

Ranch Hills Planned Development
Planning Application NO. PA 18-0034
Draft Environmental Impact Report (EIR)
County EIR No. 635
SCH No. 2021060400
Volume 2: Appendices A – N

Lead Agency | **County of Orange Public Works**
601 North Ross Street
Santa Ana, CA 92701
Contact: Kevin Canning

Prepared by | **Psomas**
5 Hutton Centre Drive, Suite 300
Santa Ana, California 92707
Contact: Sean Noonan, AICP

May 2022

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Appendix A

Notice of Preparation

**NOTICE OF PREPARATION OF A
DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)**
Planning Application No. PA180034 / VTTM 18119

FILED

JUN 17 2021

ORANGE COUNTY CLERK-RECORDER DEPARTMENT
BY: _____ DEPUTY

Date: June 17, 2021
To: State Clearinghouse, Responsible and Trustee Agencies, Interested Persons, Organizations, and Groups
From: County of Orange, OC Public Works, Development Services/Planning (Lead Agency)
Subject: Notice of Preparation of a Draft Environmental Impact Report
Title: Ranch Hills Planned Development
Applicant: Ranch Hills Partners L.P., 2454 Alton Parkway, Irvine, CA 92606
Agent: Psomas, 5 Hutton Centre Drive Suite 300, Santa Ana, CA 92707
Contact: Kevin Canning, Contract Planner, OC Public Works, Development Services/Planning
601 North Ross Street, Santa Ana, CA 92701 Phone: 714.667.8847

Public Review Period: The public review and comment period for a Notice of Preparation is 30 days. **Therefore, the public review period will be Thursday, June 17, 2021, to Monday, July 19, 2021, ending at 4:00 PM Pacific Standard Time on that day.** Please send your written response at the earliest possible date, but in no case after the close of the public review period deadline. Written responses should be submitted to the attention of Kevin Canning by any of the following methods: RanchHills@ocpw.ocgov.com, U.S.P.S. Mail, courier service, or hand-delivered to OC Public Works, Development Services/Planning at the contact address provided above.

Project Website: <https://ocds.ocpublicworks.com/service-areas/oc-development-services/planning-development/current-projects/3rd-district/pa180034>

Environmental Impact Report: The County of Orange, OC Public Works, Development Services/Planning has determined an Environmental Impact Report (EIR) is required and prepared this Notice of Preparation for the proposed Project. The County is the Lead Agency for the preparation of the Draft EIR.

Notice of Preparation: This Notice of Preparation has been prepared and distributed to the State Clearinghouse, Responsible and Trustee Agencies. to solicit guidance so that Project-related specific detail and environmental concerns relevant to each agency's statutory responsibilities are addressed in the scope and content of the Draft EIR. Public agencies should identify a contact person in their response. In addition, Interested Persons, Organizations, and Groups are requested to provide comments regarding the scope and content of the environmental information to be included in the Draft EIR.

This Notice of Preparation was sent via U.S.P.S. Certified Mail to adjacent property owners and residents, and those who have requested to be notified of any planning-related changes on this property. In addition, this Notice of Preparation was directly uploaded to the CEQAnet Web Portal in the State Clearinghouse of the Governor's Office of Planning and Research and to the County's Project website identified above.



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An Initial Study is not attached to this Notice of Preparation; however, the Initial Study/Mitigated Negative Declaration that was previously prepared and circulated in May 2020 for public review for this project is available on the County's Project website identified above.

Document Availability: This Notice of Preparation and future Draft EIR, and related documents are available for review at OC Public Works, Development Services/Planning, 301 North Ross Street, Santa Ana, CA 92701. These documents will also be provided in electronic format and will be available for download at the County's Project website identified above.

Potentially Significant Environmental Effects to be Analyzed: The proposed Project has the potential to have a significant effect on the following topical environmental factors: Aesthetics; Agriculture and Forestry Resources; Air Quality; Biological Resources; Cultural Resources; Energy; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Mineral Resources; Noise; Population and Housing, Public Services; Recreation; Transportation; Tribal Cultural Resources; Utilities and Service Systems; Wildfire; and Mandatory Findings of Significance. For each of these environmental factors, the Draft EIR will utilize Appendix G of the State CEQA Guidelines and consider all of the actions involved, including potential impacts on the Project site and any offsite impacts necessary to implement the Project, short-term construction impacts and long-term operational impacts, and cumulative impacts that could result from the combination of the Project and related projects.

Project Location and Existing Site Conditions: The Project site is located within the community of North Tustin in unincorporated Orange County at 11782 Simon Ranch Road on Assessor's Parcel Number 104-321-01, as shown in Figure 1, Regional Location Map. The Project site consists of 5.88 acres and is currently developed with the Tustin Hills Racquet Club situated within a residential setting. Currently, the tennis courts are open. The clubhouse has been closed due to the Pandemic but will reopen based on demand and in accordance with State and County guidelines. The Project site is not located within the boundaries of the North Tustin Specific Plan. Single family residential land uses surround the Project site in all directions. The rear yards of adjacent residences abut the Project site on all sides. The City of Tustin city limits are adjacent to the eastern Project site boundary. A Project Area Map and U.S.G.S Topographical Map are provided as Figures 2 and 3, respectively.

The Project site does not support any natural open space or native vegetation. Mature ornamental landscaping occurs throughout the site, which includes, but is not limited to, palm trees, pepper trees, pine trees, hedge, and turf. Storm water currently leaves the Project site via concrete drainage ditches located along the southwestern and southeastern boundaries of the Project site, which conveys flows for approximately 200 feet to a City of Tustin storm drain system.

Vehicular access to the Tustin Hills Racquet Club is located at the intersection of Pavillion Drive and Simon Ranch Road. The site is currently developed with, 11 full-sized and one half-sized (practice) tennis courts, a swimming pool with two small spas, a lawn/outdoor event area, and two single-story buildings with banquet and meeting rooms accommodating 330 individuals and administrative offices, for a total of approximately 10,000 square feet. The facility is served by a paved parking area that can accommodate approximately 127 cars. Site photographs are provided below in Figure 4.

Project Description: The Project proposes replacing the Tustin Hills Racquet Club with a Planned Unit Development consisting of 34 single-family townhome units and 3 single-family detached units for a total of 37 units. A Conditional Use Permit is required. Pursuant to Government Code section 65589.5(j)(4), a zoning change is not required for this Project because the Project is consistent with the objective General



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Plan standards and criteria but the zoning for the project site is inconsistent with the General Plan. Project site access would be provided at the intersection of Pavillion Drive and Simon Ranch Road.

Draft EIR Status: Work has commenced on preparing the Draft EIR as allowed by CEQA Guidelines Section 15082(a)(4). The Draft EIR shall not be circulated for public review until it is complete and all written comments responding to this Notice of Preparation have been received and incorporated into the Draft EIR.


Public Meetings: Public meetings and hearings have not yet been scheduled. Future meetings would include the following: Orange County Planning Commission and the North Tustin Advisory Committee (NTAC). When scheduled, the date, time, and place of these meetings and hearings would be provided on the County's Project website.

Submitted by:




Kevin Canning, Contract Planner
OC Public Works, Development Services/Planning



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Santa Ana, California 92701

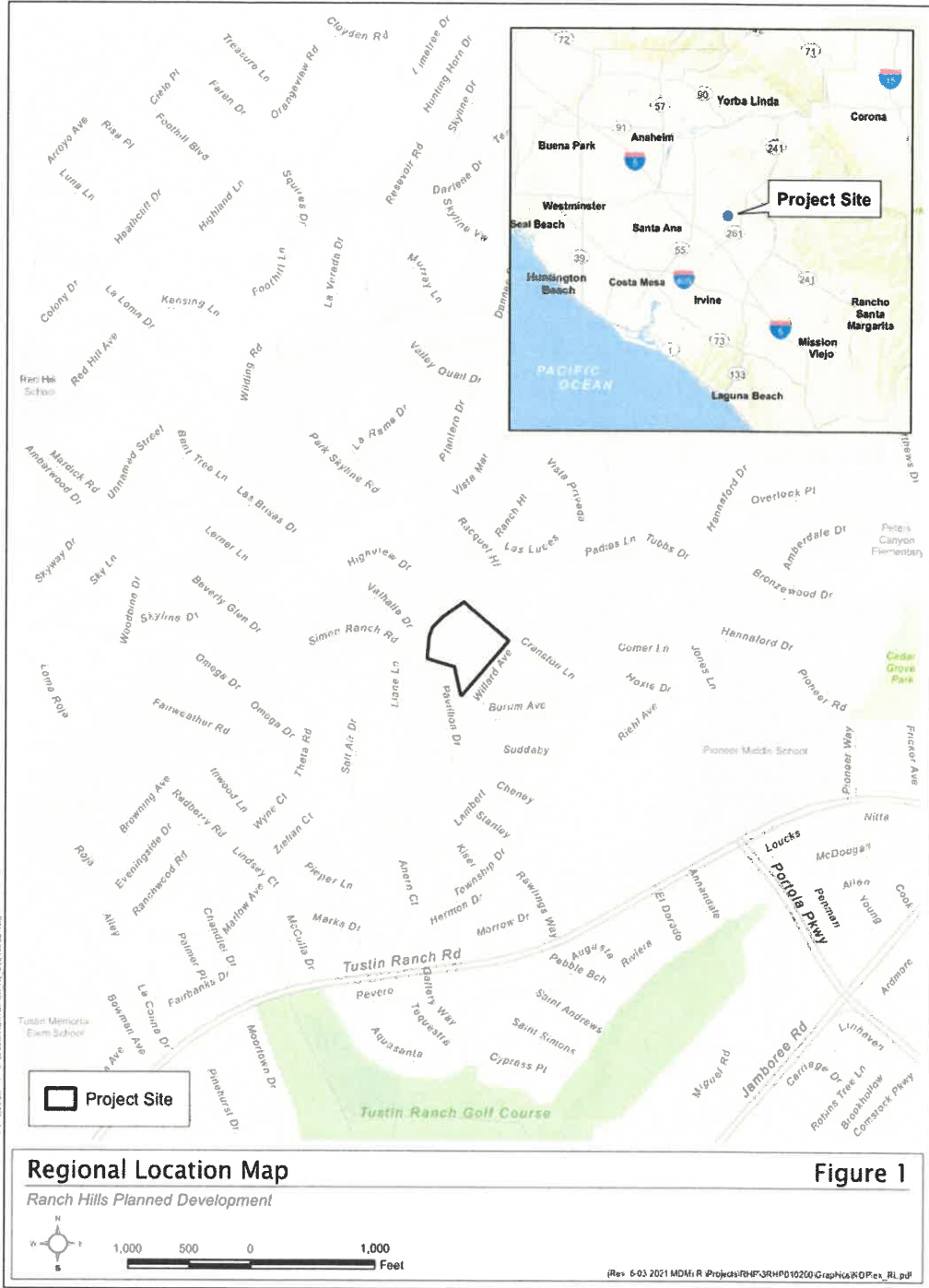
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Figure 1: Regional Location Map



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Figure 2: Project Area Map



County Administration South
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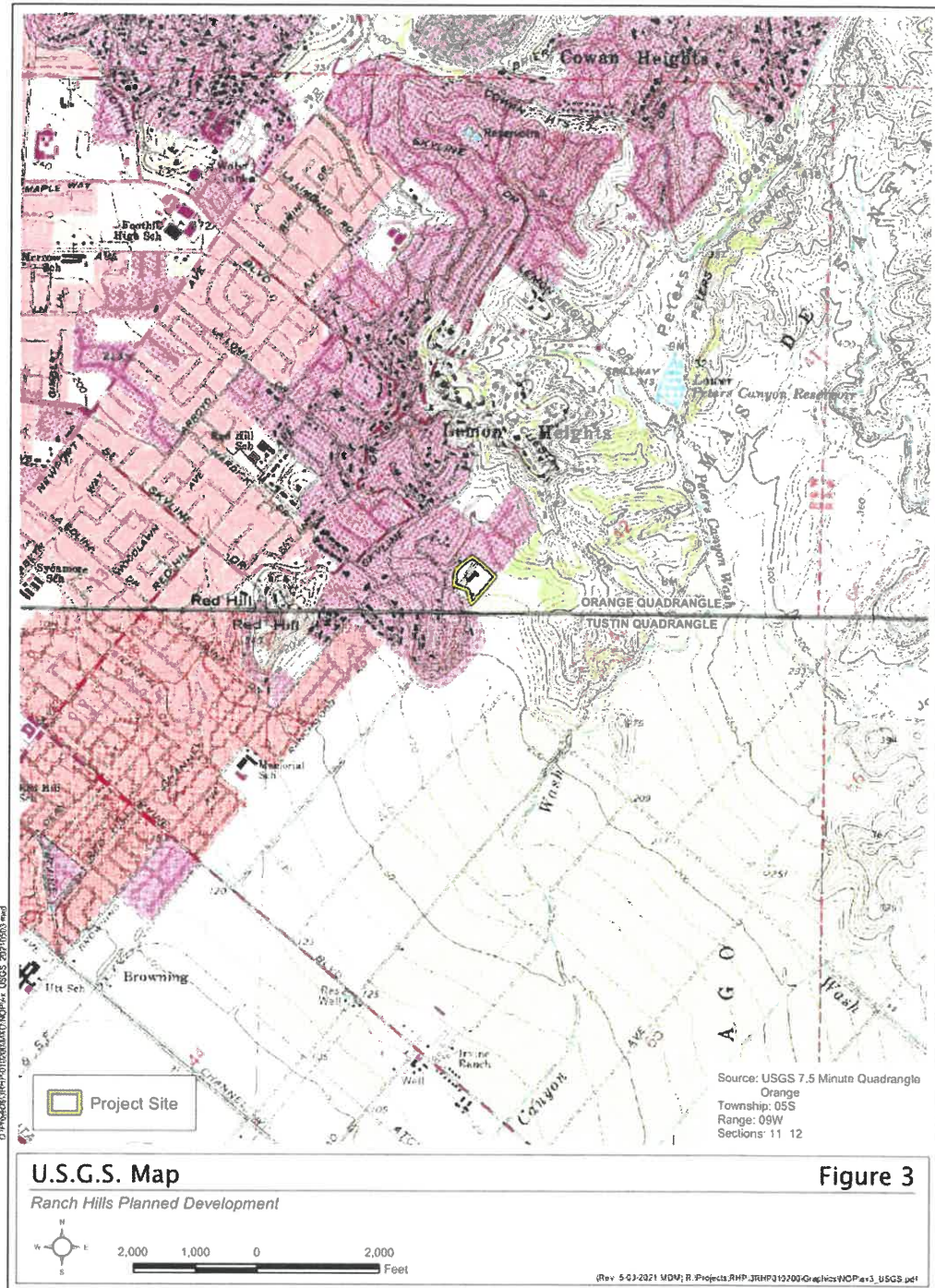
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Figure 3: U.S.G.S Topographic Map



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Figure 4: Site Photographs – Page 1 of 2



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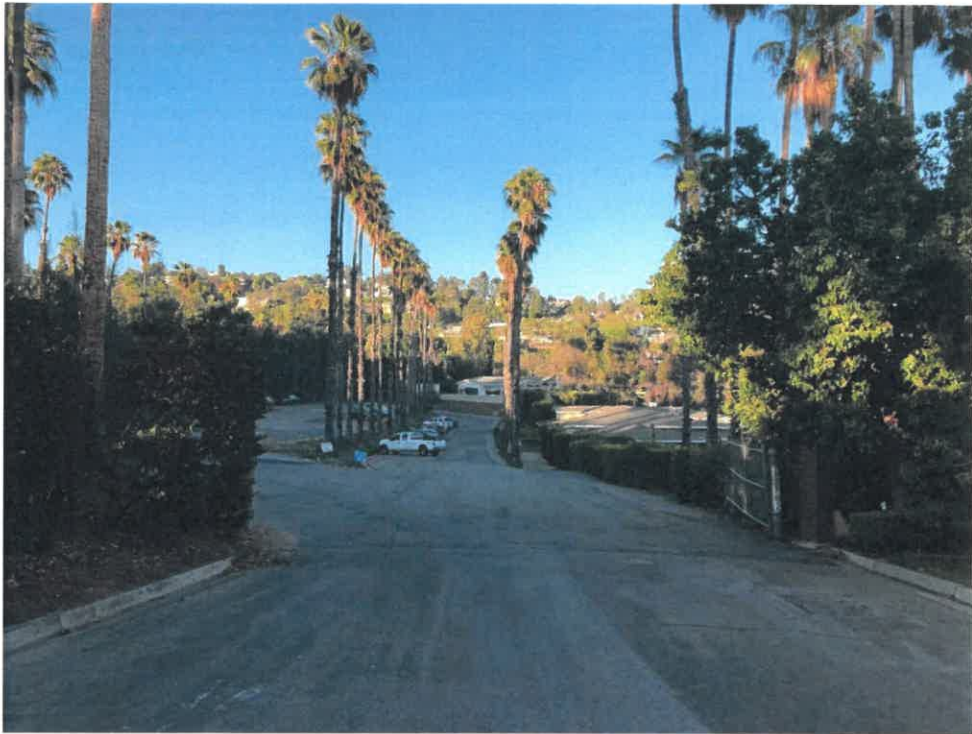
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Figure 4: Site Photographs – Page 2 of 2



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Appendix B

Scoping Comment Letters and IS/MND Comment Letters

Scoping Comment Letters

**NATIVE AMERICAN HERITAGE COMMISSION**

June 30, 2021

Kevin Canning
County of Orange, OC Public Works, Development Services/Planning
601 North Ross Street
Santa Ana, CA 92701

Re: 2021060400, Ranch Hills Planned Development Project, Orange County

Dear Mr. Canning:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, § 15064.5 (b) (CEQA Guidelines § 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

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VICE CHAIRPERSON
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Chumash

SECRETARY
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AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

 - a. A brief description of the project.
 - b. The lead agency contact information.
 - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
 - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

 - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

 - a. Alternatives to the project.
 - b. Recommended mitigation measures.
 - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:

 - a. Type of environmental review necessary.
 - b. Significance of the tribal cultural resources.
 - c. Significance of the project's impacts on tribal cultural resources.
 - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

 - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
 - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- a. Avoidance and preservation of the resources in place, including, but not limited to:
 - i. Planning and construction to avoid the resources and protect the cultural and natural context.
 - ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - i. Protecting the cultural character and integrity of the resource.
 - ii. Protecting the traditional use of the resource.
 - iii. Protecting the confidentiality of the resource.
- c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
- e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
- f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
- b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
- c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
 - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
 - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, § 15064.5(f) (CEQA Guidelines § 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code § 7050.5, Public Resources Code § 5097.98, and Cal. Code Regs., tit. 14, § 15064.5, subdivisions (d) and (e) (CEQA Guidelines § 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:
Andrew.Green@nahc.ca.gov.

Sincerely,



Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse



South Coast Air Quality Management District

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SENT VIA E-MAIL:

July 13, 2021

RanchHills@ocpw.ocgov.com

Kevin Canning, Contract Planner
County of Orange, Public Works Department
601 North Ross Street
Santa Ana, California 92701

Notice of Preparation of a Draft Environmental Impact Report for the Ranch Hills Planned Development

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. Our comments are recommendations on the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Environmental Impact Report (EIR). Please send a copy of the Draft EIR upon its completion and public release directly to South Coast AQMD as copies of the Draft EIR submitted to the State Clearinghouse are not forwarded. **In addition, please send all appendices and technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all emission calculation spreadsheets, and air quality modeling and health risk assessment input and output files (not PDF files). Any delays in providing all supporting documentation for our review will require additional review time beyond the end of the comment period.**

CEQA Air Quality Analysis

Staff recommends that the Lead Agency use South Coast AQMD's CEQA Air Quality Handbook and website¹ as guidance when preparing the air quality and greenhouse gas analyses. It is also recommended that the Lead Agency use the CalEEMod² land use emissions software, which can estimate pollutant emissions from typical land use development and is the only software model maintained by the California Air Pollution Control Officers Association.

South Coast AQMD has developed both regional and localized significance thresholds. South Coast AQMD staff recommends that the Lead Agency quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds³ and localized significance thresholds (LSTs)⁴ to determine the Proposed Project's air quality impacts. The localized analysis can be conducted by either using the LST screening tables or performing dispersion modeling.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road

¹ South Coast AQMD's CEQA Handbook and other resources for preparing air quality analyses can be found at: <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook>.

² CalEEMod is available free of charge at: www.caleemod.com.

³ South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

⁴ South Coast AQMD's guidance for performing a localized air quality analysis can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>.

mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis. Furthermore, emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA *operational* thresholds to determine the level of significance.

If the Proposed Project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment⁵.

In the event that implementation of the Proposed Project requires a permit from South Coast AQMD, South Coast AQMD should be identified as a Responsible Agency for the Proposed Project in the Draft EIR. The assumptions in the air quality analysis in the EIR will be the basis for evaluating the permit under CEQA and imposing permit conditions and limits. Questions on permits should be directed to South Coast AQMD's Engineering and Permitting staff at (909) 396-3385.

Mitigation Measures

In the event that the Proposed Project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Any impacts resulting from mitigation measures must also be analyzed. Several resources to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project include South Coast AQMD's CEQA Air Quality Handbook¹, South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan⁶, and Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy⁷.

South Coast AQMD staff is available to work with the Lead Agency to ensure that air quality, greenhouse gas, and health risk impacts from the Proposed Project are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov.

Sincerely,

Lijin Sun

Lijin Sun, J.D.

Program Supervisor, CEQA IGR

Planning, Rule Development & Area Sources

LS
ORC210622-04
Control Number

⁵ South Coast AQMD's guidance for performing a mobile source health risk assessment can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis>.

⁶ South Coast AQMD's 2016 Air Quality Management Plan can be found at: <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf> (starting on page 86).

⁷ Southern California Association of Governments' 2020-2045 RTP/SCS can be found at: https://www.connectsocial.org/Documents/PEIR/certified/Exhibit-A_ConnectSoCal_PEIR.pdf.



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



July 19, 2021

Kevin Canning
Orange County Public Works
601 North Ross Street, Suite 300
Santa Ana, CA 92707
RanchHills@ocpw.ocgov.com

**Subject: Ranch Hills Planned Development (Project), Notice of Preparation (NOP),
SCH #2021060400**

Dear Mr. Canning:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from Orange County Public Works (County) for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the state. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on Projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 *et seq.*) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 *et seq.*), the Project proponent may seek related take authorization as provided by the Fish and Game Code. CDFW also administers the Natural Community Conservation Planning (NCCP) program. Orange County (County) is a participating landowner under the Central/Coastal Orange County NCCP/Habitat Conservation Plan (HCP).

¹ CEQA is codified in the California Public Resources Code in section 21000 *et seq.* The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Mr. Kevin Canning
Orange County Public Works
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PROJECT DESCRIPTION SUMMARY

Proponent: Orange County Public Works (County)

Objective: The objective of the Project is to construct a Planned Unit Development consisting of 34 townhomes and 3 single family detached units.

Location: The Project site is located in unincorporated Orange County at 11782 Simon Ranch Road, Tustin. The site consists of 5.88 acres, currently developed with a racquet club and tennis courts, and surrounded by residential properties on all sides.

Biological Setting: The Project site is developed; on-site vegetation consists primarily of mature ornamental trees. There are two concrete drainages on the southwestern and southeastern portions of the site that convey stormwater approximately 200 feet to a City of Tustin storm drain system. Special-status species with the potential to occur in the region identified using the California Natural Diversity Database (CNDDB) include: the state threatened California black rail (*Laterallus jamaicensis coturniculus*), and the federally threatened coastal California gnatcatcher (*Polioptila californica californica*). Occurrences of both species have been recorded within approximately 0.3 mile of the Project site.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources.

Comment #1: Nesting Bird Surveys

Per California Fish and Game Code Sections 3503, 3503.5, and 3513 the proposed Project is required to avoid the incidental loss of fertile eggs or nestlings or activities that lead to nest abandonment. In order to avoid impacts to nesting birds, the DEIR should require that clearing of vegetation, and when biologically warranted construction, occur outside of the peak avian breeding season which generally runs from February 1 through September 1 (as early as January 1 for some raptors). If Project construction is necessary during the bird breeding season, a qualified biologist with experience in conducting bird breeding surveys should conduct weekly bird surveys for nesting birds, within three days prior to the work in the area, and ensure no nesting birds in the Project area would be impacted by the Project. If an active nest is identified, a buffer shall be established between the construction activities and the nest so that nesting activities are not interrupted. The buffer should be a minimum width of 100 feet (300 feet for raptors), be delineated by temporary fencing, and remain in effect as long as construction is occurring or until the nest is no longer active. No Project construction shall occur within the fenced nest zone until the young have fledged, are no longer being fed by the parents, have left the nest, and will no longer be impacted by the Project. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

Mr. Kevin Canning
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Comment #2: Analyses of the Potential Project-Related Impacts on Biological Resources

To provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts, the following should be addressed in the DEIR:

- a. A discussion of potential adverse impacts from lighting, noise, human activity, exotic species, and drainage. The latter subject should address: Project-related changes on drainage patterns on and downstream of the Project site; the volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.
- b. Discussions regarding indirect Project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands (e.g., preserve lands associated with a NCCP). Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the DEIR.
- c. The zoning of areas for development Projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.
- d. A cumulative effects analysis should be developed as described under CEQA Guidelines, section 15130. General and specific plans, as well as past, present, and anticipated future Projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Comment #3: Hydrological Impacts

CDFW has regulatory authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of any river, stream, or lake or use material from a river, stream, or lake. For any such activities, the project applicant (or "entity") must provide written notification CDFW pursuant to section 1600 *et seq.* of the Fish and Game Code. Based on this notification and other information, CDFW determines whether a Lake and Streambed Alteration Agreement (LSAA) with the applicant is required prior to conducting the proposed activities. CDFW's issuance of a LSAA for a project that is subject to CEQA will require CEQA compliance actions by CDFW as a Responsible Agency.

Whether a LSAA is required to satisfy requirements of FCG section 1600 *et seq.* can only be determined at the time a formal notification package is submitted to CDFW. The DEIR should fully analyze all hydrological aspects of the project, including but not limited to, any impacts to the concrete drainages on the Project site, and changes in conveyance of stormwater discharge into the Tustin drain system. If the DEIR determines that hydrological features on or off the Project site will be affected by Project activities, LSAA notification may be appropriate.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a data base which may be used to make subsequent or

Mr. Kevin Canning
Orange County Public Works
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supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link:
http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link:
http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying Project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist the County in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Jessie Lane, Environmental Scientist at Jessie.Lane@wildlife.ca.gov.

Sincerely,

DocuSigned by:



D700B4520375406...

David Mayer
Environmental Program Manager I
South Coast Region

ec: CDFW

Jennifer Turner, San Diego – Jennifer.Turner@wildlife.ca.gov
Emily Gray, San Diego – Emily.Gray@wildlife.ca.gov
Jennifer Ludovissy, San Diego – Jennifer.Ludovissy@wildlife.ca.gov
Sue Howell, San Diego – Susan.Howell@wildlife.ca.gov
CEQA Program Coordinator, Sacramento – CEQACommentLetters@wildlife.ca.gov
State Clearinghouse, Office of Planning and Research – State.Clearinghouse@opr.ca.gov
Jonathan Snyder, USFWS – Jonathan_D_Snyder@fws.gov



Karen Kwan
Principal Environmental Specialist
Southern California Gas Company
GT02A
555 Fifth Street
Los Angeles, CA 90013

July 19, 2021

Mr. Kevin Canning
Orange County Public Works

Email: ranchhills@ocpw.ocgov.com

RE: Notice of Preparation of Draft Environmental Impact Report for Ranch Hills Community Project (Project)

Dear Mr. Canning;

Southern California Gas Company (SoCalGas) appreciates the opportunity to review and respond to the Project's Notice of Preparation of a Draft Environmental Impact Report. We respectfully request that the following comments be incorporated into the document.

- Medium pressure distribution lines are located in the vicinity of the proposed Project. SoCalGas recommends that the project proponent call Underground Service Alert at 811 or (800) 422-4133 at least two business days prior to performing any excavation work for the proposed project. Underground Service Alert will coordinate with SoCalGas and other utility owners in the area to mark the locations of buried utility-owned lines.
- *Section 3.19 Utility and Service Systems* appropriately identifies SoCalGas as the natural gas provider. The document states that a significant impact related to the need for new systems or supplies or substantial alterations related to natural gas would not occur. However, no specifics are provided regarding the need to extend or relocate services. A discussion of the following issues with appropriate diagrams, including specific environmental impact analyses related to these activities, if necessary, may help to reduce the time and cost associated with the extension of new natural gas service to the Project.
 - The number and description of any new natural gas facilities that will have to be constructed or installed, in order to provide natural gas service to the proposed Project.
 - Identification of any existing natural gas infrastructure that would need to be relocated and/or abandoned, in order to provide natural gas service to the proposed Project.
 - Identification and description of any temporary areas required for construction and/or staging of material related to new gas service relocation or construction.
 - Identification of any actions that would require permitting or acquisition of new right-of-way or easements for natural gas service to the Project.
 - Any proposed grading and/or drainage improvements that would redirect drainage in a manner that would increase the potential for erosion around SoCalGas facilities.
- Should it be determined that the proposed Project may require SoCalGas to abandon and/or relocate or otherwise modify any portion of its existing natural gas lines, SoCalGas respectfully

requests that the Project proponent coordinate with SoCalGas by emailing:
NorthwestDistributionUtilityRequest@semprautilities.com.

- SoCalGas respectfully requests that Project proponent coordinate service extension by calling (800) 427-2000 or submitting a “Non-Residential Request for New Gas Services” application.

Once again, we appreciate the opportunity to comment on the Project’s Draft Environmental Impact Report. If you have any questions, please feel free to contact SoCalGas Environmental Review at Envreview@semprautilities.com.

Sincerely,

A handwritten signature in cursive script that reads "Karen Kwan".

Karen Kwan
Principal Environmental Specialist
Southern California Gas Company

Community Development Department

July 19, 2021

Sent via email to RanchHills@ocpw.ocgov.com

Mr. Kevin Canning
Contract Planner
Orange County Public Works
Development Services/ Planning
601 North Ross Street
Santa Ana, CA 92701



SUBJECT: REVIEW OF THE NOTICE OF PREPARATION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED RANCH HILLS PLANNED DEVELOPMENT

Dear Mr. Canning:

Thank you for the opportunity to provide comments on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the proposed Ranch Hills Planned Development project located at 11782 Simon Ranch Road in North Tustin. The project proposes the development of 34 single-family townhome units and three (3) single-family detached units for a total of 37 units on 5.88 acres at the existing Tustin Hills Racquet Club site.

The City of Tustin offers the following comments:

General Comments

1. The proposed Ranch Hills Community is directly adjacent to the Tustin Ranch neighborhood of Treviso. Tustin Ranch is a master planned community within Tustin that is regulated by the East Tustin Specific Plan. When the Specific Plan was approved, a requirement was included that limits the height of residences on lots along the boundary between Tustin Ranch and North Tustin to a maximum of one story in Sector 8 of the Specific Plan. In addition, those same lots were required to be a minimum of 10,000 square feet in size. These requirements were put in place to maintain compatibility between the existing North Tustin residential community and Tustin Ranch.
2. It is our understanding that the proposed Ranch Hills Community includes attached residences that are up to two stories in height and have a minimum net lot area per residence of 5,000 square feet. This height, development pattern, and density are inconsistent with the height, development pattern and density of the adjacent Treviso properties. The proposed project would be an incompatible land use along the border between North Tustin and Tustin Ranch, and would be in conflict with the restrictive requirements that were agreed to when the East Tustin Specific Plan was adopted and that were imposed upon the developer of the Treviso neighborhood. The County of Orange should respect this land use restriction and reciprocate by not allowing incompatible residential development directly adjacent to the Treviso neighborhood and by also limiting the heights of the proposed buildings within the Ranch Hills Community along the City/County border to a maximum of one story.
3. Please clarify the project description as it relates to a Zone Change and the General Plan inconsistency. Does this project include a Zone Change or General Plan Amendment?

Grading Plan

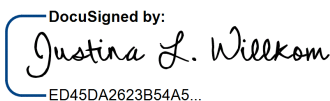
4. The proposed water system has dead ends and is not a looped system as required in the Will Serve Letter sent by the City of Tustin on September 23, 2019. The Preliminary Conditions of Approval still apply.
5. The proposed home site near the northwest corner (Pad=256.5) appears to be on top of the utility easement and water line. The easement and water line must remain clear and accessible at all times.
6. A 20'x40' easement required to accommodate a jack and bore pit for construction and maintenance of the water line between the northeasterly tract boundary and Racquet Hill is not delineated on the map.

Aesthetics and Views

7. Per the letter sent by the City of Tustin in response to the Mitigated Negative Declaration on June 4, 2020, the City of Tustin requests that the EIR include a view analysis from vantage points within Tustin to determine whether the proposed Project would have any significant visual impacts and whether mitigation is needed. This view analysis should include photographic simulations that show the views of the proposed buildings from various locations.
8. It is recommended that dense landscaping be required to be maintained in the proposed Ranch Hills Community along the City/County border to ensure that there are no visual impacts to the adjacent properties and to provide a greater level of privacy for the residents of the established Treviso neighborhood.

Thank you again for the opportunity to provide comments on the NOP of the DEIR. The City of Tustin would appreciate receiving written responses to our comments and a copy of the DEIR when they become available and all future public notices regarding this project. Please provide all future CEQA notices regarding this project to the undersigned pursuant to Public Resources Code Section 21092.2. If you have any questions regarding the City's comments, please contact Jessica Newton, Associate Planner, at (714) 573-3149 or via email at JNewton@tustinca.org.

Sincerely,

DocuSigned by:

ED45DA2623B54A5...

Justina L. Willkom

Community Development Director

cc: Matthew S. West, City Manager
Nicole Bernard, Assistant City Manager
Douglas S. Stack, Public Works Director
Ken Nishikawa, Deputy Public Works Director
Irma Huitron, Assistant Director – Planning
Scott Reekstin, Principal Planner
Jessica Newton, Associate Planner

S:\Cdd\CDD Staff (Current)\Jessica\Environmental Review\Ranch Hill Community Project Letter.doc

IS/MND Comment Letters

Canning, Kevin

From: susanadams412@yahoo.com
Sent: Sunday, May 10, 2020 6:33 PM
To: Canning, Kevin; Shannon, Kevin
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hello. My husband and I live on Liane Lane in Santa Ana near the Tennis Club. Of course we feel the same as everyone whom lives here about adding more homes/townhomes in this neighborhood. My husband and I are for growth, but it has to be done without jeopardizing our safety.

My husband has a severe traumatic brain injury from a horrific bicycle accident 10 years ago in 2010. We purchased this home in 2011 because it is peaceful and a perfect setting for my husband's continued recovery. We can see the tennis club from our home.

Another major reason to consider NOT building these intrusive homes is that **we live in a very high fire zone.**

If you add more people and cars, it will be **detrimental to our safety to get off this hill if there was an evacuation.** It is not a matter of *if it will happen....*we feel that one day it could be a *very real possibility.*

We have so many supplies already packed and ready to go in case of such an emergency, **but if our car could not get away from the flames we would perish in our car trying to get off this hill.**

Think of PARADISE, CA please! That is a small sleepy town, I've been there, and there is one road in and one road out. People died that didn't need to. **I don't wish for my husband and myself to be placed in a horrifying situation like that. There is NO way you can add that many people and the impact not be incredibly UNSAFE!!! There is one road to take you off this hill. That's it!**

And, lets not even get started on how our homes may decrease in value if such a project is built.

We purchased a little slice of heaven and we had to pay over a million dollars for it. **Why on earth would anyone want to destroy our sweet, beautiful neighborhood? What in the heck did we do to deserve that?**

PLEASE do not let this happen. Please don't destroy our little piece of heaven.

Susan and Jim Adams - **Severely, Severely injured. Wheelchair, hooyer lift, G-Tube, Urine Cath, etc.**

2161 Liane Lane
Santa Ana, CA 92705
714-334-2061

Canning, Kevin

From: Sandi Alaux <sandraalaux@gmail.com>
Sent: Sunday, May 31, 2020 5:12 PM
To: Canning, Kevin
Cc: kirkwati@gmail.com
Subject: Fwd: Opposition to Rezoning of Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Sent from my iPhone

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild

parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

John and Sandi Alaux

Canning, Kevin

From: hanlie.alberts@sbcglobal.net
Sent: Monday, June 1, 2020 1:51 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to rezoning at Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Hanlie Alberts.

Canning, Kevin

From: Andrea Altenberg <andialt@sbcglobal.net>
Sent: Monday, June 1, 2020 10:55 AM
To: Canning, Kevin
Subject: Tustin Hills Raquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Andrea Altenberg

Sent from my iPhone

Canning, Kevin

From: Anast, William <wanast@advisorresourcegrp.com>
Sent: Friday, June 5, 2020 3:27 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com; 'Laurie Anast (wanast@sbcglobal.net)'
Subject: Tustin Hills Racquet Club rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning,

I am writing to you regarding the proposed rezoning of Tustin Hills Racquet Club (The Club) to anything besides current Recreation only zoning.

My family and I have lived in the immediate area surrounding the Club since 1991, and on the same contiguous street as the Club since 2001. For the last almost 30 years we have lived here, the Club has been an asset that enhanced property value, enjoyment, and provided vital and beneficial open space.

The redevelopment rezoning request without community approval would significantly and adversely affect our property values and enjoyment with immediate and irrevocable effect. Some important points that refute what the developer has submitted

- 1) Study developer provides assumes max traffic from the club and does not consider some important factors that render that study a misrepresentation of the reality and of common sense.

First, the club has limited hours, and therefore at least 1/3 (1/2 on weekends) of each 24hour period the Club is closed. Therefore, unlike residential where occupants come and go at various times throughout the entire 24 hour period, during the week 1/3 of the day and weekends ½ the day the Club generates zero (0) traffic unlike residential use. Secondly, residential units will undoubtedly be occupied by families with school age children. Therefore, commuting to work, dropping off children to school each day, taken to and from after school activities multiply the effect each residence has on traffic. Nor does the developer's study take into account visitors, housekeepers, gardeners, or maintenance personnel hired by those proposed residences. Our streets are home to many more walkers, runners, dogs walking with owners, and children on bicycles or scooters than cars. Many of us greet each other from our front yards and porches as we walk by each other's homes, and that element provides the unique and valuable character from which our neighborhood benefits. The proposition the developer makes that traffic would lessen defies logic and reason, and is a purposeful partial rendering of facts to appear credible.

- 2) Developer does not propose how our community is not harmed or enhanced.

Proper rezoning approval requires those that would approve it to take into account the harms that such a rezoning would inflict. As such, a symbiotic proposal would include possible renumeration, development of mitigation for space and lifestyle loss, and buy in by those specifically harmed by the rezoning. It would appear the only beneficiary of the rezoning would be a developer, and at the cost of each and every community homeowner. No such proposal has been submitted, and no real effort to even consider working with residents has been undertaken by the developer.

Planning departments and County Supervisors are the voice of residents. Do not approve such a rezoning effort without the specific authority of the residents most fundamentally impacted and in doing so, retain sacred public trust with which you have been endowed.

Respectfully,

William Anast
2182 Salt Air Dr.
Santa Ana, CA 92705

William Anast, CFP



631 E. Chapman Ave.
Orange, CA 92866
714.289.2123
714.289.0587 fax
wanast@advisorresourcegrp.com

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Canning, Kevin

From: Tony Anderson <toanderso@yahoo.com>
Sent: Tuesday, June 2, 2020 11:42 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community. We've already lost appropriate residential zoning at the top of Newport next to Peter's Canyon and along 17th street at La Loma. WHEN WILL IT STOP??

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Tony Anderson

Canning, Kevin

From: Greg Anderson <greg.anderson@securitasinc.com>
Sent: Saturday, May 30, 2020 8:56 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com; Gilli (Cell)
Subject: Resident Input - Ranch Hills/Tustin Raquet Club Development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin,

I'm writing to you to express my sincere and complete disagreement with the proposed re-zoning of the current Tustin Racquet Club to a high density residential tract that would allow the construction of 37 residential condos in my neighborhood.

My family of four currently live at 1981 Beverly Glen Dr, the house sitting at the entry point of Red Hill Ridge, at the corner of Browning and Beverly Glen (known in the neighborhood as the "Gazebo House" due to the large neighborhood gazebo in our front yard). We've lived here for 4+years now and absolutely love our quiet, mature neighborhood where you know just about everyone.

The Red Hill Ridge community is a quiet residential area consisting of 100 or so homes on large 0.5 acre tracts. These large custom homes were built some 50-60 years ago. It's a beautiful community, very quiet and very safe with minimal traffic volume or issues. You can walk around the Red Hill Ridge Loop, as me and my family do nearly every night - Salt Air to Pavilion - safely, even though there are no community sidewalks.

As you can see from the map I've attached, my property sits at the ONE and ONLY ingress and egress point for the development under consideration. As such, I have a significant - and proximate - personal interest in the disruption a zoning change of this nature would bring to our community. I'm extremely concerned the addition of 37 residential condos to our quiet neighborhood would radically change our community on many fronts.

First, the increase in a construction traffic and activity (that would likely span multiple years) would be incredibly disruptive to the entire neighborhood. While concerning for the community in general, personally I can't begin to fathom how disruptive the increase in traffic, noise and activity at the single ingress/egress point - right in front of my house on Browning and Beverly Glen - will be!!

Secondly, beyond my "inconvenience ", I'd encourage you to consider very obvious broader concerns on traffic flow and safety of all residents in the Red Hill Ridge Community. This narrow single point of entry and exit Can get busy during morning and afternoon rush hours. Adding 37 new condos and increasing the community vehicle count through this entry/exit point will be problematic and dangerous (especially in the eventful an emergency evacuation).

Finally, our community has unique character and I have significant concerns we'll lose what we've come to love about our neighborhood should this rezoning be approved. Evening walks with friends, block parties, community

neighborhood watch meetings - we're a tight nit community that values the quiet, safe, (& low traffic) streets we live on. Our quality of life and, very likely, our home values would be adversely impacted should this rezoning be allowed.

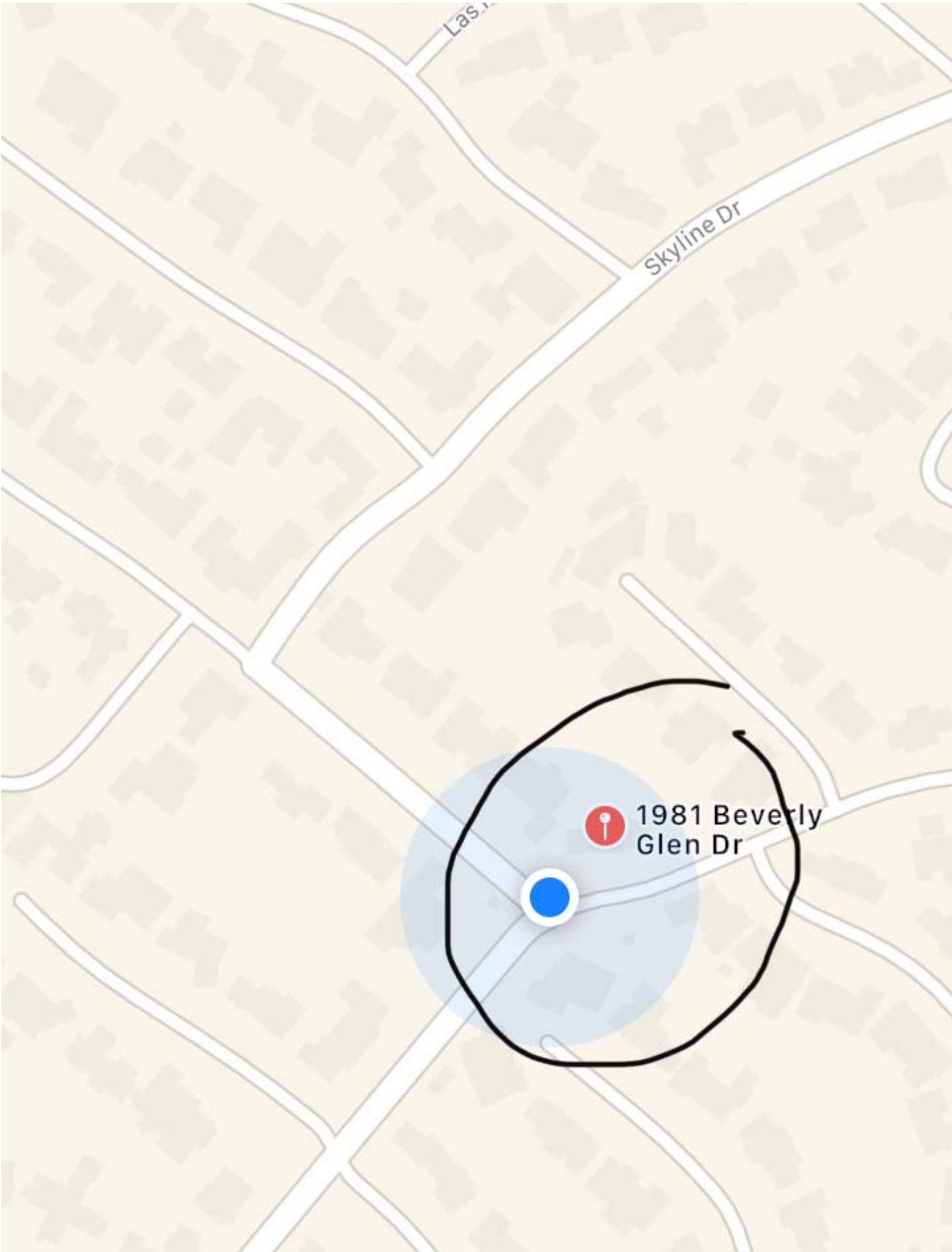
I appreciate you listening to my feedback, and that of my neighbors, regarding this proposed zoning change. I wouldn't normally write a letter to the planning commission, but this proposal has literally hit home and is very concerning on so many fronts. We need your support to help protect our quiet community!

I can be reached at the cell number below. Please feel free to reach out should you want to discuss directly.

Greg

Greg W Anderson | President and CEO
Securitas • North America Guarding

2100 South State College Blvd, Anaheim, CA • 92806
C: (303) 591-2345
greg.anderson@securitasinc.com | www.securitasinc.com



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Canning, Kevin

From: A N N A R E L L A <tannarella@sbcglobal.net>
Sent: Monday, June 1, 2020 10:08 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Tom and Cris Annarella

Canning, Kevin

From: Kirsten Antonius <kantonius@gmail.com>
Sent: Sunday, May 31, 2020 4:40 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am **STRONGLY** opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing.

If this project is built it will cause increased traffic and a terrible safety concern. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services.

Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be outright denied as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

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Sincerely,

Kirsten Antonius

Canning, Kevin

From: Hannah Arch <harch@bmrins.com>
Sent: Monday, June 1, 2020 8:01 PM
To: Canning, Kevin
Subject: No Zoning changes please

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

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Best regards,

Hannah Arch

Canning, Kevin

From: Gary Arch <garch@bmrins.com>
Sent: Monday, June 1, 2020 5:28 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and greenhouse gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

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Best regards,

Gary Arch

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Canning, Kevin

From: Abdul Aref <abdul_aref@yahoo.com>
Sent: Wednesday, June 3, 2020 2:04 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: PA180034 / VTTM 18119 – Ranch Hills Planned Development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I own a property on Simon Ranch Road and to be honest, I'm extremely concerned about the proposed development with the Racquet Club. My main concern is the traffic flow as Simon Ranch Road is the only road accessible for two way traffic and with the proposed mostly condominiums and a few SFR's, this will generate excessive street traffic and noise. This will have a major impact in values of my home as well as my neighbors.

Additionally, building condominiums does not conform with the rest of the neighborhood as all the homes in the area are SFR's with minimum 10,000 to 15,000 square foot lots.

I urge you to reconsider your position in this matter. It's not like I'm against homes being built but if they are being built they have to conform to neighborhood. I'm all for SFR's being built that have lot sizes similar to our neighborhood but condominiums are out of the question.

Yours truly
The Aref Family

Canning, Kevin

From: Bobby Aschtiani <bobbyasch@gmail.com>
Sent: Friday, June 5, 2020 4:28 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi Kevin,

We are strongly against the developer's plans. This will greatly impact the already overcrowded streets like Browning, La Colina, SE Skyline and Red Hill. This does not benefit any of the community and only the developer. Please help to stop this.

Bobby

Canning, Kevin

From: Lynn Barr <lynn.barr@gmail.com>
Sent: Monday, June 1, 2020 1:05 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Lynn Barr

Canning, Kevin

From: Paige Basconcillo <pbasconcillo@hotmail.com>
Sent: Tuesday, June 2, 2020 6:04 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Paige Basconcillo

1800 N Lynn St. Apt. 1119
Arlington, VA 22209

Canning, Kevin

From: Jaime Bauer <bauerbrood@gmail.com>
Sent: Wednesday, June 3, 2020 8:08 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

Most importantly, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Additionally, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area. Finally, it will cause an increase strain on local emergency services and will eliminate the only open space in North Tustin, California.

Due to the the significant impact on the surrounding homeowners, the rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange.

However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

Sincerely,

Jaime Bauer

Canning, Kevin

From: Erin Bauer <eringail@gmail.com>
Sent: Monday, May 25, 2020 5:29 PM
To: Canning, Kevin; Kirkwatilo@gmail.com
Subject: Please conduct a full environmental study of the north tustin racquet club site

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning and Mr. Watilo--

I am not convinced by claims that replacing the Racquet Club with high density housing will not have any significant environmental impacts, exempting the developers from the need to prepare a proper environmental impact report.

Any major development, like the one being contemplated for the racquet club, should be properly studied and vetted. This is for the long term benefit of the local residents and of the developers--it is easiest and cheapest to mitigate major impacts when they are spotted in the planning stage.

Don't skip steps. If the developers are telling the truth about the impacts, then they have nothing to fear from an accurate and comprehensive EIR. I for one would like to read it.

Sincerely,
Erin Bauer.
1271 Tropicana Lane
Santa Ana CA 92705

Canning, Kevin

From: annie cygan <anniecygan@gmail.com>
Sent: Wednesday, June 3, 2020 4:16 PM
To: Canning, Kevin
Cc: Shawn Beck
Subject: Tennis Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

The Tustin Hills Racquet Club has been an integral part of my life for as long as I can remember. Some of my happiest memories are of playing tennis with my dad and sister and participating in camps and clinics at the club.

I have always loved the neighborhood surrounding THRC - the homes are characterized by their generous lot sizes and distinctive architecture. When I moved back to Tustin, my husband and I purchased a home within walking distance of the tennis club because we always envisioned that it would be part of the neighborhood. We believed that because our "tract" was part of a covenant that THRC would always be reserved for recreation. The sale and potential development of the club is very disappointing and we believe that the proposed plan will drastically alter the value of our property as well as the character of the neighborhood.

I am also concerned about the amount of traffic that this development will create. We do not have any sidewalks, our streets are narrow, and any additional traffic will be hazardous to pedestrians. What would happen if we need to evacuate during an emergency? The neighborhood will not safely support an additional community of people fleeing the hills during a wildfire or flood.

Enduring 2 1/2 years of heavy construction is not something that we want to tolerate. We did not buy in a home in an exclusive neighborhood so that we could listen to construction noise. I also believe that it will negatively affect the environment; many raptors nest in the trees both in and around the tennis club and they will be adversely affected. The club is home to native plants and protected animals. What will be their fate?

Please do not continue with the development of the Tustin Hills Racquet Club - it is a direct violation of the neighborhood covenant and will forever alter the character of our beautiful neighborhood.

Thank you for your time and consideration.

Sincerely,
Annie and Shawn Beck
2151 Salt Air Drive

Canning, Kevin

From: Louis Burgener <lwburgener@gmail.com>
Sent: Monday, May 25, 2020 7:46 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Replacing Racquet Club with High-density Housing

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Reference: Tustin Racquet Club

Attn: Kevin Canning, OC Public Works
Development Services/Planning
601 N. Ross St.
Santa Ana, CA 92701

Dear Mr. Canning:

I have lived in North Tustin since 1979.

I strongly oppose replacing the Tustin Racquet Club with high-density housing. The racquet club is surrounded by expensive single-family homes. High-density housing would significantly reduce the value of those homes. High-density housing would also significantly increase traffic in the area.

Sincerely,

Louis W. Burgener
10982 Bent Tree Rd.
North Tustin, CA 92705
lwburgener@gmail.com
714-925-7214 mobile

Canning, Kevin

From: Janet bieler <rocknjen2@icloud.com>
Sent: Friday, May 22, 2020 8:44 PM
To: Canning, Kevin
Subject: Tustin racquet club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To additionsl housing in this area would cause an incredible amount of traffic hurt the environment and being safe for kids. A full environment studies should be done

Sent from my iPhone

Canning, Kevin

From: Janet bieler <rocknjen2@icloud.com>
Sent: Friday, May 22, 2020 8:46 PM
To: Canning, Kevin
Subject: Tustin racquet club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

additional housing in this area would cause an incredible amount of traffic hurt the environment and be unsafe for kids.
A full environment studies should Be done

Sent from my iPhone

Sent from my iPhone

Canning, Kevin

From: Megan Black <meg.intheblack@gmail.com>
Sent: Monday, June 1, 2020 2:05 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Megan Black

Canning, Kevin

From: Nancy Blank <nancy.p.blank@gmail.com>
Sent: Monday, June 1, 2020 5:28 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: No Zoning Change to THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi Friends and Family-

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Nancy Blank
THRC Member

Canning, Kevin

From: Denise Bolt <denisebolt@gmail.com>
Sent: Friday, June 5, 2020 3:12 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: OPPOSED to redevelopment of Tustin Hills Raquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To whom it may concern,

I am very opposed to the redevelopment of the Tustin Hills Raquet Club property. I live just down the street on Lerner Lane. I am very concerned with many aspects of this project. There is only one way in and out for traffic. The traffic going up Browning is already bad enough. To add high density housing will disrupt traffic of cars as well as bikes and pedestrians out for walks. It will be dangerous for emergency response to get in and out of the small loop road.

I have 4 children, all of which have taken tennis lessons at the Raquet Club. This is such a wonderful family neighborhood community asset. We enjoy going swimming there and we have also enjoyed many community events. We have gone to several Foothill High School Sports Banquets and Fundraisers there.

The loss of this community asset will greatly disappoint my children and myself.

Sadly this will also impact the current property values. Many people move to North Tustin to enjoy large lots and spacious yards, intentionally leaving the tract home style of living to South Orange County. We value our unique and special situation in North Tustin and would like to keep it the way.

Sincerely,
Denise M. Bolt

Canning, Kevin

From: Jay Boston <jay@bostonmcdermott.com>
Sent: Wednesday, June 3, 2020 7:21 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: FW: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Jay Boston

BOSTON-MCDERMOTT
CALIFORNIA || ARIZONA || NEVADA || OREGON || WASHINGTON || IDAHO

100 W. Main St.
Suite 8
Tustin CA 92780
714 812 8182

Canning, Kevin

From: Rich Botzbach <smylmkr@yahoo.com>
Sent: Monday, May 25, 2020 9:59 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Fw: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Kevin Canning at the County of Orange,

One of the reasons we bought our house more than 20 years ago, was the opportunity to walk to Tustin Hills Racquet club to play tennis. We soon discovered many other benefits as our kids grew up... they took swimming lessons at the club...they enjoyed attending school functions hosted at the club, mother-daughter teas, school fundraisers and meeting school friends at the club to swim. All four of my kids have enjoyed tennis summer camps and my two youngest who are freshman at Foothill have continued to play tennis in high school. Some member of our family is at the club almost everyday.

Having grown up in this area, I have seen many open spaces disappear. I remember in the late 1970's, early 1980's there were plans to put a toll road through Peter's Canyon. Thankfully the state legislature listened to the people and Peter's Canyon is now a wonderful park. It is a place to inhale deeply. Given the number of people there, especially on the weekends, I believe the county is in need of more open spaces not denser housing projects. Please listen to the people and keep the current agricultural zoning for the Tustin Hills Raquet Club. Please don't take this space away. It is a place for the people of Orange County to breath.

The proposed development is out of character for the neighborhood. Building second story condominiums next to single story homes is out of character for the neighborhood. The single story homes that line the perimeter of the Racquet club will have their privacy invaded by having second story condominiums peering over their property. The proposed development plans would change the character of this neighborhood.

Six months ago, I contacted the OC transportation department because when I drive out of our neighborhood, exiting Racquet Hill Road onto Skyline I had a near miss traffic collision due to traffic coming up Skyline. This development of adding 107 cars to the neighborhood will increase this issue and definitely create safety issues. The proposed development would put the most dense housing in the middle of the entire neighborhood causing a huge increase in traffic in a residential area creating safety issues. While the Racquet club has the potential to have maybe 100 cars parked there, it rarely sees that number. Most days the number of cars at the club is well under 20. Thus the proposed development will cause a huge increase in daily traffic. What would happen if there was a fire? Would the increase in the cars necessitate a traffic light? Definitely not the character of this neighborhood.

One of the things we enjoy in our neighborhood is walking our dog. There is a walk way through the back of the club (off Racquet Hill Rd) that we enjoy passing through so that we can walk around Pavillion Dr. According to the proposed development this walk way would be blocked. So for us to walk our dog we would have to walk down Skyline, which has more and faster traffic. (Honestly not

comfortable walking with our kids and dog on Skyline due to traffic). There are no sidewalks around the Racquet club neighborhoods. When neighbors walk their dogs they walk on the side of the street. The increase in traffic will cause significant safety issues as the cars and pedestrians collide.

At the Foothill Community Association in March 2020, Lisa Ohlund (OC Water District) spoke and encouraged residents to conserve water. She explained that if our water usage increases it will put our area in a higher billing bracket because water will need to be brought into this area at a higher cost. This would increase everyone's water bill in our area. She acknowledged that our area has already done a fantastic job of conserving water but that we need to continue as we are at risk of having a higher water pricing bracket. Water is a limited commodity in our community and a high density development will make matters worse for everyone. Approving such a project would be neglecting the drought issues this county faces.

Sincerely,
Pam Botzbach, MD
Rich Botzbach, DDS

Canning, Kevin

From: richard & yvonne botzbach <rybotz@yahoo.com>
Sent: Tuesday, May 26, 2020 12:47 PM
To: Canning, Kevin
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Kevin

We are friends of the many racquet club users. It is such a beautiful area to visit and watch our grandkids take advantage of the club activities. Please keep the facilities open for all to enjoy.

Dick and Yvonne Botzbach

Canning, Kevin

From: Bari Brennan <barigal@pacbell.net>
Sent: Wednesday, June 3, 2020 9:09 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am writing in opposition of the proposed residential development of the Tustin Hills Racquet Club location. I grew up within walking distance of the club, however not within the Simon Ranch development we know as Red Hill Ridge. My father played tennis at THRC for about 50 years (until age 91), and we held his surprise 75th birthday party there.

So, it goes without saying that I am very unhappy at the prospect that the club will be redeveloped. However, it is difficult to understand how a project with the density of almost 3.5 times that of the surrounding neighborhoods is under consideration. The Environmental Document describes a common interest development of duplexes surrounded by a wall that is at one point 12.5" in height. This sounds nothing like the surrounding neighborhood of stately single story homes which stand on enormous and beautifully landscaped lots. The nature of the development is completely out of character for this area in particular. I don't think that there are ANY attached unit dwellings or CIDs within this area of North Tustin, certainly none that are nestled into such a distinguished neighborhood.

When previous variances have been granted the developments were located near major streets (such as Red Hill Ave.) This is not the case with the proposed development. There is only one way in and out of the Red Hill Ridge neighborhood; the resulting increase in traffic would be detrimental to the existing residents of the neighborhood, and a very real danger could result if there is need for evacuation. The plan calls for streets not wide enough to permit parking on both sides, and this is another example of a potential risk to safety. A fire truck cannot get through on a narrow street when someone chooses to park illegally.

The plan describes the intended demographic to be residents who are "downsizing but want to stay in the area". To further bolster this claim the homes are designed with ground floor master bedrooms, so that with all living on the first floor the resident doesn't have to negotiate stairs. If the intended residents are downsizing and not wishing to risk stairs, then perhaps this development should be designated as age restricted, and therefore priced appropriately as such for our ever increasing aging population? This would help to ensure that the number of car trips would actually be less than that of the sleepy racquet club. What will actually result is families with multiple cars and multiple car trips zooming up and down Browning Avenue and Beverly Glen to the school, to the youth sports, and back. The report states that there is no actual factor identified for tennis court use, so an alternative factor (for a recreational community) was used, instead. A study of the actual traffic generated by THRC should be conducted in order to determine a factual baseline. The courts are seldom full; if they were full this conversation would not be necessary.

Because no one in Orange County parks in their garage (unless the CC&Rs require it AND the association enforces it, the 18' driveways will be full and overflow parking will spill over onto Simon Ranch and Pavilion, where sightlines are already blocked by curves and hedges. We see it all over as families double up to economize or adult children return to the nest with their own families, why think that this will be any different? The environmental document states that the project would generate approximately 12 additional students to the school district (TUSD). I think that this is a serious underestimate of what will actually occur because the development will not be age restricted and the residences will be occupied by families, not "downsizing" empty nesters.

The developer can provide a report prepared to make it appear that the proposed project will cause no harm and create something perceived as needed, but it does nothing to address that the proposed development is completely alien to the surrounding area. The proposed development will have a serious negative impact on those who made their homes in what has always been an incredibly desirable area of North Tustin.

Thank you for your time and consideration.

Bari Brennan

Canning, Kevin

From: britts6@aol.com
Sent: Thursday, June 4, 2020 6:40 PM
To: Canning, Kevin
Subject: Letter responding to Proposed Mitigated Negative Declaration re: Tustin Hills Racquet Club Property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kathy and John Brittingham
THRC Members and neighborhood residents
12082 Theta Rd
Santa Ana, CA 92705
britts6@aol.com

June 4, 2020

Dear Kevin,

My husband, John, and I have been residents of the neighborhood about 1/2 mile below THRC off of Browning Avenue for 32 years. When we moved to Theta Rd. our children were 4,6,8 and 10, three boys and a girl. We joined Tustin Hills Racquet Club within the year and our whole family grew up playing tennis at the club. My husband and I played together, and in Summer League with others and our circle of friends grew when we barbequed together on summer nights after our matches, something we loved. All four of our children took lessons from Tim Pawsat, and so did John and I for many years.

I got involved in daytime tennis leagues when our youngest was in morning Kindergarten and I had a few precious hours to spend outdoors playing the game I grew to love; in fact I would say it became a healthy wonderful addiction- and it still is and I'm now 68 years old. I've never stopped my League competition in several Leagues and look forward to three days of tennis a week at THRC during the season every year, and fun summer play in the off season.

We've had opportunities to consider living other places but nothing compares to our ranch style home on 1/2 acre, so private feeling and quiet with wonderful neighbors on a double ended cul-de-sac. In fact, in the face of the covid virus we treasure our community even more. We walk on our quiet wide streets, often in pairs, and easily distanced from our neighbors as our relationships grow stronger on our socially distanced walks.

It is unthinkable that our tennis club, which has been such a perfect combination of outdoor exercise, family fun and social interactions would be replaced with 34 single-family townhomes and 3 single-family units, crowded together on our wonderful, open THRC space, in complete disregard to the half acre lots we are zoned for. We don't want to lose the tennis club but if you want to build single family homes on half acre lots we would have a hard time objecting to your redevelopment plans.

As currently envisioned your proposed development plan would have a significant adverse effect on our North Tustin neighborhood and, the well-being of the community.

We are unequivocally opposed to the zoning change you seek. We urge Dave Beauchamp to invest his money elsewhere.

Sincerely,

Kathy and John Brittingham

Canning, Kevin

From: Michele Brooks <jcbrooks@aol.com>
Sent: Monday, June 1, 2020 10:08 AM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club property concerns

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mssrs Canning and Watilo

I am a resident at 11612 Plantero Drive, North Tustin, which is about ¼ mile from the Tustin Hills Racquet Club.

I oppose rezoning the property to high density (Condo). That would be inconsistent with the estate sized lots in the greater surrounding area.

An EIR should be conducted to determine the impact on wildlife, traffic, schools, water, emergency services and the amount of open space remaining.

The North Tustin Advisory Committee should be consulted for recommendations before any decisions are made.

Very truly yours,

Michele L. Brooks
11612 Plantero Drive, North Tustin, California

Canning, Kevin

From: Brian Bullard <brian.d.bullard@gmail.com>
Sent: Wednesday, June 3, 2020 7:55 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com; Carrie Bullard
Subject: CEQA Initial Study Proposed Mitigated Negative Declaration (No. PA-180034) - Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Thank you for the opportunity to comment on CEQA Initial Study Proposed Mitigated Negative Declaration (No. PA-180034) ("MND"). Please be advised that we oppose any zoning changes to the Tustin Hills Racquet Club property located at 11782 Simon Ranch Road, Santa Ana, CA 92705 (hereinafter "THRC"). This zoning has been in place since before the Racquet Club was built in 1958 and changing the zoning will be catastrophic to the North Tustin community.

A. Opposition to Proposed Rezoning of THRC Property:

We live at 2232 Racquet Hill which is adjacent to the THRC at the North East corner of the property. Our back yard looks over the THRC property with two tennis courts directly behind our property. We purchased this home in North Tustin seven years ago because of the larger lot sizes, quiet neighborhood and because the area was already built out. This area had already been significantly "developed" when the Racquet Hill streets were completed in 1976. We specifically purchased our home on Racquet Hill, adjacent to the Racquet Club, because of the open space and recreational opportunities it provides to our family, such as tennis, swimming and walking.

When purchasing our home, we relied upon the County of Orange's zoning of the area, with its large lot sizes and specifically the zoning of the THRC as agricultural/recreational. We were comfortable that the THRC property next to our home could not be redeveloped for housing. We never imagined the THRC would be, or could be, rezoned and redeveloped into high density housing. Had rezoning and redevelopment been a likely possibility, it would most certainly have impacted the price we were willing to pay for the property. Many of our neighboring homeowners have similarly relied upon the County's zoning when purchasing their homes here. The current zoning must be protected to preserve the unique character of the area, our property values and the amenities and recreational uses provided by the THRC property.

We previously owned another home on the street which was also adjacent to the THRC for 7 years prior to purchasing our current home. In total, we have been neighbors of the THRC for the past 14 years and appreciated all of the opportunities for recreation and gatherings that the THRC affords. We have been members of the THRC with swimming rights and enjoyed teaching our older son to swim in the THRC swimming pool.

THRC serves the community at large by hosting tennis matches, camps for children, swimming lessons and family pool memberships. The banquet facility also provides an affordable alternative to other Orange County venues which are either too large or too expensive for Weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras / Quinceneros, school events and other functions, such as funerals, school and sports team fundraisers and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community.

The Developer, Ranch Hills Partners, LP's partners, principals and employees (hereinafter the "Developer") are not citizens of North Tustin and do not have a vested interest in our community except to maximize its profits by squeezing in as many homes as possible on the THRC property. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses which consist of large half acre lots. The construction (anticipated to last for over 2 years) and the high-density housing will negatively impact our home and the entire area by eliminating several recreational uses and open space in the area (which is already lacking), increasing noise, dust and traffic and placing a strain on resources. Building high density housing behind our home will also result in years of construction, dust and noise and greatly reduce the quiet enjoyment of our home and yard. It will also have a dramatic effect on the short- and long-term value of our home.

The Developer disingenuously claims it is building these condominiums to address a claimed need for housing for "active adults of 55 years and older" in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anecdotal needs for this type of housing in this area. Ironically, the proposed development consists of two-story condos which is difficult for older adults to live in. Additionally, there is no access to public transportation or nearby amenities such as grocery or other stores that can be accessed by older citizens without driving. This does not seem to be a suitable location for the proposed development. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. The THRC property is zoned for agricultural/recreational uses and the owner of the Club was aware of this when he purchased it. The zoning must not be changed without substantial justification and maximizing profits for a small group of out of town Developers is not a substantial justification that warrants this significant change in use which will be detrimental to the community.

B. Opposition to the County's Adoption of the Mitigated Negative Declaration:

First and foremost, we are opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes, the proposed changes are inconsistent with the surrounding neighborhoods and there is no substantial justification for the change. However, if a zoning change is still being considered, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. The baseline for considering any environmental impact is its current use (a tennis club) and as such an Environmental Impact Report will show significant impacts because of the proposed change to high density housing.

1. Increased Traffic:

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. From reviewing the MND it appears that in order to develop its car trips into the THRC, the Developer assumes all 11 and ½ tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used every day. This is simply not the case. There are cars coming into the parking lot at select times of the day, but not continuously all day and all night, especially since THRC closes and its gate is locked each evening. The Developer claims his Ranch Hills Project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developer's assumptions are in inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Outside of peak morning and evening hours, most of the day there is little activity at THRC.
- (3) The banquet facility is not used every day. There are limited numbers of events at the banquet facility each month and those are usually limited to weekend use.

(4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the THRC during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high-density housing. As an adjacent property owner, I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high-density housing. We believe the proposed new high-density housing will increase traffic in the area for the following reasons:

(1) Traffic volumes for the current club use is much lower than claimed by the Developer.

(2) The residents of the proposed 37 condominiums will have at least 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are designed to have 2 to 3 bedrooms with bonus rooms and home offices).

(3) The Developer is planning for the condominium units to have 2 car garages and allow for 2 cars to be parked in the driveways and also allow for on street parking.

(4) We are concerned that the high-density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the development on neighboring streets which will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot which has always been able to handle the number of vehicles for its users.

(5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high-density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on the windy roads leading to the single access point for the proposed development raise major safety concerns for all residents.

There are significant questions regarding the Developer's traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study to determine the actual ADTs generated by the current club use, so the severity of the new planned use can be determined and mitigated.

2. Cumulative Negative Impacts:

The MND inaccurately states there would be "less than a significant impact" caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station (Project CIP No. 60114). This project just started in March of 2020, rather than "spring of 2017" as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in "spring of 2017" illustrates the many flaws and inaccuracies of the data and conclusions contained in the Ranch Hills Developer's MND.

The Simon Ranch Reservoir and Booster Pump Station project alone generates increased and significant noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hills Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hills development starts, this potentially subjects the surrounding area to

4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough environmental impact review.

The Reservoir project has already significantly impacted the resident's quiet enjoyment of their properties; we cannot imagine what will happen if the Ranch Hills Development is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment, vehicles and construction. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of "rock crushers" and construction of 37 condominium units over three phases during two and half years of construction. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further amplified by our need to work from home for at least the next 18 months due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large projects, especially when the Ranch Hills Development is not consistent with the neighborhood, is not a permitted use under the current zoning and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. This is too much for this once peaceful neighborhood.

3. High Density Housing Will Eliminate North Tustin's Only Open Space, Limit Recreational Uses and Impact Aesthetics:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, an exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the Club is open to any member of the public who would like to join.

Additionally, the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian pathway between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic throughout the surrounding area rather than concentrating walkers on the same streets. We walk our dog every night often walking through the public access path that utilizes the THRC parking lot to traverse the neighborhood. The proposed Development will create a situation where there is only one way in and one way out for pedestrians. This also creates a safety concern for emergency evacuations because it will eliminate another potential pedestrian evacuation route. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also impact the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will now have houses and roof tops to look at, rather than the open space provided by the current use and zoning. This is a significant impact on the aesthetics of the neighborhood.

4. Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is "developed," it was built over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. This is to name just the wildlife I have personally observed. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we

believe will have a more significant impact on local wildlife than is outlined by the MND and should be the subject of a formal Environmental Impact Study.

5. Potentially Inaccurate Property Map Used

The development plans provided do not appear to properly reflect the property line between our property and the THRC. We recently had a survey done in preparation for submitting plans to renovate our back yard. The property line delineated in the submission by Ranch Hill Partners shows the property line as being adjacent to the edge of the drainage ditch that runs through the back of our yard. The actual property line, however, is several feet away from the drainage ditch and is approximated by the existing chain-link fence between our property and the THRC. We believe any consideration of a zoning change must start with an accurate site plan that has been surveyed by an independent professional.

6. Other Concerns Regarding Increased Strain on Local Resources, Safety Concerns and Pollution:

Both during construction and after construction, this project will place a significant strain on the North Tustin area, which must be fully reviewed and understood. Some of the other concerns we have that have not been fully studied are:

- a. Increased demand for police and fire services.
- b. There will be an increased noise (both during construction and thereafter) due to the construction of an additional 37 more homes, increased traffic and corresponding greenhouse gasses and higher water usage.
- c. Increased pedestrian and vehicular traffic at all hours create safety hazards and concerns for both drivers and pedestrians since the surrounding streets which have no sidewalks.
- d. Increased lighting impacts with the addition of streetlights and houses. Unlike the Racquet Club which closes, the housing lighting will be 24 hours a day.
- e. The Development will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion and reduce possible evacuation routes, when evacuation of the area is necessary in times of wildfires and earthquakes.
- f. Water quality concerns due to increased pollution from storm water runoff from the added streets (the addition of cul-de-sacs and roads) and vehicular traffic.
- g. Increased greenhouse gas emissions from construction and increased traffic.

In summary, the THRC property should not be rezoned and redeveloped. This will destroy a valuable community asset; it will change the special nature of the adjacent neighborhood and North Tustin at large by allowing for "spot rezoning" for high density housing. It will increase noise and traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the lack of a substantial justification by Ranch Hills Partners for the rezoning and the significant impact on the current residents of the area. However, if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer's rezoning request cannot be done without a complete and accurate Environmental Impact Study and Report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Respectfully submitted,

Brian and Carrie Bullard

2232 Racquet Hill

Santa Ana, CA 92705

Canning, Kevin

From: Thomas Bulowski <thomasbulowski@yahoo.com>
Sent: Wednesday, June 3, 2020 11:28 AM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Ranch Hills Community File No. 18-0034

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Good morning gentlemen,

As a home owner with one of the homes that directly backs up to the Tustin Hills Racquet Club("THRC") and located at the front gate entrance, **we strongly oppose the re-zoning and re-development plan of the THRC.**

When we first purchased our home, our family was drawn to the beauty of the upscale neighborhood, the majestic views with all of the palm tree's, the large 1/2 acre lots with non identical looking homes, a safe, quiet and peaceful neighborhood with limited traffic flow. Unfortunately now all of the above points are in jeopardy with the city's consideration of rezoning to allow the construction of 37 high density non neighborhood conforming townhomes of much less value.

Our family is extremely concerned about the possible rezoning for several reasons 1) the townhomes and their proposed 5,000 sq ft lot sizes are vastly smaller and not consistent with our typical 1/2 acre lot sizes and will negatively impact our current home values and views with new 25ft townhomes in our backyard 2) the traffic impact with 37 new homes will be significant with increased noise, congestion and safety, especially given the large number of family's with children and the numerous residents that walk on a daily basis with their pets. Living near the front gate entrance, with the narrow gate entrance and only one way in/one way out, there is not enough room for 2 cars to safely pass each other, not to mention adequate space for first responders should a fire or other catastrophe arise, there is no other way to access this area, 3) the beauty of the surrounding area that can be viewed from not only our home, but from all other homes and from all streets would be in jeopardy with the environmental impact with added pollution, not too mention the numerous species of birds that currently call the palm tree's home, 4) having our home located directly at the proposed community entrance, more and new street lights would shine directly into our bedroom windows, not to mention the added noise of traffic at all hours of the day, unlike the current club hours.

Don Wagner has pledged his opposition against the re-zoning both verbally and in writing numerous times and we will continue to ask for his support to educate his fellow supervisors why preserving the THRC is so important to our community.

Our area is such a precious and beautiful location and one that we are proud to call home and we want to keep it that way. However we also understand the issue at hand

and are fully supportive of either keeping the club as is for the surrounding neighborhoods to enjoy or to build custom homes on 1/2 acre lots consistent with character, quality and home values of our neighborhood. As an adjacent neighbor to the THRC, we would be open to discussing possible alternatives with the new owner, but until that happens, we are opposed to the rezoning and ask that you do not consider the Mitigated Negative Declaration.

Sincerely,

Thomas and Tiffany Bulowski
2121 Valhalla Dr
949-525-2639

Canning, Kevin

From: Gmail <kecaiozzo@gmail.com>
Sent: Sunday, May 31, 2020 4:12 PM
To: Canning, Kevin
Subject: THRC - NO REZONE

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Kris Caiozzo

Canning, Kevin

From: LeoraCane.com <leora@leoracane.com>
Sent: Saturday, May 30, 2020 2:58 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Redevelopment of Tustin Hills Raquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning:

My husband and I purchased our property at 2082 Omega Drive almost 20 years ago. As I am sure you are well aware, the properties in our neighborhood are very special as it relates to offerings of housing in the general sense. Most homes in the area sit on 1/2 acre, or more, lots, some have views and many have one story ranch homes. All have been custom built. NO tract homes in this area.

We strongly object to the planned redevelopment of the Tennis Club. The area will suffer irreparable harm which includes substantial increase in traffic and noise. Further there would be safety concerns as in the case of an emergency as the additional population would effect the ability to evacuate safely. Also the new lighting in the development would create light pollution.

Most importantly, the charm and uniqueness of the area would be forever lost . As such the values in our homes would decline .

Please reject this development plan. We do not live in tract homes. We do not live in Irvine. This is not planned community living. Please do not allow this type of development to proceed.

What makes more sense is a developer that cares about the surrounding neighborhood and its unique character. As such we reject this proposal.

Leora and David Cane

Kind Regards,
Leora Cane, ASID

Leora Cane Design & Decoration
714.402.07617

Canning, Kevin

From: Lisa Capps <lisacapps@cox.net>
Sent: Tuesday, June 2, 2020 5:14 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Ranch Partners, LP's zoning change and request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Thank you for the opportunity to comment on CEQA Initial Study Proposed Mitigated Negative Declaration (No. PA-180034) (“MND”). Please be advised that I oppose any zoning changes to the Tustin Hills Racquet Club property located at 11782 Simon Ranch Road, Santa Ana, CA 92705 (hereinafter “THRC”). This zoning has been in place since before the Racquet Club was built in 1958 and changing the zoning will be catastrophic to the North Tustin community.

A. **Opposition to Proposed Rezoning of THRC Property:**

My family and I live on Racquet Hill (the street is aptly named because of the THRC) and our home is adjacent to the THRC. We purchased this home in North Tustin seven years ago because of the larger lot sizes, quiet neighborhood and because the area was already built out. This area had already been significantly “developed” when the Racquet Hill streets were completed in 1976. We moved from **Irvine to North Tustin** because of North Tustin’s unique character and environment of less dense housing and single family residents on larger lots. Moreover, we specifically purchased our home on Racquet Hill, adjacent to the Racquet Club, because of the open space and recreational opportunities it provides to my family, such as tennis, swimming and walking.

When purchasing our home, we relied upon the County of Orange’s zoning of the area, with its large lot sizes and specifically the zoning of the THRC as agricultural/recreational. We were comfortable that the

THRC property next to our home could not be redeveloped for housing. We never imagined the THRC would be, or could be, rezoned and redeveloped into the very same high density housing we moved away from in Irvine. This is not a criticism of Irvine, but planned communities with high density housing such as Irvine also plan for open space, parks and other recreational facilities. North Tustin is not a planned community with a master plan and CCR's to govern property uses and provide for important things like open space, parks, pools and recreational facilities, rather we **only have the County's zoning to rely upon**. Much like my family, the other neighboring homeowners have similarly relied upon the County's zoning when purchasing their homes here. The current zoning must be protected to preserve the unique character of the area, our property values and the amenities and recreational uses provided by the THRC property.

Our family is a member of the THRC and enjoys all that it offers both to its members and the local community. Our use of the facility includes tennis, the pool, children's camps and the banquet room for school functions, meetings and other special events. My wife also belongs to a tennis league through the THRC which plays against other tennis leagues from surrounding Orange County communities. We have also played together in "couples leagues" organized through the Club. If THRC is rezoned for condominiums, the THRC will be closed and this will require THRC users to drive to other cities such as Anaheim, Irvine or Yorba Linda (as the closest) to play in leagues. This will eliminate my wife and likely other tennis players' ability to play regularly because these other tennis facilities are too far to travel to while juggling busy family and work schedules. Rezoning the property will force our neighbors to seek recreation in other cities and eliminate this valuable community gathering place that is so vital to providing a sense of community within North Tustin.

THRC serves the community at large by hosting tennis matches, camps for children, swimming lessons and family pool memberships. The

banquet facility also provides an affordable alternative to other Orange County venues which are either too large or too expensive for weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras / Quinceneros, school events and other functions, such as funerals, school and sports team fundraisers and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community.

The Developer, Ranch Hills Partners, LP's partners, principals and employees (hereinafter the "Developer") are not citizens of North Tustin and do not have a vested interest in our community except to maximize its profits by squeezing in as many homes as possible on the THRC property. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses which consist of large half acre lots. The construction (anticipated to last for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several recreational uses and open space in the area (which is already lacking), increasing noise, dust and traffic and placing a strain on resources. Building high density housing behind our home will also result in years of construction, dust and noise and greatly reduce the quiet enjoyment of our home and yard. It will also have a dramatic effect on the short and long term value of our home.

The Developer disingenuously claims it is building these condominiums to address a claimed need for housing for "active adults of 55 years and older" in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anecdotal needs for this type of housing in this area. Ironically, the proposed development consists of two story condos which is difficult for older adults to live in. Additionally, there is no access to public transportation or nearby amenities such as grocery or other stores that can be accessed by older citizens without driving. This does not seem to be a suitable location for the proposed development. Moreover, it does

not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. The THRC property is zoned for agricultural/recreational uses and the owner of the Club was aware of this when he purchased it. The zoning must not be changed without substantial justification and maximizing profits for a small group of out of town Developers is not a substantial justification that warrants this significant change in use which will be detrimental to the community.

B. **Opposition to the County's Adoption of the Mitigated Negative Declaration:**

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes, the proposed changes are inconsistent with the surrounding neighborhoods and there is no substantial justification for the change. However if a zoning change is still being considered, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. The baseline for considering any environmental impact is its current use (a tennis club) and as such an Environmental Impact Report will show significant impacts because of the proposed change to high density housing.

1. **Increased Traffic:**

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. From reviewing the MND it appears that in order to develop its car trips into the THRC, the Developer assumes all 11 and ½ tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used every day. This is simply not the case. There are cars coming into the parking lot at select times of the day, but not continuously all day and all night, especially since THRC closes and its gate is locked each evening. The Developer claims his Ranch Hills Project

will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developer's assumptions are in inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Outside of peak morning and evening hours, most of the day there is little activity at THRC.
- (3) The banquet facility is not used every day. There are limited numbers of events at the banquet facility each month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the THRC during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner, I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have at least 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are designed to have 2 to 3 bedrooms with bonus rooms and home offices).

(3) The Developer is planning for the condominium units to have 2 car garages and allow for 2 cars to be parked in the driveways and also allow for on street parking.

(4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the development on neighboring streets which will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot which has always been able to handle the number of vehicles for its users.

(5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on the windy roads leading to the single access point for the proposed development raise major safety concerns for all residents.

There are significant questions regarding the Developer's traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study to determine the actual ADTs generated by the current club use, so the severity of the new planned use can be determined and mitigated.

2. **Cumulative Negative Impacts:**

The MND inaccurately states there would be "less than a significant impact" caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station (Project CIP No. 60114). This project just started in March of 2020, rather than "spring of 2017" as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC

on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in “spring of 2017” illustrates the many flaws and inaccuracies of the data and conclusions contained in the Ranch Hills Developer’s MND.

The Simon Ranch Reservoir and Booster Pump Station project alone generates increased and significant noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hills Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hills development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough environmental impact review.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hills Development is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment, vehicles and construction. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units over three phases during two and half years of construction. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure

the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large projects, especially when the Ranch Hills Development is not consistent with the neighborhood, is not a permitted use under the current zoning and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. This is too much for this once peaceful neighborhood.

3. **High Density Housing Will Eliminate North Tustin's Only Open Space, Limit Recreational Uses and Impact Aesthetics:**

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, an exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the Club is open to any member of the public who would like to join. Additionally the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian pathway between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic throughout the surrounding area rather than concentrating walkers on the same streets. The proposed Development will create a situation where there is only one way in and one way out for pedestrians. This also creates a safety concern for emergency evacuations because it will eliminate another potential pedestrian evacuation route. The

Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also impact the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will now have houses and roof tops to look at, rather than the open space provided by the current use and zoning. This is a significant impact on the aesthetics of the neighborhood.

4. **Impact on Wildlife:**

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was built over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. This is to name just the wildlife I have personally observed. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe will have a more significant impact on local wildlife than is outlined by the MND and should be the subject of a formal Environmental Impact Study.

5. **Other Concerns Regarding Increased Strain on Local Resources, Safety Concerns and Pollution:**

Both during construction and after construction, this project will place a significant strain on the North Tustin area, which must be fully reviewed and understood. Some of the other concerns we have that have not been fully studied are:

- a. Increased demand for police and fire services.
- b. There will be an increased noise (both during construction and thereafter) due to the construction of an additional 37 more homes, increased traffic and corresponding greenhouse gasses and higher water usage.

- c. Increased pedestrian and vehicular traffic at all hours create safety hazards and concerns for both drivers and pedestrians since the surrounding streets which have no sidewalks.
- d. Increased lighting impacts with the addition of street lights and houses. Unlike the Racquet Club which closes, the housing lighting will be 24 hours a day.
- e. The Development will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion and reduce possible evacuation routes, when evacuation of the area is necessary in times of wildfires and earthquakes.
- f. Water quality concerns due to increased pollution from storm water runoff from the added streets (the addition of cul-de-sacs and roads) and vehicular traffic.
- g. Increased greenhouse gas emissions from construction and increased traffic.

In summary, the THRC property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the adjacent neighborhood and North Tustin at large by allowing for “spot rezoning” for high density housing. It will increase noise and traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the lack of a substantial justification by Ranch Hills Partners for the rezoning and the significant impact on the current residents of the area. However, if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer’s rezoning request cannot be done without a complete and accurate Environmental Impact Study and Report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Respectfully submitted,

Lisa M. Capps

1992 Racquet Hill

Santa Ana, CA 92705

949.355.5478

Canning, Kevin

From: Gregory Carbone <gacarbone@cox.net>
Sent: Wednesday, June 3, 2020 8:07 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Raquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Gregory Carbone

Canning, Kevin

From: Heather <4heathercarroll@gmail.com>
Sent: Sunday, May 31, 2020 6:44 PM
To: Canning, Kevin
Subject: Long live THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Add me to your long list of opponents to the redevelopment of Tustin Hills Racquet Club.

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes. The current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. Please understand this side and join us in the correct decision.

With respect,
Heather Carroll

Canning, Kevin

From: Dan & Nancy Chapel <chapel@cardwellhillwine.com>
Sent: Wednesday, June 3, 2020 4:29 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com; Dan & Nancy Chapel
Subject: Ranch Hill Community

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Good Morning Kevin,

I am writing with reference to my opposition to the development PA180034/TTM18119. More specifically I wish to state that there exists a real need for a detailed professional Environmental Impact Report. This report needs to be submitted to our local community for review and analysis. Then fully detailed mitigation steps need to be made available to the community to review.

I am setting forth those reasons in the following remarks. My wife and I purchased our home at 2181 Racquet Hill in 1976. We were drawn to this area because of the large lots and rural ambience of North Tustin. We have remained in our home for the same reasons. We have no desire to be surrounded by multiple occupant dwellings that are squeezed onto tiny lots. We pay a premium for this privilege. Developments such as the Ranch Hills Community have no place in our neighborhood. Nor are we interested in enduring the ceaseless dust, dirt, noise, danger and disruption of the construction of this project.

Foremost in our minds with reference to danger is the dramatic effect this construction project would have on the school children attending Tustin Memorial Academy located on Browning Ave. Construction and debris removal vehicles will use the route past this school for an extended period of time.

We have been informed that you have decided that no EIR is necessary for this proposed development. The community deserves data on the noise pollution, the air pollution and the visual pollution that the neighborhood would have to endure during and after construction. The permanent visual pollution is undisputable.

Further, it is well known that the gnatcatcher (a federally endangered species) is a resident of the area in question. The Bald Eagle is also a resident here. All of the noise, dirt, dust and odors would be a negative factor in the lives of these fragile birds. This fact alone should dictate a formal EIR. The Audubon Society of Orange County has been active in the past in opposition to construction projects that wreak havoc in the lives of federally endangered birds.

The local community of home owners deserve to review numerous plans and details regarding this project.

Tons of debris will be removed in the destruction of tennis courts, swimming pool, relatively large building, parking area, and vegetation removal.

Re-grading of the entire property will also create more debris. How long will this last and how many trucks per day. What route will trucks follow?

We need a plot plan showing the location of buildings, parking areas, walkways and vehicle access for weekly trash removal and maintenance equipment.

The plot plan needs to be dimensionally correct and define the percentage of the area devoted to buildings and paved areas. It needs to define the percentage of area not covered and thus devoted to landscaping and vegetation. It also needs to define the percentage reduction in vegetation relative to the current situation

We need a construction access plan showing routing of phone lines, power, fresh water and waste water lines. Show tie in points with existing services.

Define any upgrades of existing services to compensate for the increased loads caused by adding proposed facilities.

Define routing of open trenches and duration that they remain during construction. Discuss mitigation plans. Define number of residences to be impacted. There is considerable concern that a very large number of residences on side streets in the area would be impacted. If utility lines need to be trenched far down Browning Ave. then hundreds of families and traffic aspects would be impacted.

Define how heavy rain water will be controlled and discharged. Show mitigation plan how heavy rain water from the area heavily covered by buildings and paved surfaces will not flow onto existing homes and streets.

What is the perimeter design and architectural plan? What features will be designed and built near the property line of existing residences? Each home owner must have a say in what features interface with their existing property.

Where will the debris be discharged? Who will be impacted? Who pays for the right to dump debris?

How long will the project take? How many construction vehicles per day? How many heavy load -long bed trucks will need access to the site?

Will long bed loads arrive at night? How many? How will long load beds be controlled during the day.

What methods to control noise and air pollution? What methods to allow residences to have unobstructed early morning and end of the day vehicle traffic? What methods to respond to heavy residential traffic near the Tustin Memorial Academy in the morning and mid afternoon?

Define long term vehicle traffic of the residents from the proposed units and all of the support services needed to service well over 100 new residents in our area. Will school children be picked up from the units? If so, how?

We wish to also mention the issue of making arbitrary zoning changes to suit the needs of developers. Why establish zoning criteria if they can be changed at the whim of a given builder? We the residents in the area have a right to vote on such basic changes.

Lastly we want to mention the adverse financial effect this development will have on our property. What right does this builder have to enrich himself at our expense as our properties have reduced value due to high density residential additions.

As a registered Chemical Engineer in the State of California, it is my strong opinion that this project clearly needs a detailed Environmental Impact Study and Report and all appropriate follow-up reviews and analysis. Finally, the local residents must have a say if the proposed project is to proceed.

I have had related experience in refinery and petrochemical projects in CA, TX, NJ, OK, MI, IL, AK and international projects on 6 continents.

The citizens of North Tustin deserve full disclosure and an opportunity to critique and correct adverse impacts that are within the heart of our community.

The proposed action to by-pass this right must be stopped and proper procedures and disclosures followed.

Dan Galliver Chapel
Registered Professional Chemical Engineer, California CH2744
B.S. Engineering(chemical), B.S. Chemistry, M.S. Chemical Engineering

Home residence since purchase in 1976
2181 Racquet Hill Drive
North Tustin, CA 92705

Dan and Nancy Chapel
Business Owners
Cardwell Hill Cellars
24241 Cardwell Hill Dr.
Philomath, Oregon 97370
541.929.9463 office
714.315.7622 cell



Canning, Kevin

From: LORI LEWIS CHEW <lorichew98@gmail.com>
Sent: Friday, June 5, 2020 3:18 PM
To: Canning, Kevin
Cc: Kirk Watilo
Subject: Rezoning Proposal for the Tustin Hills Racquet Club Site

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin –

We have been North Tustin residents for the past 17 years and moved here specifically for its distinctive, rural quality over “planned communities” found in many of the surrounding areas. North Tustin is extraordinary and highly sought after by people like us wanting space and quiet neighborhoods.

After reviewing the Mitigated Negative Declaration for the proposed condominium development, we have several serious concerns:

Traffic

We lived at the northeast corner of Browning Avenue and La Colina Drive when we first moved to North Tustin. We bought our house on a Sunday afternoon, having no idea of the traffic patterns occurring at this corner – particularly during commute hours. Shortly after moving in, we became profoundly aware that this is a hectic commuter route for residents traveling to and from the freeways into the foothills. As our young daughter grew and began playing outside, we became more concerned about her safety and put up a fence and hedge to protect her and our pets from speeding drivers. Despite CHP officers often monitoring and ticketing drivers at this intersection, traffic continues to be a huge safety issue in the neighborhood. Case in point – one afternoon, a car traveling at a much higher speed than permitted failed to stop at the stop sign (another often occurrence), hit the ditch at that intersection and lost control. The driver took out the stop sign in front of our house, drove up and across our driveway, and then on to our neighbors' property, taking out their mailbox and...kept going. Had my daughter been playing on the driveway as she often did, she would have been killed. It was at this point we decided to move off this busy street to a quieter location off of SE Skyline.

Having lived at the corner of Browning and La Colina (a principal traffic route to the property) for 15 years and being a member of the tennis club for nearly as long, we have excellent first-hand knowledge of traffic at both locations. The traffic study included in the MND is inaccurate in its assumptions for the existing use and therefore produces grossly misleading results. To suggest the addition of 37 new homes in this pocket of homes will produce 200 fewer traffic counts daily than the club is wildly false and out of touch with actual traffic patterns.

We now live in the foothill area served by SE Skyline and Beverly Glen Drive near the tennis club. Unlike Browning Avenue and La Colina Drive, streets in the foothill neighborhoods are narrow and windy, do not have sidewalks, and have very few streetlights. They were not intended for high-density residential traffic but for the more rural housing that exists. Our now 12-year old daughter often rides her bike or walks our dog

along these streets, and the addition of 96 new drivers traveling along those roads will undoubtedly adversely impact the safety of our family and our neighbors'.

To conclude that a high-density residential condominium development placed on the infill club site will not adversely impact traffic and safety of North Tustin residents is either naïve or purposely misleading. If actual traffic counts are taken at the club site, instead of formulaic, hypothetical assumptions not reflective of its actual usage, the real adverse impact would be **evident and concerning to any County official**.

Zoning

Like most North Tustin residents, we chose this neighborhood for its large lots and open space. We looked at many other communities when deciding where to live and raise our family, and North Tustin was far and away the most attractive to us for this reason. Having lived in other areas within the County, we couldn't believe this community existed in the heart of Orange County. However, the downside of this community is that we have no city council to represent and safeguard our interests. While we have a detailed zoning code, it appears that outside developers have been successful at obtaining zone changes that permanently alter our unique community. We bought our homes at prices reflective of the in-place zoning – only to watch our neighborhoods adversely transformed at the whim of an outside investor seeking to profit off our community with little to no concern for its residents.

To that point, the mere fact that the County believes that a high-density, 37-unit planned development is a “compatible use” at this infill location surrounded by 20,000 square foot lot homes is highly concerning. As a county planner, you know there are NO multi-family zoned areas in all of North Tustin except as provided for in the North Tustin Specific Plan (located along 17th Street and Newport Avenue). To suggest a development, albeit residential, that is **four times the density** of surrounding uses is in any way compatible is incomprehensible - particularly when such proposed high-density use is planned and designated for other specific areas within the community.

Additionally, relying on the broader “Suburban Residential” General Plan designation (2 units/acre up to 18 units/acre), loosely defining the North Tustin community as a whole, to justify this incompatible zone change is deceptive. Why does the County maintain a specific, detailed zoning code for our community that we residents must adhere to if it is merely going to “broad brush” any new development application? It took us two years to get permits for our home remodel, having every minuscule requirement reviewed by County planners. Yet, this development proposal is deemed “compatible” simply because it falls within the broad general plan overlay for the **entire community**. The County’s inconsistent procedural approach of treating residents with exacting meticulousness versus a “dartboard” approach for developers is staggering.

The fact that the County is willfully ignoring restrictive use covenants and declarations recorded against both the tennis club site and the neighborhood in which the site is a part is another alarming fact. If residents must spend money to protect their rights and litigate against a development violating legally-binding, recorded agreements because our county officials - spending our taxpayer dollars - approve such a development is ludicrous at best.

Recreation Asset

For years, we have been members of the Tustin Hills Racquet Club, which has been a vital amenity for our family and the community. Our daughter participates in the tennis programs there as well. Another benefit of the club is the pool since our home does not have one. Unlike neighboring towns, North Tustin does not have any community pools or clubhouses, so this existing use is a precious amenity in that regard as well. As such, the existing club has been a hugely valuable social and recreational asset for the community for nearly 60

years and is its ONLY zoned and improved recreational site. To "repurpose" this parcel for something other than recreation/open-space would be significantly detrimental to the community and surrounding neighborhood.

As it stands, North Tustin has just about the lowest parkland acreage per 1,000 resident ratio in the entire County at 0.7 acres/1,000 residents (including the club). Parkland standards for most other Orange County municipalities range from 3.0 to 4.0 acres per 1,000 residents as part of their General Plans while the County's standard, as reported, is 2.5 acres/1,000 residents. Analyzing 35 of the 39 County municipalities that provide parkland data, the range of parkland-to-resident ratios is between 0.7 ac/1,000 (North Tustin) to 29.8 ac/1,000 (Irvine) and average about 8 ac/1,000. With the destruction of the existing recreation use, the North Tustin parkland-to-resident ratio would drop further to 0.2 ac/1,000 residents, further short-changing residents.

The fact that the developer will pay an "in-lieu fee" to meet the County Local Park Code as a "***means of meeting the local park and recreation needs of present and future county residents***" while actually destroying existing recreation space (our only zoned recreation space) is ironic, illogical and harms North Tustin residents. The current A1 zoning designation is the designation for recreational purposes, and the Project site been used in that context since 1958. It is inconceivable that the County would permit the destruction of this very valuable community asset with a project that will solely benefit the developer.

The developer claims there is demand for downsized housing alternatives in this location from active, older adults who want to remain in the area. This manufactured "benefit to the community" does not exist. There is no demand for multi-level, downsized housing at the cost of \$1mm to \$1.5mm for older adults in this neighborhood. There are plenty of downsizing housing alternatives in other areas of North Tustin. Conversely, there is enormous community opposition to having their only recreational facility destroyed.

Fire / Life Safety

The addition of a high-density development in the heart of a foothill neighborhood with only one access point can create many fire and life safety issues. In light of the many recent fires, evacuation in the case of fire is a significant concern. For decades the club's open space, including the parking area, grass, tennis courts, and clubhouse on a 5.88-acre property, has served as both a potential fire break and emergency responder staging area benefitting the community. This valuable resource should not be destroyed, causing further increased likelihood of homes lost to fires fueled by the Santa Ana wind conditions.

Other

How these critical issues were evaluated and concluded upon by the County raises serious concerns over its impartiality and suggest advocacy on the part of County officials of the developer's interest over the community's. These issues include:

1. the lack of support for traffic assumptions used and relied upon and the absence of a meaningful investigation into *real* traffic impacts,
2. reliance solely on the broad General Plan designation at the exclusion of North Tustin's specific zoning, the property's recorded use covenant, the recorded declaration of restrictions for the adjacent neighborhood, and surrounding land uses, and
3. the advocacy of the destruction of the community's only zoned recreational facility in exchange for a developer's in-lieu parkland fee

As an unincorporated community, we expect the County to make decisions based on the best interest of their constituents, not an outside developer. This seeming lack of impartiality by County officials to date is highly

concerning and warrants further evaluation at a higher level. If it is customary for planning officials to act as an advocate for a developer versus an impartial arbiter, then the public should be fully informed.

Lori Chew
North Tustin Resident

Canning, Kevin

From: C Chew <chew_ccc@yahoo.com>
Sent: Friday, June 5, 2020 10:55 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Proposed THRC redevelopment

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning:

I'm writing to voice my concerns over the proposed high-density residential development on the site of the Tustin Hills Racquet Club (THRC). In reading through some of the preliminary due diligence and County data several issues raise serious concerns.

First, is related to the submitted traffic study. As both a resident on Browning Street for 15 years and a member of the tennis club for roughly 10 years, I am in a relatively unique position of having lived in and experienced the traffic patterns for both locales. Common sense alone would suggest that the addition of roughly 90+ permanent residents would have a far greater effect on daily traffic versus a tennis club with limited operating hours. But after reading the assumptions contained in the traffic study, I realized how that false assertion could be made. To assume THRC banquet facility and tennis are at capacity every single day is completely unrealistic at best and misleading at worst. I can assure you they are nowhere close to booking the facility every single day of the year which would be very simple to confirm by obtaining actual annual bookings from THRC or conducting an actual traffic count at the site. If THRC is generating the level of occupancy implied in the traffic report, why doesn't it correlate with the existing revenues thus making it so viable for redevelopment?

My next issue involves the County's role in pursuing this development on the only zoned recreational space in North Tustin. The site is clearly zoned A1 General Agriculture (providing for recreational uses) and North Tustin has a specific plan which calls for areas of both low-and high-density residential development. Per the County's own North Tustin zoning, THRC is clearly not within an area permitting high density development. Furthermore, surrounding homeowners of THRC are protected by a legal covenant limiting its use, something the prior owner was clearly aware of when he purchased the property. At best the role of the County should be to protect and enforce the guidelines of its jurisdiction and to support the best interests of the community, and at worst should be a neutral arbitrator of those guidelines. However, in this instance it appears the County has become an advocate for the developer as evidenced by both promotion of misleading traffic study figures and a seeming disregard for zoning detail as called for in the North Tustin specific plan. All this despite overwhelmingly clear and supportable community opposition to the proposed development.

I welcome any feedback.

Sincerely,

Cliff Chew

Canning, Kevin

From: Stephanie Chiavatti <schiaivatti@aol.com>
Sent: Saturday, May 23, 2020 9:17 AM
To: Canning, Kevin
Cc: Kirkwatilo@gmal.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Kevin:

I am a member of the Tustin Hills Racquet Club and have been for years. In our fast paced environment, the tennis club is a place where our community can come together and enjoy community, quietness and beauty.

The county not requiring a full environmental impact report for this property to become high density is not in the community's best interest. One would start to wonder why it is not required. Having high density housing in this location would impact the overall community. People bought their houses in the area based on the fact that their neighbor was a tennis club. What about the impact on the homeowners?

I live in the county, as a voting member of the county, I am recommending you reconsider a full environmental impact report be required by the builder. Consider the community!

Thank you,
Stephanie Chiavatti

Canning, Kevin

From: Joseph Chiavatti <josephc.realtor@gmail.com>
Sent: Monday, June 1, 2020 8:34 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposing THRC Rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Joseph
29 year Tustin resident
Cell: 714-943-5281



Canning, Kevin

From: Stephanie Chiavatti <schiavatti@aol.com>
Sent: Monday, June 1, 2020 7:04 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club Rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Stephanie Chiavatti

Canning, Kevin

From: Cho, Esther <Esther.Cho@kyl.com>
Sent: Monday, June 1, 2020 4:21 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Esther Cho

.....
Esther E. Cho

Keesal, Young & Logan

400 Oceangate, Long Beach, CA 90802

562.436.2000 (office) | 562.230.1831 (cell)

esther.cho@kyl.com | www.kyl.com

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Canning, Kevin

From: Chelsea Christensen <chelchristensen@gmail.com>
Sent: Monday, June 1, 2020 2:01 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light, water pollution and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Chelsea Christensen

Canning, Kevin

From: Elena Chung <elenachung@cox.net>
Sent: Friday, June 5, 2020 4:23 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Respectfully Opposing: Tennis Club (11782 Simon Ranch 92705) Conversion to 37 Condos

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning:

It was nearly 9 years ago that we purchased our home on Simon Ranch Road, just a block away from the Tennis Club. We had lived in high-density housing in Tustin Ranch for 15 years prior; from a 1,700 SQ condo to a 3,000 SF model home on a popular tract near Peter's Canyon. My daughter had taken tennis lessons for 3 years at the Tennis Club before we moved to Red Hill Ridge. We were drawn to our Simon Ranch Road home, longing for a traditional "old school" one-story house with a big lot and extra elbow room, where parking and number of cars in the neighborhood would not be an issue. Upon arriving here at Redhill Ridge, we thought that we had finally found a sense of privacy & peace, so grateful for our unique community.

Now, we find ourselves with other "Tract 3883" homeowners sadly facing this threat of tract-like homes along with even more cars and traffic; negative impacts on the environment as well as on the values of our homes. The alarming proposal to overcrowd the Tennis Club space with 37 new condos signals a potentially calamitous outcome.

My biggest concern is the access into and out of the Red Hill Ridge Community, which is like a gated community with an entry/exit gate at Browning/Simon Ranch Rd & Beverly Glen/Salt Air ... only one way in & one way out.

Isn't this a fire hazard? Did the local county Fire Authority assess/address and authorize the safety of adding 37 new homes (households) onto this Tennis Club space? With only one way in & one way out from Pavillion/Simon Ranch, unless one drives all the way around Pavillion to exit via Salt Air in case of a disaster/fire. Realistically, there will likely be "2.5+ cars" per household with an average of 4 persons/home which is like 150 people; this is not even considering/including the workers & helpers (& their cars) that regularly keep the homes running during the week (gardeners, cleaning people, plumbers, construction workers, pool cleaning professionals, nannies, tutors, trainers, etc.).

Just wondering if these conditions (traffic/density) was truly considered & deemed safe by fire officials in the case of a true, natural disaster such as a fire. The last time we evacuated from Red Hill Ridge (non-mandatory) during a fire (~Oct. 2017), it took me over 30 minutes to get from my house on Simon Ranch to Skyline/Newport Ave./17th St. due to so many people in the area (Redhill, Arroyo, Racquet Hill) trying to leave as well. I remember this distinctly, because I was trying to go to Rosary Academy in Fullerton in the late afternoon to pick up my daughter who was a high school freshman then.

While it is understandable that a housing development is being considered, the building of 37 homes in a 5 acre parcel of land runs counter not only to the stipulations of the Tennis Club's restrictive covenant (since 1958) but brings forth significantly detrimental short-term and long-term consequences to our neighborhood: undesirable and dangerous traffic conditions, noise pollution, and the inevitable reduction of our property values.

It is my hope that a more reasonable plan (if for housing development) can be achieved in place of the current one, as 37 units seems excessive and rather awkward in the midst of the sprawling custom homes with ~1/4 acre+ lots. Because the Tennis Club is, and has been such a unique part of this community for so long, perhaps it can still be retained ...

Thank you for considering my thoughts regarding the Red Hill Ridge community. My family & our neighbors are caring and reasonable people who are very concerned about our neighborhood being severely altered by this new development proposal. We are committed to working together to preserve the safety and future of our homes and community.

Respectfully,

Elena Chung

Canning, Kevin

From: KIM CHURTON <kchurton@cox.net>
Sent: Friday, June 5, 2020 1:28 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Racquet Club Rezoning
Attachments: Racquet Club.docx

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Thank you for reading our letter and considering our views,

Kim & Tim Churton

Tim and Kim Churton
kchurton@cox.net
11762 Highview Drive
North Tustin, CA 92705

To: Orange County Planning Commissioners and Board of Supervisors

We live very close to the Tustin Hills Racquet Club. The proposed zone change and development of this property concerns us greatly. The high density of the project will not only increase the number of vehicles traveling our neighborhood streets, but, also the type of flow. Only two days ago, we encountered a close call while turning on to Valhalla. The entrance to the racquet club and proposed project is dangerously close to the peak of Simon Ranch Road. The convergence of Simon Ranch Rd, Valhalla, Leanne, Pavilion, and the entrance of the property in question is very precarious. We know to approach with caution as you cannot see what may be approaching from the other side of the peak. Also of concern is S. E. Skyline, one of the few main roads leading to said property. This street is very narrow and winding with many blind curves and driveways coming from it. Another concern regarding the increase of traffic is the fact that you cannot reach this neighborhood without crossing traffic from two different public elementary schools, Tustin Memorial and Redhill. Living so close to the club we are extremely aware of the number of cars and how infrequently they come and go. Such a high density of living quarters will necessitate that many more vehicles must come and go through our neighborhood on a very regular basis throughout the day. Whereas a member of the racquet club may come once a day or even once a week or less, residents of this project will most likely need to come and go very often daily. In reviewing the proposed plan, we are concerned about parking and the problems created when the additional vehicles associated with such a high density spills out onto our streets. Besides vehicles, our neighborhood is very popular with pedestrians getting exercise and walking their dogs. Being an older neighborhood in unincorporated Orange County, most of our winding streets do not have sidewalks or street lights.

The type of development proposed would fit better in a newer community, where there are more neighborhood amenities such as parks and shopping within walking distance. My husband and I are longtime residents of the area. My husband graduated from the Tustin School District as did our three children. We have a business in Tustin and worked hard to live in this desired neighborhood. It is my understanding that there is a covenant governing the land used for the racquet club, the only recreational property in the area. The owner of this land knows of this covenant and I would suspect that the value of the land would reflect that. Besides the very real dangerous situations I have presented before, a project like this would greatly affect the aesthetics and value of our existing homes which we have worked so hard to attain. To allow this project and ignore the covenant is to promote a lie to all current residents for the financial benefit of a few. Please do not approve a zone change or allow this project to proceed.

Sincerely,
Tim V. Churton
Kimberly J. Churton

Canning, Kevin

From: Chris Cipolla <chris@cpiresources.net>
Sent: Tuesday, May 19, 2020 3:53 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Ranch Hills Community (North Tustin Hills Racquet Club)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Good Afternoon Mr. Canning. This correspondence is concerning the community impact of the proposed build-out of (37) condos on the existing North Tustin Hills Racquet Club site. Simply stated, this area is not equipped to deal with this sudden influx of (37) new families, (74) more cars driving up and down Simon Ranch & Browning and all the other traffic associated with these new residents, such as: UPS/FedEx Drivers, Food Delivery Drivers, Landscapers and the obvious construction traffic to name just a few. Please consider this e-mail my family's formal opposition to this project.

Respectfully,

Christopher Michael Cipolla
2052 Valhalla Drive
N. Tustin, CA 92705
949.230.7543
chris@cpiresources.net

Community Development Department

June 4, 2020

Mr. Kevin Canning
Contract Planner
Orange County Public Works
Development Services
601 N. Ross Street
Santa Ana, CA 92701



SUBJECT: REVIEW OF THE PROPOSED MITIGATED NEGATIVE DECLARATION (MND) FOR THE PROPOSED RANCH HILLS COMMUNITY PROJECT

Dear Mr. Canning:

Thank you for the opportunity to provide comments on the Initial Study (IS) and Proposed Mitigated Negative Declaration (MND) for the proposed Ranch Hills Community project located at 11782 Simon Ranch Road in North Tustin. The proposed project proposes a Zone Change, Use Permit, and Vesting Tentative Tract Map to allow the development of 17 buildings consisting of 34 townhomes, three (3) separate detached single-family homes, and a recreational facility at the existing Tustin Hills Racquet Club site.

The City of Tustin offers the following comments:

General Comments

1. The proposed Ranch Hills Community is directly adjacent to the Tustin Ranch neighborhood of Treviso. Tustin Ranch is a master planned community within Tustin that is regulated by the East Tustin Specific Plan. When the Specific Plan was approved, a requirement was included that limits the height of residences on lots along the boundary between Tustin Ranch and North Tustin to a maximum of one story in Sector 8 of the Specific Plan. In addition, those same lots were required to be a minimum of 10,000 square feet in size. These requirements were put in place to maintain compatibility between the existing North Tustin residential community and Tustin Ranch.
2. The proposed Ranch Hills Community includes attached residences that are up to two stories in height and have a minimum net lot area per residence of 5,000 square feet. This height, development pattern, and density are inconsistent with the height, development pattern and density of the adjacent Treviso properties. The proposed Zone Change to R2(5000) would allow an incompatible land use along the border between North Tustin and Tustin Ranch, and would be in conflict with the restrictive requirements that were agreed to when the East Tustin Specific Plan was adopted and that were imposed upon the developer of the Treviso neighborhood. The County of Orange should respect this land use restriction and reciprocate by not allowing incompatible residential development directly adjacent to the Treviso neighborhood and by also limiting the heights of the proposed buildings within the Ranch Hills Community along the City/County border to a maximum of one story.

Mr. Kevin Canning
Orange County Public Works
June 4, 2020
Page 2

Aesthetics and Views

3. The site photographs provided in Exhibits 9a through 9e of the MND were all taken from vantage points within Unincorporated North Tustin. None of the photographs was taken from the adjacent Treviso neighborhood in Tustin. There is also no narrative analysis of views of the site from the Treviso Neighborhood. Despite the lack of a complete visual analysis, the MND states on page 34 that the “Project would not substantially degrade the visual character or quality public views of the Project site or the surrounding area during construction or operation, or conflict with applicable zoning and regulations governing scenic quality. Therefore, impacts would be considered less than significant once developed and no mitigation is required.” The City of Tustin requests that the MND be amended to include a view analysis from vantage points within Tustin to determine whether the proposed Project would have any significant impacts and whether mitigation is needed. This view analysis should include photographic simulations that show the views of the proposed buildings from various locations.
4. Although it is stated on page 32 of the MND that “private views are not protected and for purposes of this CEQA analysis would not be considered a significant impact,” it is recommended that dense landscaping be required to be maintained in the proposed Ranch Hills Community along the City/County border to ensure that there are no visual impacts to the adjacent properties and to provide a greater level of privacy for the residents of the established Treviso neighborhood.

Thank you again for the opportunity to provide comments on the Initial Study and Proposed Mitigated Negative Declaration. The City of Tustin would appreciate receiving written responses to our comments when they become available and all future public notices regarding this project.

If you or your staff have any questions regarding the City’s comments, please feel free to contact me at (714) 573-3031 or ebinsack@tustinca.org, or to contact Scott Reekstin, Principal Planner, at (714) 573-3016 or sreekstin@gmail.com.

Sincerely,

Elizabeth A. Binsack

Elizabeth A. Binsack
Community Development Director

cc: Matthew S. West, City Manager
Nicole Bernard, Assistant City Manager
David Kendig, City Attorney
Douglas S. Stack, Public Works Director
Ken Nishikawa, Deputy Director of Public Works/Engineering
Justina Willkom, Assistant Director – Planning
Kris Saldivar, Public Works Manager
Scott Reekstin, Principal Planner

Canning, Kevin

From: JON COFFIN <jlangc@aol.com>
Sent: Wednesday, June 3, 2020 7:10 AM
To: Canning, Kevin
Subject: Negative Environmental Impacts

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Jo Coffin

Sent from my iPhone

Canning, Kevin

From: Jennifer Coffman <salonsage1@yahoo.com>
Sent: Monday, June 1, 2020 6:04 AM
To: Canning, Kevin
Subject: THRC rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

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Best regards,

Jennifer Coffman
Salon Sage

3800 E. Coast Hwy. Ste. B
Corona Del Mar, Ca. 92625
Cell 949 760 0962

Please excuse brevity and any
Spelling errors, this message was
Sent from my iPhone

Canning, Kevin

From: Leslie Coghlan <lcoghlan17@yahoo.com>
Sent: Tuesday, May 26, 2020 4:42 PM
To: Canning, Kevin; Kirkwatilo@gmail.com
Subject: Tustin Raquet Club Environmental Study NEEDED

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hello Kevin and Kirk,

An environmental study to determine the impact of allowing the construction of high density housing on the Tustin Hills Raquet Club is most definitely needed.

Traffic congestion is just one concern. I live on a street near La Colina and Redhill, just down the road perhaps a mile or a bit less from the Club. There is currently quite a bit of traffic that backs up on Redhill in the morning and evening as folks commute to work or school. Additionally, traffic backs up on La Colina between Newport and Tustin Ranch. Many drivers have realized that they can cut through using La Colina and it is very busy. Adding high density housing will only increase the number of people needing to get in and out of the neighborhood and add to traffic on the surrounding roads that are residential and only one lane each way.

Thank you for your consideration.

Leslie

Canning, Kevin

From: Paige L. Conner <plc4autigers@verizon.net>
Sent: Monday, June 1, 2020 7:03 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

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Best regards,

Paige L. Conner

Canning, Kevin

From: Cristina Coo <coocomom@gmail.com>
Sent: Sunday, May 31, 2020 5:11 PM
To: Canning, Kevin
Subject: Fwd: Help save the racquet club!

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

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Best regards,

Cristina Coo

Canning, Kevin

From: Lyann Courant <lyann@advantageman.com>
Sent: Monday, June 1, 2020 11:55 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC Zoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

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Best regards,

Lyann Courant

Get [Outlook for iOS](#)

Canning, Kevin

From: Ralph Cygan <rwcygan@yahoo.com>
Sent: Wednesday, June 3, 2020 6:02 PM
To: Canning, Kevin
Subject: Tustin Hills Raquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

We are writing to express our strong opposition to the proposed rezoning and high density development of the Tustin Hills Raquet Club.

We have lived in North Tustin for over 40 years one of the most beautiful and unspoiled communities in Southern California. The well established and beautifully maintained homes in the surrounding neighborhoods are on large 1/2 to 1 acre or more plots and has contributed to the special ambiance of this unique community.

Additionally, the Tustin Hills Raquet Club has been an incredible asset to the region for 6 decades. Generations of children, their parents, and grandparents have enjoyed the Tennis Club's many amenities and recreational opportunities. Our family is now enjoying a third generation of tennis, swimming, and the comradery and friendships that have greatly benefited our family just as it has so many other local families. Generations of high school tennis players, CIF winners, college players, NCAA champions, and tennis professionals along with hackers like us have honed their skills on these courts all the while maintaining a level of health and fitness in an unparalleled outdoor environment that all communities should strive to emulate.

Loss of the Tennis Club would be a major blow to this special place. Demolishing this irreplaceable community asset and replacing it with high density condos would be a financial win for a few local developers from Newport Beach but a tragedy for our beautiful community. Loss of this club would deny current and future generations of a community based asset to recreate and to pass on the love of a sport which, unlike nearly all others, can be played for a lifetime.

As a wise steward of Orange County communities you must not allow this unique and priceless asset to be taken from our community.

Thank you,

Ralph W. Cygan, MD

Kitty M. Cygan, MD

Sent from my iPad

Canning, Kevin

From: Julia <juliadahl@sbcglobal.net>
Sent: Friday, June 5, 2020 4:21 PM
To: Canning, Kevin
Cc: Dahl, Steven; kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club Rezoning Objection

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning –

We purchased our home on Liane Lane almost 20 years ago in the Red Hill Ridge area of North Tustin with the understanding that the Tustin Hills Racquet Club land was zoned to be for recreational use only. This was a major factor in our purchase decision as our home is only 3 lots from the racquet club. I strongly feel that the rezoning of this property would entirely change the character of the area and negatively affect the residential property owners in a number of ways, but most importantly, no single land owning party should be approved for a zoning change without the majority consent of all area properties owners in the area which clearly is not the case here. In addition, the owner of the racquet club has even gone beyond asking to have their recreationally zoned lot changed to residential zoning that would be consistent with the existing residential zoning in the area, but is instead asking for a change that would allow high density housing which is a total departure from all residential structures within miles of the lot.

I fundamentally have an objection to any zoning change of the existing land, but even if you can get past that idea to consider what is being proposed, there are many issues with the current proposal and both the assumptions and conclusions of the negative mitigated declaration study assessment. The traffic study does not appear to be accurate as it is assuming maximum consistent use of the club, this is just not the case. It is false to assume that full time residential occupants of high density housing would not dramatically increase the vehicle traffic in the area, which is a real concern with limited roads in and out of the area. In the event of a major fire or other disaster, the result of such increased vehicle traffic could be catastrophic. The study also does not address safety risks of specific intersections – like the Simon Ranch/Liane Lane/Valhalla intersection – which is a blind hill intersection just 50 feet from the only drive entrance of the proposed development. The reality is that tennis club activity and traffic has always had minimal impact on the neighborhood, given it is at off-hours, set club operating hours, on-site club parking and lack of overflow parking to neighborhood streets.

The noise and congestion of both vehicle and human traffic would be a huge imposition to area property owners for the proposed 2+ years of construction and would remain permanently higher with high density housing construction. What is the positive gain for existing tax paying property owners to tolerate the construction, noise, dust, etc. for this proposed project? It seems ridiculous to say that the project construction would not negatively affect area property owners, but the eventual finished project would change the character of the area forever and then add a significant negative financial impact to area property owners as well because while we all chose to live in the area because of its desirable large lots and uncongested feel, we also paid a premium to do so. The property values in the area are tied to the highly desirable character of North Tustin's aesthetically pleasing hills, large lot sizes and low density housing. The county has a responsibility to consider the serious negative financial impact that zoning changes can have on citizens in the county as well as the impact of traffic, aesthetics, and safety.

The Tustin Hills Racquet Club has been the only recreational area of its kind for decades and is a part of the original design plan of the area that helps make North Tustin so unique. Not only is its existence in the area part of what contributes to area property values, but the club has been used by many of the larger Tustin community for tennis

camps, lessons, swim lessons, weddings, and as a party or meeting venue in Tustin. We have attended a number of school fundraisers for Tustin Public Schools that were held at the Tustin Hills Racquet Club, two of which I helped work on and know that there were no similar area facilities that existed. These are some of the reasons that the loss of the racquet club would be a loss to the entire community well beyond just those people who are members of the club.

The area has been zoned in a certain way that affects every property owner and a change in any zoning would also affect every property owner. Because what is being considered is a total departure from the existing zoning and original design intent of the entire area, it must be supported by those surrounding property owners, and in this case no zoning change is supported at all. I am sure that if I decided I wanted to subdivide my lot to build multiple units, the county would not approve my request for a zoning change because it does not conform to area zoning and would in fact be a drastic departure. To my mind, this zoning change request is a similar incompatible area zoning change request and I would really expect that the county would recognize that and support the 126 existing area residents by denying this unreasonable request. The tennis club and its open space is a unique special resource in the area and I cannot see any convincing justification to destroy that in exchange for high density condominiums, the likes of which would mirror nothing in the surrounding area. In fact, I only see negatives and for that reason, adamantly object to the proposed rezoning.

Thank you for your consideration,

Julia Dahl

juliadahl@sbcglobal.net

2152 Liane Lane

Santa Ana, CA 9705

714-679-3797

Canning, Kevin

From: Dahl, Steven <Steven.Dahl@disney.com>
Sent: Monday, June 1, 2020 12:17 PM
To: Canning, Kevin
Cc: Dahl, Steven; Julia Dahl (juliadahl@sbcglobal.net); kirkwatilo@gmail.com
Subject: Tustin Hills Racket Club rezoning objection

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

My wife and I have owned the home at 2152 Liane Lane, just 3 lots from the Tustin Hills Racket Club, since 2001. Our family of four has been regular club members most of those 19 years for tennis, swimming, fitness, and social activities. We have also attended many events at the tennis club, including school fundraisers, weddings, and community receptions. The Tustin Hills Racket Club has been landmark feature of our neighborhood, and North Tustin, for nearly 60 years, and one of the primary attractions of our original purchase. We would be angry and disappointed if the county approves the proposed rezoning and high density residential development of the club property, as this would significantly impact the quality of life for many community residents, the value of our home(s), and be a grave violation of trust by our county officials.

Rezoning this land from recreation to residential, with permission to build high density housing, would be highly destructive. The CEQA INITIAL STUDY PROPOSED MITIGATED NEGATIVE DECLARATION assessment is fundamentally flawed as a result of ignoring / not checking key elements of Table 2 (page 4), including Aesthetics, Noise, Population and Housing, Recreation, Land Use and Permitting. Each of these points is critical to the zoning and usage of this land plot, and by not assessing them objectively and thoroughly, the study presents biased, misleading, and inaccurate conclusions.

- The proposed development aesthetics are in conflict with the surrounding area (Red Hill Ridge/Lemon Heights/North Tustin) in the context of cookie cutter tract repetition, lot size/land use/human/parking density, attached walls/roofs, and zero lot line geometry with driveways so small that vehicles will hang into the streets. These characteristics are what most in Lemon Heights despise, and why we choose to invest in Red Hill Ridge/Lemon Heights/North Tustin versus other communities like Tustin Ranch and Irvine. More specifically, the home owners in Red Hill Ridge Estates invested in the neighborhood largely because of the large lot sizes (½ acre and larger), large homes (3,500-8,000 square feet), the aesthetics of a more traditional custom home community, the privacy created by the hills/mature vegetation, and single road access. The proposed development does not respect the 60 year characteristics of the Red Hill Ridge Estates design standards, zoned building requirements, and the formal Red Hill Ridge Estates “Declaration of Restrictions” (Tract No. 3883, Red Hill Ridge Estates, recorded Aug 22, 1962, by Ruby McFarland, County Recorder, Orange County).
- The noise/congestion/vehicle and human traffic/dust in Red Hill Ridge will spike during construction (estimated at 2+ years). And remain higher permanently due to this proposed plot of 37 high density homes (perhaps 110 new residents; note, this density is roughly 24 people/acre, versus existing homes at roughly 6 people/acre; with proposed development netting 4.5 acres for housing, excluding land for roads, and assuming 3 people/home).
- One specific traffic safety risk will be the intersection of Simon Ranch Road, Liane Lane, and Valhalla, just 50 feet from the only drive entrance of the proposed development (the hills, curves, sunlight angles, and vegetation can make visibility very challenging at this intersection). And our street, Liane Lane, will be impacted, since it is less than 100 feet from the tract, and the only flat street for walking in the neighborhood. The club activity and traffic has always had minimal impact on the neighborhood, given club traffic is off-hours, parking never overflows onto the residential streets, visitors stay on the club property, and consistent club operating hours.

- The club has been a local fixture nearly 60 years, for both members and non-members. Closing it would be equivalent to closing one of our larger public multi-use parks, relative to number of visits/week, sporting capacity, and acreage. It is essential to the local tennis community given very limited public courts capacity (and long weekend/evening wait times), including frequently use by non-members (for weekly group clinics, tournaments, lessons, and fundraisers). And the pool and indoor/outdoor events facilities are also essential to the area's overall recreational and events capacity (once again, for non-members as well, including swim lessons, weddings, and other events).
- There have been several market value offers to purchase and continue the club operations over the last few years, but the owner has been more interested in the potential golden egg offer of a developer, sadly ignoring the legacy zoning and best interests of residents (the core of his customer base and personal income for decades).
- The proposed loss of recreation land and facilities would be a major blow to the community at large. And the proposed rezoning and high density housing would be in direct conflict with existing zoning, and the immediate and surrounding neighborhoods.

Closing the club would result several job loses for club staff, including sales, service, maintenance and custodial, and tennis and swimming instructors. The developer can build somewhere else that could compatibly support high density housing, without the net result negatively impacting jobs/tax revenues/housing capacity.

Don't be swayed by the distorted proposal of the developer. The rezoning and development of this land will be destructive to the community at large, and highly destructive to the 126 existing Red Hill Ridge Estates homeowners.

Respectfully,
Steven Dahl

steven.dahl@disney.com
2152 Liane Lane
Santa Ana, CA 92705
714-414-7485

Canning, Kevin

From: Sandy Diaz <chefsandy67@gmail.com>
Sent: Monday, June 1, 2020 4:22 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: No Rezoning in North Tustin!

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

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Best regards,

Sandy Diaz
10735 Equestrian Dr.
Santa Ana 92705

Canning, Kevin

From: William Dickinson <bdickins72@sbcglobal.net>
Sent: Thursday, June 4, 2020 12:35 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Ranch Hills Community Development
Attachments: June 4 OCPW.docx

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Kevin,

Please see my attached letter for your consideration regarding the proposed development at the Tustin Hills Racquet Club.

Thank you.

William Dickinson

June 4, 2020

Mr. Kevin Canning
OCPW Development Services

Subject: Ranch Hills Community
Location: Tustin Hills Racquet Club
Proposed Mitigated Negative Declaration

Dear Mr. Canning:

I cannot believe the statement in this declaration that says, "will not create a significant adverse effect, because the mitigation measures described in the initial study have been added to the project".

Traffic

The traffic studies or lack thereof are bogus in their conclusion that there will be no traffic effect. The tennis courts are used by mostly ladies in the daytime and by mostly men at night. Their traffic pattern does not conflict with the normal work and shopping traffic pattern of the residents of our area. And to say that the banquet facilities are used full time at their capacity is a joke. They are used occasionally on weekends. Adding 37 residential units at the Racquet Club will increase traffic on the upper part of Simon Ranch Rd by 50% and on the intersection of Simon Ranch and Browning by 33%. Many people in our area walk on the streets for their daily exercise as we have no sidewalks. Their safety is clearly going to be impacted by the increased traffic. So will our residents be impacted trying to enter or leave the area since there is only one way out on Simon Ranch.

The impact on traffic during construction of the project will be even more horrendous. I would judge that there would be at least 100 workers employed there for a period of well more than a year. It doesn't take much imagination to visualize the mayhem of 100 cars entering the area in the morning and backed up forever at the intersection of Simon Ranch and Browning when they leave in the afternoon! Not to mention the continuous string of trucks supporting the construction.

Environment

We currently have no condos close to our area and certainly don't think that they fit our neighborhood. It does not take a rocket scientist to see that 37 residences on 5 acres does not fit in an area where the rest of the 114 homes are on ½ acre lots. What is being done to mitigate the loss in value that our homes will have?

Recreation

There are limited recreation facilities in our area and the Tustin Hills Racquet Club should be preserved in perpetuity for recreational use as it was originally deeded when this area was developed.

Safety

Has anyone evaluated the problems in evacuating this area in the case of fire or earthquake due to the increased population and only one escape route?

As long-time residents of this area, we urge you to reverse the" intent to adopt mitigated negative declaration". It fails to consider key impacts of this proposed development. This development should never be built.

Thank you for your consideration.

Sincerely yours,

A handwritten signature in cursive script that reads "Jo Ann and William Dickinson". The signature is written in dark ink on a light-colored background.

Jo Ann and William Dickinson
2021 Lerner Ln
Santa Ana, CA 92705

Canning, Kevin

From: Casey Doelman <caseyd@qualitygrainco.com>
Sent: Wednesday, June 3, 2020 3:05 PM
To: Canning, Kevin
Subject: Racquet Club Property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin,

I live in the North Tustin neighborhood and am quite concerned about the proposed plan to build a high density neighborhood in place of the Tustin Hills Racquet Club. We live in a unique area where the only access is narrow windy roads. I can only imagine the congestion building dozens of homes in this spot would create. This neighborhood was developed in the 1960's and 1970's with the plan of single family homes on one half acre lots. Not only would this be a very odd location for high density housing but our aging infrastructure would create safety concerns for pedestrians and cyclists. Please deny the rezoning of this property so this ill conceived plan can be put to rest.

Sincerely,
Casey Doelman

Canning, Kevin

From: Brigid Doll <brigid.doll@gmail.com>
Sent: Monday, June 1, 2020 4:38 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

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This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Brigid Doll

Canning, Kevin

From: Ashley Dorna <adorna@niagarawater.com>
Sent: Monday, June 1, 2020 9:42 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: RE: Opposition to Mitigated Negative Declaration and Rezoning of the Tustin Hills Racquet Club (Ranch Hills Community Project PA 18-0034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report (EIR) prior to the Orange County Supervisors consider its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing on the surrounding community. If this project is built it will cause increased traffic (both during construction and after), noise, light and greenhouse gas emissions. It will interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space and recreational facilities in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

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Best regards,

Ashley Dorna | Executive Vice President | **Niagara Bottling** | 1440 Bridgegate Dr. | Diamond Bar, CA 91765 USA | Mobile 949.735.1275 | adorna@niagarawater.com

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Canning, Kevin

From: Roger Egge <rdegge@gmail.com>
Sent: Thursday, June 4, 2020 10:59 AM
To: kirkwatilo@gmail.com; Canning, Kevin
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community which is where I have lived the last 16 years and also as a kid from 1965-1976.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Roger D. Egge

rdegge@gmail.com

949-283-1869

1171 Castlegate Lane

North Tustin, CA 92705

3.19 Utilities and Service Systems

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry year?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Introduction

This section evaluates potential impacts to Utilities and Service Systems that could result from Project implementation. Analysis in this section is based on the existing environmental setting conditions, and

Canning, Kevin

From: Jeff Smyth <jsmyth@eocwd.com>
Sent: Friday, June 5, 2020 1:22 PM
To: Canning, Kevin
Subject: RE: CEQA Initial Study Proposed Mitigated Negative Declaration Ranch Hills Community Project (PA 18-0034)
Attachments: MND Comments.js.060520.final.pdf; ISMND - Ranch Hills Community - May 2020 removed figure 2 and 3a.js.060520.Final.pdf

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi Kevin,

Attached is our comments letter and enclosure. I had to delete Figures 2 and 3a (I had no comments on the figures) to make it small enough to email.
Please confirm receipt by email reply.

Jeff

From: Jeff Smyth
Sent: Friday, June 5, 2020 10:46 AM
To: kevin.canning@ocpw.ocgov.com
Subject: CEQA Initial Study Proposed Mitigated Negative Declaration Ranch Hills Community Project (PA 18-0034)

Hi Kevin,

Per our conversation this morning EOCWD will be providing comments on the MND for the above project. Is there some way to transmit the ISMND file with my comments as it is quite large?

Thanks,
Jeff



eocwd.com

Jeff Smyth, P.E Engineering Manager
185 N. McPherson Rd. Orange, Ca 92869
P: 714-538-5815 F: 714-538-0334

Hometown Service. Fiscal Discipline. Direct Accountability.

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General Manager

Date: June 5, 2019

Kevin Canning
OCPW Development Services
601 N. Ross Street
P.O. Box 4048
Santa Ana, CA 92701

Subject: CEQA Initial Study Proposed Mitigated Negative Declaration Ranch Hills
Community Project (PA 18-0034)

Dear Mr. Canning,

Per our conversation, we have reviewed the CEQA Initial Study Proposed Mitigated Negative Declaration (MND) for the Ranch Hills Community Project. The MND found the impacts to utilities and service systems would be less than significant. The determination for EOCWD's wastewater system was based on EOCWD's Service Commitment letter dated January 9, 2019. At the time, limited information was available regarding the project and a sewer capacity analysis was not completed. In addition, the letter has expired.

The density of the proposed development is greater than the density analyzed in EOCWD's 2018 Sewer Master Plan. Prior to adoption of the MND, the developer will need to request a new will serve letter, a capacity analysis will need to be completed at the expense of the developer, and any impacts to the wastewater system will have to be mitigated.

In addition to the above, I have provided a markup of the MND attached.

I look forward to working with you on this project.

Sincerely,



Jeff Smyth, P.E.
Engineering Manager

Enclosure

Cc Lisa Ohlund, General Manager
Jerry Mendzer, Operations Manager

Canning, Kevin

From: Jennifer Esser <jennifer@camelotwest.com>
Sent: Thursday, June 4, 2020 6:37 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

We are deeply put off by the previous owner of Tustin Hills Racquet club sale to the developer who intends to completely ignore the surrounding landscape of structures and diminish most of the reason people buy in Red Hill Ridge. The entire community has one ingress egress. It consists entirely of half acre parcels with various hillsides and views that we all individually maintain. There is extreme pride of ownership and respect for the neighbors views and privacy. This sale to this intended outcome would deviate completely from this and actually risk the very things inherent to Red Hill Ridge of North Tustin.

We love change and progress Mr. Canning. I'm in Commercial Real Estate. I'm big on development and value add projects. But this is NOT a fit nor does it meet the proper criterion in so many ways I would be exhausted to write them all. This would devastate the safety, privacy, traffic, and be a total eyesore in the Red Hill Ridge location noted for half acre lots, Custom homes, and peace and quiet.

Please honor the oath of office and respect the local community of Red Hill Ridge and your supporters. We highly value your position and know you are there for good reason. I would like to invite you to meet here at the site this weekend.

714-809-4793

Jennifer Esser and family

--

Jennifer Esser Principal/Broker At Camelot West Commercial Real Estate



Camelot West Commercial
The Allan Building
[14081 Yorba St. Ste 111](#)
[Tustin, CA 92780](#)

t. [714-731-7000](tel:714-731-7000)

e. jennifer@camelotwest.com

w. camelotwest.com

CA Bureau License No: 00833875

Canning, Kevin

From: Brian Esser <esserfirst@gmail.com>
Sent: Wednesday, June 3, 2020 9:45 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club Redevelopment

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To whom it may concern:

I am writing to express my views of opposition to the proposed redevelopment of the Tustin Hills Racquet Club. This development would cause a complete upset to the community with increased traffic, noise, loss of views for some owners and reduced property values. This area is should remain exclusively for single family residences. For this and many other reasons, I adamantly oppose this redevelopment.

Sincerely,

Brian Esser

Canning, Kevin

From: Ariana Fahrney <ariana.fahrney@gmail.com>
Sent: Monday, June 1, 2020 4:59 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Strong Opposition to rezoning of Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best,
Ariana Fahrney

Canning, Kevin

From: Richard Fahrney, II <fahrney@hotmail.com>
Sent: Thursday, June 4, 2020 1:05 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC Zoning change

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

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This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

RICHARD L. FAHRNEY II
Fingal, Fahrney & Clark, LLP
5120 Campus Drive, Suite 200
Newport Beach, California 92660
Telephone: (949) 723-8100
Facsimile: (949) 723-8108

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Canning, Kevin

From: S F <ttennis77@gmail.com>
Sent: Monday, June 1, 2020 4:39 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: No Zoning Changes at THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Sharon Fahrney

Canning, Kevin

From: Allison Fahrney <allison.fahrney@gmail.com>
Sent: Monday, June 1, 2020 5:51 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Opposition to rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

--

Allison Whitmer Fahrney

allison.fahrney@gmail.com

Canning, Kevin

From: rnelson fcahome.org <rnelson@fcahome.org>
Sent: Wednesday, June 3, 2020 4:42 PM
To: Canning, Kevin
Subject: Comments on Mitigated Negative Declaration
Attachments: FCA MND Comments.pdf

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin Canning:

Please see attachment.

Rick Nelson
Foothill Communities Association
714-730-7810



Foothill Communities Association
Response to Ranch Hill Partners and County of Orange Mitigated Negative Declaration
Finding PA180034 / VTTM 18119
Ranch Hills Planned Development

June 3, 2020

The Foothill Communities Association (FCA) appreciates the opportunity to comment on the Ranch Hill Partners PA 180034/VTTM 18119 application (Application). FCA is a California non-profit incorporated in 1964 to represent the interests of Orange County's largest Census Designated Place: the 10,000+ home community of Tustin Foothills. Since our community lacks a city council to safeguard its interests, for over 60 years, FCA has played a key role as the primary grassroots organization dedicated to protecting the community's semi-rural environment and land use integrity for its 24,000+ residents by, among other things, providing comments on land use matters to the County of Orange and cities abutting unincorporated North Tustin. As a voluntary organization of North Tustin residents, FCA has had a valuable and long-standing relationship with government agencies and private organizations that have led to North Tustin becoming one of the most desirable places to live in the County. FCA intends that providing input on the Application will continue to reflect FCA's primary goal, which is to preserve and protect the unique value and character of North Tustin for years to come.

Please find our comments on the following sections of the Mitigated Negative Declaration (MND) that a County contract planner has prepared for the Application.

1.6 General Plan land use designation of Suburban Residential (1B) Communities allowing a density of .05 to 18 dwellings per acre (du/ac).

Relying solely on the County's broad "Suburban Residential" General Plan designation to support a proposed development having four times the density of surrounding uses is inaccurate and misleading. It ignores the following:

- A land-use Covenant recorded for the benefit of the surrounding neighborhood that restricts uses of the Project site into perpetuity
- A recorded Declaration and Restrictions affecting homes in the immediate, abutting neighborhood of the Project site
- North Tustin's detailed zoning plan delineating specific areas within the community for low to high-density residential uses and commercial uses (per the County's North Tustin detailed zoning map)
- The density of existing surrounding uses

Recorded Restrictive Covenants:

As the MND shows, the County has not considered, in conjunction with the Application, recorded documents that significantly limit the permitted density minimums and maximums (du/ac) for a site that is currently is designated an agricultural parcel. Those documents were created and recorded to protect the rights of past, present, and future residents to ensure compatibility of uses within the Red Hill Ridge community. They are as follows:

- 1) On September 24, 1974, the owner of the 5.88 acre Project Site (currently operated as a private membership tennis club), filed a recorded restrictive land-use covenant running with the land. The specific language in this Covenant is as follows:

“Macro Systems Associates, a California Corporation does hereby declare for itself and for all of the successive owners of the land described in Exhibit “A” attached hereto and made a part hereof by reference:

1. That MACRO SYSTEMS ASSOCIATES owns the land described in Exhibit “A” attached hereto and made part hereof by reference.
2. This Covenant runs to the benefit of the owners of Lots 1-78 and 80-118 of Tract 3883, recorded August 2, 1962 in Book 166, pages 5 to 11, of Miscellaneous Maps, Orange County, California, and each successive owners.
3. The use of the premises described in Exhibit “A” attached hereto shall be either that of a commercial or non-commercial private membership tennis club, and in the event that the use shall be other than of a commercial or non-commercial private membership tennis club, such other use shall conform to the uses permitted in Tract #3883.”

- 2) Tract 3883 (Red Hill Ridge community) is adjacent to the Project site, abutting it on two sides. The Project site is located within this established community, sharing a single access point. This Tract has a Declaration of Restrictions recorded on August 22, 1962, in Book 6222, page 500, which sets forth, among other things, a minimum lot size requirement of 20,000 square feet and restricts uses to one, detached single-family dwelling unit per lot.

Thus, the Application violates both the 1974 restrictive Covenant that runs in perpetuity and the reciprocal 1962 Declaration of Restrictions recorded upon the adjacent Tract 3883.

North Tustin Zoning:

The broader "Suburban Residential" General Plan designation, while loosely defining the community as a whole, also ignores North Tustin's detailed zoning that thoughtfully designates areas within the community for low to high-density residential uses as well as commercial uses. This zoning intention ensures compatible land uses and preserves the distinctive rural quality that sets the North Tustin community apart from other Orange County communities.

The proposed multi-family R2 (5,000) zoning designation permitting 5,000 square foot lots for the Project site is inappropriate for the following reasons:

1. North Tustin foothill neighborhoods are primarily zoned for minimum lot sizes of 20,000 square feet, particularly those surrounding the property in the eastern and northeastern foothill areas.
2. North Tustin neighborhoods surrounding the Project site in all directions consists of 20,000 square foot lots or larger.
3. The Red Hill Ridge neighborhood (Tract 3883), in which the Project site is a part, is restricted by a recorded declaration prohibiting lot sizes less than 20,000 square feet.
4. Homes in the Racquet Club neighborhood also abutting the Project site to the north are zoned for a minimum of 20,000 square foot lots.
5. The proposed multi-family zone change represents a **density four times greater** than the surrounding neighborhoods.
6. North Tustin already provides for medium and high-density residential uses such as the proposed Application within the North Tustin Specific Plan (located in areas in and around Newport Avenue and 17th Street.) This Specific Plan was designed to "expand the role of medium and high-density housing in meeting local housing needs." (North Tustin Specific Plan-Land Use Designation Goals and Policies, Par. C-2)
7. Multi-family (R2) zoning is permitted within the North Tustin Specific Plan but is unprecedented in all other areas of North Tustin.
8. The proposed 5,000 square foot lot development is permitted within the North Tustin Specific Plan but is unprecedented in all other areas of North Tustin.

Furthermore, the requested zone-change will destroy the community's only parcel zoned for open space and improved with a recreational facility. The destruction of this valuable community asset would solely benefit the developer at the community's expense. The community **strongly opposes** any rezoning of this site and remains united in preserving North Tustin zoning that exists to represent residents' interests.

1.7 Zoning Districts

This section states the site is zoned as A1 "General Agricultural" District. The Project proposes a zone change to revise the zoning designation from A1 to the multi-family R2 (5,000) designation with a minimum of 5,000 square feet of net land required for each unit.

See comments above as to the incompatibility of the proposed zoning to this property.

The Application's proposed high-density destroy-and-replace development will irreversibly alter the rare and unique personality of the North Tustin foothills, characterized by large lot sizes, and will negatively impact surrounding property values. North Tustin property owners have rights under existing zoning codes that ensure compatibility and conformity with surrounding land uses. Residents bought homes based on the in-place code, and many paid a premium for their home based on this zoning.

Moreover, residents who bought homes in Tract 3883 did so knowing the existing restrictive use covenant on the Project site would permanently preserve the tennis club open space forever, and the Tract's Declaration of Restrictions would ensure neighborhood compatibility. Rezoning this site to a higher density would solely benefit the Applicant while devaluing homes in the community and negatively impacting residents' safety and quality of life.

Furthermore, the Project site is the only parcel in the entire community zoned for open space and improved with a recreational facility. It is an irreplaceable community asset and has been for the past 60 years. To destroy the community's only zoned recreational open space and coveted amenity for an incompatible use (suitable for other multi-family designated areas within the community) will be deleterious and is highly opposed by the community.

1.8 Project Description

The Project proposes a zone change, Use Permit, and Vesting Tentative Tract Map to allow 37 residential condominium units on a 5.88-acre parcel. As previously stated, this request is in direct violation of the recorded Covenant running with the Project site and the Declaration of Restrictions recorded against Tract 3883 home sites.

For the County to approve a project that traduces the 1974 pledge of open space is a breach of trust to the owners of Tract 3883 and the surrounding communities. It is the only zoned recreational/outdoor space in the area, which the greater area residents and school districts have come to expect and rely on for the benefit of society. Eliminating this asset would be enormously detrimental to the neighborhood.

1.9 Environment Setting

The Project Site Setting admits that there is one entry point to this parcel with no opportunity to have secondary emergency access in the event of a catastrophic event. The Orange County Fire Authority in recent years throughout all of Orange County has consistently opposed this sort of development without an emergency access gate to enable residents to escape their neighborhood. This property is landlocked and will NEVER have secondary access.

The Project site abuts a permanent, continuous barricade separating the club site from the City of Tustin housing tract at the rear perimeter. There is no pedestrian or vehicular access between the two sites. This permanent barricade was erected as part of a development agreement between the Tustin Ranch developer and members of Tract 3883 during the planning of the Tustin Ranch community.

Allowing 37 additional homes on the 5.88 acres could contribute to loss of lives in the event of a disaster such as a fire. This community has had many fires over the years due to the Santa Ana winds, and many residents have had to water their roofs down as a safety mitigant. An additional 37 homes will only add additional potential incendiary devices to the neighborhood rather than having a parcel that acts as a possible fire break, a fire suppression staging area, as well as potentially a safe zone for residents of the area to evacuate.

2.1 Purpose and Intent

To its credit, the *Project Objectives* acknowledge that the Application does not propose a typical infill development on vacant land; rather, it is “proposing to demolish the existing facilities” that have served the community since 1958. However, the Project’s four objectives are refuted by facts showing that the Project is not merely unnecessary; it is environmentally adverse.

Statement: “Provide homes that would meet the increased demand and shortage of housing in the North Tustin Community, especially for people (i.e., active adults) seeking to downsize but stay in the same general area.”

FACT: The claims that (1) there is a demand for this location from age-targeted (*i.e.*, older adults) residents at a cost of \$1 million to \$1.5 million to downsize into a multi-level home, and (2) there is a lack of downsizing opportunities within the community are provably false and reveal an unfamiliarity with the community and recent changes to state law.

1. The North Tustin community has already been rationally planned to provide for downsize housing alternatives in both the North Tustin Specific Plan, and R1 zoned neighborhoods located to the south that provide smaller, single-story floor plans on smaller lots.
2. Also, if the Applicant is targeting an older population to purchase these condominiums, it is well known by senior housing developers and their marketing firms that single-story floor plans are the homes most desired by that demographic and not multi-level floor plans as the Application proposes.
3. Finally, with last year’s enactment of Assembly Bill 68—which next month will be belatedly implemented by the Board of Supervisor’s addition of Section 7-9-90 [“Accessory dwelling units (ADU) and junior accessory dwelling units (JADU)”] to the County Zoning Code, the “target seniors” in the community can more economically “downsize” by staying right where they are and constructing single-story ADUs on their own properties.

Statement: “Provide for a residential use compatible with the surrounding residential development in the area.”

FACT: As previously stated, there are no multi-family, high-density zoning designations in the entire North Tustin community except as provided for in areas located within the North Tustin Specific Plan. High-density housing like the proposed Project (more than four times the density of surrounding land uses) is precisely the type of development intended for the North Tustin Specific Plan which has the express goal to 'expand the role of medium and high-density housing, both owner and tenant occupied, in meeting local housing needs' (North Tustin Specific Plan-Land Use Designation Goals and Policies, Par. C-2).

Moreover, the restrictive use covenant recorded on the Project site and the Declaration of Restrictions recorded for Tract 3883 were put in place to protect residents' interests and preserve the continuity of their neighborhood.

Statement: "Create an environmentally sensitive development through implementation of drought-tolerant landscaping and compliance with the most current low impact (i.e., water conservation) development standards."

FACT: What this objective actually says is that the Project will result in the destruction of aesthetically attractive mature trees and landscaping, drought-hardened over decades, and its replacement with xeriscape planting that will never replace the beauty of the current site.

Statement: Redevelop the project site in a manner that minimizes the impacts on the circulation network and significantly reduces traffic and environmental effects of the existing commercial use.

FACT: Traffic from the construction and ongoing use of the proposed Project will have a significantly negative impact on the surrounding community. See comments on Section 3.17.

2.2 Building Characteristics

The building characteristics are inconsistent with the surrounding area and permitted uses as set forth in the restrictive use Covenant recorded on the Project site and the Declaration of Restrictions recorded on adjacent Tract 3883. See comments on Sections 1.7 and 1.8, and 2.1.

2.3 Site Characteristics

As stated previously, the proposed zone change and other changes as contemplated by the landowner and County are inconsistent with the surrounding community and an inappropriate use for a landlocked parcel with limited access. The Zoning Code section cited [sec. 7-9-77.1] states, "The R2 District is established to provide for the development and maintenance of very-high-density multi-family residential neighborhoods with a low building height and a minimum amount of open space. Those uses are permitted that are complementary to and compatible with such a residential neighborhood." There are no compatible type communities except for those located in the North Tustin Specific Plan.

Per Zoning Code Section 7-9-110:

"The purpose of a PD is to provide a method whereby land may be developed utilizing design features which take advantage of modern site planning techniques to produce an integrated development project providing an environment of stable, desirable character which will be in harmony with existing and potential development of the surrounding neighborhood. "

FACT: The Application's high-density proposal is inconsistent with the actual home spacing and luscious green open space surrounding every home within miles of this parcel. It is not at all in harmony with the existing surrounding neighborhood, improved with single-family homes on ½ acre lots.

2.3 Vehicular Access, Parking and Onsite Circulation

The Application proposes a destroy-and-replace project to be located within an established community built in the early 1960s known as Red Hill Ridge (also identified as Tract 3883). This community sits atop the foothills and was developed in a circular, "cul-de-sac" style with only

one access roadway in and out. All of the North Tustin foothill areas such as this are characterized by narrow, windy residential streets with many blind curves. The foothills also have NO sidewalks and minimal streetlights owing to its rural-like feel. (Figure 1 in the MND report gives an idea of the curvy and winding nature of the road access in the foothills.) The neighborhoods are very peaceful and serene with lots of walkers (day and night), bikers, scooters, and children playing.

Simon Ranch Road is the only access for the existing 104 homes within the Project site neighborhood. The roadway is very narrow and has a pinched access point. It was not designed for a high traffic volume from high-density uses, but rather for a rural-like, low-density neighborhood (further evidenced by no sidewalks).

Browning Avenue and SE Skyline Drive (via a short stint on Beverly Glen Drive) are the two residential streets connecting to Simon Ranch Road. Both are neighborhood streets often filled with active adults and children (biking, walking dogs, jogging). SE Skyline Drive is the primary access for residents to Newport Avenue (and the 55 Freeway), and Browning Avenue is the route to the 5 Freeway via Tustin Ranch Road. Without sidewalks, **all** pedestrian activity occurs in these narrow streets. With the addition of nearly a hundred more drivers daily (presumably many being commuters), increased traffic will undoubtedly create safety hazard issues.

The surrounding neighbors are also genuinely concerned that the proposed development as a planned community will have a deleterious effect on the area outside the proposed development since most planned communities are not adequately sized for sufficient parking. Counties and cities set minimum standards for parking spaces. In communities in Tustin and Santa Ana, municipalities are battling parking for Planned Developments that have been constructed and are trying to enforce parking regulations to limit on-street parking. The Applicant indicates it will meet the parking requirements by utilizing driveway and garage parking to meet the standards, but there are no guarantees that the Applicant's buyers will park their vehicles in their driveways, let alone their garages. Since homes in Southern California do not have basements, many people use some or all of their garage for storage. A residential development with a **density four times greater** than the adjacent neighborhood will undoubtedly create the same spillover parking issues.

2.4 Utility Characteristics

Although the Applicant may have a "will serve" letter from the water agency servicing this parcel, it is merely not enough to have this document. The County should require a full report on the environmental impacts of installing a new water main and sewer line and documents demonstrating this Applicant has clearance from private homeowners, agencies, and other landowners in the area confirming this construction can be accomplished. The pump station and other ancillary devices associated with this Project must be vetted and shared with the public, especially adjacent owners, to determine the impacts of noise and smell on their environment. This all should be provided before scheduling presentations to the North Tustin Advisory Committee, Planning Commission, and the Board of Supervisors.

3.1 Aesthetics

The destruction of scenic views and visual character of the surrounding community is highly detrimental to the desirable neighborhood characteristics, residents' quality of life, and property values. Losing the existing open-area feel of the 5.88-acre property will create a permanent and significant aesthetic loss to the community, as the public has for decades enjoyed the views to the Project site's park-like open space with mature palm trees that are a hallmark of this community. The original developer used palms in the neighborhood as a selling feature, and the club perimeter reflects that architectural design as well. Although the Applicant claims that views will be improved by the removal of the palms, the public disagrees; they are part of the charm of living in this community.

3.2 Agriculture and Forestry Resources

Response to Impact Question b); Less than significant impact.

The paragraph states that agricultural zoning is not an indication of a long-term commitment to specific uses because the General Plan may designate for more intensive uses in the future. The Project will require a zone change to make the zoning consistent with the proposed use.

RESPONSE: The existing A1 zoning designation is also the designation for recreational purposes, and the Project site been used in that context since 1958. It is also the only parcel in North Tustin zoned for and improved with a recreational facility. Conversely, North Tustin Specific Plan areas specifically provide for high-density residential uses. The County has previously worked with North Tustin residents and the FCA to ensure that planning and development is consistent with safe access and harmonious, congruent properties, benefiting the community overall. To "repurpose," this parcel for something other than recreation/open-space would be significantly detrimental to the community and surrounding neighborhood.

3.14 Population and Housing

The Applicant states that the Project would generate approximately 96 new residents (based on an average household size of 2.59 persons.) That equals 16 residents per gross acre (96/5.88 gross acres). Assuming approximately 30% of the gross acreage will be lost to new roads and infrastructure, the site's net acreage is estimated to be about 4.15 acres, resulting in a population density of about 24 residents per acre.

By comparison, the surrounding community has a population density of 5 residents per acre. The proposed Project's population density of nearly five times the surrounding community is highly incompatible. The addition of almost 100 more drivers will also have a significant impact on the neighborhood's traffic patterns and safety.

3.15 Public Services

As stated elsewhere, although the OCFA and other agencies may report that the number of additional residences or residents will not significantly impact their response times to the greater population and that no additional facilities may be required by the proposed development, FCA strongly requests that the OC Public Works inquire with these agencies about ingress/egress into these surrounding neighborhoods in the event of a major catastrophe

with additional traffic to and from this Project that could jeopardize the safety of all residents in the surrounding area.

3.16 Recreation

The County General Plan's zoned park/recreation land requirement is 2.5 acres per 1,000 residents. And, although the Applicant will be required to pay a park impact fee to mitigate this deficiency, the Project does not add any additional park/recreation space for the North Tustin community; to the contrary, it eliminates a long-standing community recreational facility. The parks mentioned in the County's document refer to Bent Tree Park, Esplanade walking path, and the mini Holderman park. These parks, combined with the Tustin Hills Racquet Club, provide 0.7 acres of parkland per 1,000 residents, a far cry from the County's standards. Excluding the Project site, the ratio drops further to 0.45 acres per 1,000 residents. The majority of municipalities in the County require 3 to 4 acres per 1,000 residents. Removing this agricultural/open-space recreational use further deteriorates the County's in-place standard.

The other North Tustin parks listed in the MND are situated on land zoned for residential uses while the Tustin Hills Racquet Club is the only parcel in the community zoned for open space and improved as a recreational facility. Removing this parcel from its long-standing primary purpose is a breach of the County's own General Plan and violates the restrictive use Covenant that exists to preserve this use in perpetuity.

3.17 Transportation

The presented traffic study is flawed and misleading for several reasons outlined below. Given the Project's location, the nature of the existing improvements, and the historical usage over the past 60 years, an actual "on the ground" driveway count taken at the Project site would produce accurate and meaningful traffic counts versus the formulaic Trip Generated Analysis using "hypothetical" assumptions with no factual support. Historical usage trends are the best indicator for future traffic patterns given the club has been in operation for over 60 years.

After further consultation with traffic engineering experts, **an actual driveway count should be conducted.**

Banquet Facility

1. The banquet facility is assumed to be occupied at a maximum of 330 persons at a daily occupancy rate of 100%. Inaccuracies with this analysis include:
 - a. Banquet events are in direct violation of the restrictive land-use Covenant for the existing use and, therefore, should be excluded.
 - b. The venue website reports its maximum occupancy capacity at 220 persons versus 330 used. Even if banquet events were to be counted, the maximum venue capacity is overstated by 110 persons.
 - c. The assumption of a daily occupancy rate of 100% has no factual support. If historical event data is reviewed, it will show a much lower daily rate of occupancy. Residents in Tract 3883 and Racquet Hill Drive surrounding the tennis club estimate the club has one event per month, with one or two additional monthly events from May through September for an approximate total of 20 annual events. This usage

equals an average daily occupancy rate of 5.48% (versus 100%). Using the venue's reported occupancy limit of 220 persons, the banquet facility (realistically) generates an estimated total daily traffic count of 8 (220 x 5.48% x 0.667) versus 220.

Tennis Courts

1. The Trip Generated Analysis also erroneously uses a 100% daily occupancy rate for the courts instead of actual usage data.
 - a. Surrounding homeowners and tennis club members realistically note that courts are typically 100% occupied on Saturday mornings until Noon and then empties out. Other than those few hours, the club is rarely at full occupancy, especially during summer months, when local mid-day temperatures often exceed 90 degrees. There are usually at least 3 to 4 empty courts equaling something closer to 65% occupancy (7 courts / 11 courts) vs. 100%.
 - b. A review of actual usage logs would contradict the assumptions used. An actual traffic count would also yield a lower occupancy rate.
 - c. Assuming the courts are 65% occupied daily, the total daily traffic count would be 217 versus 334.

Assumptions based on actual usage trends for the existing use yield daily traffic counts of 225 versus 554, a 329 daily variance from the MND. The proposed Project is (realistically) expected to generate 124 additional daily traffic trips over the existing use.

Vehicle Miles Traveled

The MND traffic report does not consider the new VMT CEQA standard (effective July 1, 2020) replacing the Level of Service metric. The new guidelines focus on how a project is likely to influence the overall amount of automobile usage and no longer consider traffic at intersections and roadways immediately around the Project site.

Traffic generated by the existing recreational use is characteristically shorter trips, with many club users living in and around the surrounding community (some walk from their homes). Conversely, the proposed Project will generate longer trip traffic (work/commuter), thereby contributing to greater overall automobile usage. Given the new standard will be in place in less than 30 days and in advance of any potential Project approval, these traffic factors should be evaluated and made part of the MND in conjunction with correcting its inaccurate traffic analysis.

After sections of the North Tustin community (just south of the Project site) were destroyed to provide for the extension of La Colina Drive to Tustin Ranch Road (to accommodate Tustin Ranch development), neighborhood traffic increased dramatically. Commuter traffic from the 5 Freeway to the foothills (and the Project Site) now flows primarily along Tustin Ranch Road, La Colina Drive and Browning Avenue. In fact, commuter traffic along Browning Avenue (from La Colina Drive to Beverly Glen/Simon Ranch Road) represents the greatest percentage of daily traffic along Browning (per PSOMAS traffic study). This traffic is further exacerbated by commuters attempting to avoid congestion on Irvine Boulevard as commuters also head directly up Browning from Irvine Boulevard into the foothills. Although Browning Avenue is a

25 MPH zone, it is practically a "major" thoroughfare for that traffic pattern at peak hours. The CHP often tickets speeders and drivers who fail to stop at the stop sign at the intersection of Browning and La Colina.

SE Skyline Drive is the other traffic artery providing access to the entrance of Tract 3883 and the Project site. It experiences a similar traffic pattern for commuters entering the hills from Newport Avenue and the 55 Freeway. Due to the increased speeding traffic along these narrow residential streets and the safety risk, concerned residents have resorted to putting up "Slow Down" and "Drive Like Your Kids Live Here" signs in their front yards.

The addition of nearly 100 more drivers (presumably largely commuters) and the realistic expected increase in daily traffic counts produced by the proposed Project will not only severely impact residents living in the Red Hill Ridge community (Tract 3883), but also greatly impact residents living on the neighborhood "feeder" streets (La Colina Drive, Browning Avenue, Ranchwood Road, Beverly Glen Drive, and SE Skyline Drive.)

Given the above, the County of Orange should require a formal traffic study with driveway counts, a review of historical usage for the existing improvements, and supplementation with the new CEQA traffic standard.

3.19 Utilities and Service Systems

Although the City of Tustin has provided a will serve letter to the Applicant for the Project, FCA believes this alone is insufficient to enable the Applicant to proceed to public hearings. Due diligence on the route, size, and connection of all utilities, especially water with the planned required pump stations to service the terrain of the Project, the ultimate impact on the design, and access to the site must receive greater scrutiny by County and City of Tustin staff for utility impacts to be deemed of little or no impact to the surrounding neighborhood.

3.20 Wildfire

For decades the club's open space, including parking area, grass, tennis courts, and clubhouse on a 5.88-acre property, has served as both a potential fire break and emergency responder staging area benefitting the community. This valuable resource should not be destroyed, causing further increased likelihood of homes lost to fires fueled by the Santa Ana wind conditions.

Thank you for allowing Foothill Communities Association the opportunity to respond to this Application.

Sincerely,



Rick Nelson, on behalf of the Foothill Communities Association
and the Tustin Hills Racquet Club Steering Committee

Canning, Kevin

From: Laura Fitch <mlfitch1@cox.net>
Sent: Monday, June 1, 2020 10:21 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC No Rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light, water pollution and greenhouse gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Laura Fitch

Canning, Kevin

From: Yasmin Fletcher <yasminthebean@mac.com>
Sent: Friday, June 5, 2020 4:27 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club ("THRC") property. Areas are zoned so that everyone involved, both residents and (potential) developers understand what is and what is NOT acceptable use for the land. The current zoning has been in place for decades and any potential changes from low density to high density housing would not be consistent with the North Tustin and surrounding unincorporated neighborhoods. Furthermore, "spot zoning" of parcels could encourage widespread change to uses incompatible with the existing character of the community.

My family was living in Anaheim Hills in 2007 when the fires resulted in hundreds of people evacuate and burned down many homes. The evacuation took some residents hours because of too many people residing in an area that does not have enough options to get in and out. With the recent fires our own area of North Tustin has endured, it is irresponsible to increase the amount of traffic and people in the area as this could be catastrophic then next time an evacuation is necessary.

The neighbors surrounding Arroyo Elementary are already outraged at the traffic during school drop off and pick up. Building 37 condos in an area that was never intended for such use would further frustrate current residents, increase traffic on narrow and windy roads and create safety concerns as most of the area does not have sidewalks for pedestrians, such as children walking to and from school.

Lastly, the Tustin Hills Racquet Club sits on the ONLY land in North Tustin zoned for recreation. Loosing this area of recreation and community would be devastating to North Tustin.

The rezoning application needs to be denied outright. Rezoning is both inconsistent with the character of North Tustin and would pose dangerous, potentially life threatening, situations daily during catastrophic events. Many families have resided in the area for generations, please help us maintain the character that has kept families in the area for generations.

Thank you for your time and consideration.

Yasmin Fletcher

Be the change you wish to see in the world. - Ghandi

Canning, Kevin

From: lis fortner <lfortner@cox.net>
Sent: Tuesday, June 2, 2020 9:04 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to rezoning of Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community and surrounding city of Tustin.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An EIR will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after) that the neighborhood cannot easily sustain, noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Elisebeth Fortner
2986 Young Street
Tustin, CA 92782



This email has been checked for viruses by Avast antivirus software.

www.avast.com

Canning, Kevin

From: Gary Fortner <gfortner@cox.net>
Sent: Monday, June 1, 2020 10:32 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Oppose Zoning Change to Tustin Hills Racquet Club !

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Gary J Fortner

Canning, Kevin

From: Emily Frye <fryesocal@mac.com>
Sent: Thursday, June 4, 2020 9:40 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Emily Frye (North Tustin resident)

Canning, Kevin

From: Ashley Frey <ashleycfrey@gmail.com>
Sent: Thursday, June 4, 2020 9:33 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Ashley Frey

--
Ashley

Canning, Kevin

From: Rusty <prince@princeofpinot.com>
Sent: Wednesday, June 3, 2020 5:25 AM
To: Canning, Kevin
Subject: Comments regarding Environmental Document THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Good morning Kevin

My family have been residents of the North Tustin community for 41 years. We live within a short walking distance of Tustin Hills Racquet Club (herein referred to as the Club). My wife and two sons have used the Club as our main source of recreation during those years and continue to use it regularly for recreation today.

Besides tennis, we have used the facility for exercise workouts, swimming, pilates, and have attended many events there. We have celebrated important milestones including birthdays and anniversaries at the Club. The Club has been our singular source of community recreation since it is the only land zoned for recreation in North Tustin.

We have developed an entire social network with other members of the Club.

We originally moved to North Tustin to be close to the Club.

We are opposed to rezoning of the property for high-density housing. 96 more residents will mean nearly 200 more cars on the surrounding narrow roads at the time of job commuting and throughout the day. Our community is zoned for single-family homes on 1/2 acre lots and a change to multi-family housing will be 4 times the density of the

surrounding community, an unprecedented change in North Tustin. Property values will be adversely affected.

There is no lack of appropriate housing in North Tustin and nearby communities. The loss of the Club will only benefit the developer.

I urge you to assist our North Tustin community in preserving our current zoning and our singular source of local recreation.

Thank you,

William Gaffney MD, Patricia Gaffney, Garrick Gaffney, Dane Gaffney

Canning, Kevin

From: Anne Gardner <acgardner@me.com>
Sent: Tuesday, May 26, 2020 12:48 PM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: Ranch Hills Community File No: PA 18-0034

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning:

I would like to speak up and make it known that I/we disapprove of the zone change being proposed to increase density in our community.

To suggest that an EIR is not necessary seems very strange to me — actually it's disconcerting. Here are concerns I think of quickly:

1.) Water.... we live in an area where water is quite a concern. (GSW is certainly using this to their extreme advantage in my area)

How are you evaluating the additional water resources required to sustain this project? How are the environmental impacts of runoff (from a myriad of sources when you pack many more people into the area) being accounted for? Shouldn't the public see these evaluations and how they will impact their specific community and environment?

2.) Traffic.... the additional traffic associated with zone changing (adding more than was planned for this area — ie, changing zoning) increases the risk of accidents (auto-auto, auto-pedestrian), increases the dirt/dust/overall air quality, and will require additional resources for maintenance and repair work in the area.

3.) Fire danger.... Isn't there some concern for the additional density in the face of fire? There's only one road in and one road out.... trust me, this is an issue.

I've lived it where I live... and the county had the gall to change zoning in my neighborhood as well...to increase density. Isn't it possible you're setting these new residents up for potential disaster (in addition to existing residents)?

All in all, Mr. Canning, I'm tired of our politicians and planners not SERIOUSLY looking out for the best interests of all involved. It seems all I see in this a money grab — for developers (don't blame them, if you're going to keep letting them do it, why not?), for the county/state officials reaping the tax revenue (and whatever all else folks are getting out of this); and, for anyone else who get's funding based on increased density. I certainly realize housing is an issue — BUT we live in a desert and you cannot responsibly keep cramming people in. NOT RESPONSIBLY.

In addition, what's the point of zoning? We've invested the most significant percentage of our financial wherewithal in our homes. We bought our homes specifically in an area zoned in a fashion we desire to live in. Why is it okay for our planning commissions and development officials to change the rules on us "after the fact"? It seems a little like the "bait and switch" strategy is starting to go into high gear in N. Tustin. Why? Why is it okay to pull the rug out from underneath us and change our zoning, thus changing our neighborhoods forever?

All in all, it would seem **the minimum** you could do (when you are about to change the rules on everyone and majorly disrupt lives) **is complete a thorough EIR.**

I do appreciate the job you have to do and I/we would appreciate your consideration of these issues and others like them when processing new development plans.

Sincerely,

Anne Gardner

N. Tustin resident for over 40 years

Canning, Kevin

From: Maureen Geary <mgeary47@yahoo.com>
Sent: Thursday, June 4, 2020 10:14 AM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Maureen Geary
mgeary47@yahoo.com

#714-767-2370

Canning, Kevin

From: Rex Gelert <rexgelert@gmail.com>
Sent: Tuesday, June 2, 2020 5:15 PM
To: Canning, Kevin
Cc: kirkwaltilo@gmail.com
Subject: Re-zoning of racquet club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light, water pollution and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Rex Gelert

--

Rex Gelert Productions
714-623-1542
www.rexgelert.com
rexgelert@gmail.com

Canning, Kevin

From: Robert Gorelick <rgorelick@benefitequity.com>
Sent: Friday, June 5, 2020 1:25 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Redevelopment of the Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning,

To allow for multifamily high density building to replace the Racquet Club is wrong and I object to this project. Adding to which will certainly be more traffic. The report wants us to believe that there would be less traffic than we have now, however, the report makes an unrealistic assumption that 100% of the club facilities are being used all the time.

Adding 37 units in a community of single family homes on half to one acre lots is not compatible with our community. The proposed units are 4x the density of properties in the neighborhood. This project is clearly a money making proposition for the owner/developer. Multifamily units should not be allowed in the Tustin Hills.

I have lived here for 25 years. I live here because I enjoy the larger lots, open space and the The Racquet Club. It is an important community benefit and it would be a shame to lose it.

Regards,

Robert Gorelick
North Tustin Resident

Canning, Kevin

From: Natalie Griswold <ngriswold@cox.net>
Sent: Thursday, June 4, 2020 12:27 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: save the racquet club!

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Natalie Griswold

Canning, Kevin

From: Christine Groner <ccg0724@yahoo.com>
Sent: Monday, June 1, 2020 5:00 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: We oppose the Rezoning and redevelopment of the Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

We are opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, We are opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Christine & Carl Groner

949-500-6635

Sent from my iPhone

Canning, Kevin

From: John.Grover <John.Grover@knobbe.com>
Sent: Friday, June 5, 2020 12:14 PM
To: Canning, Kevin
Subject: Proposed development of property currently occupied by the Tustin Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Kevin Canning,

I am deeply troubled by the proposed high-density development of the property currently occupied by the Tustin Racquet Club. It seems in this instance that cooperation with the developer by the county is solely for the financial gain of the developer to the economic detriment and reduction in enjoyment to the community. I am unsure when our community leaders determined that type of one-sided proposal constituted an appropriate civic position. I know that our supervisor, Don Wagner, has openly and in writing expressed opposition to such development. Such replacement of a recreational community asset with high density condos out of place with the surrounding community is unprecedented in Tustin, and is an affront to common sense use of the land. Here are a few specific reasons why such development should be shut down.

I live in a house I purchased on the circle that includes the Tustin tennis club. This is the community's only recreational space. It was designated in the original plan for the community, there is a covenant to that end that is for the legal benefit of the community, not the particular club land owner, that requires it be used as a tennis club. When I purchased my property, the seller priced in this community asset, and when I decided to buy, it was proximity to this asset that was part of the sale. We moved from a community where the land owners had a home owners association with a central club, pool, courts, etc. We would not have come to this community without such an amenity as part of the plan. My wife and I have participated in almost all of the continuous tennis clinics for the past 5 years and taken numerous private lessons. The club is one of the few remaining tennis clubs in Orange County.

I understand the strong independent business preference we have in America. A landowner should generally get to do with his or her land as they please. However, in this case, the current recent buyer, the developer, and the prior land owner knew about the covenant (the previous owner knew for decades) and knew the land was intended since the 80s to be a recreational space. The developer has utterly no claim to surprise here. The developer is attempting to change zoning requirements, overturn a covenant that is not for his benefit, rather for the benefit of the community, and entirely change the nature of this bedside community. And for what? Obviously, he makes a bunch of money, but where or what is the community benefit? There simply is none. The plan replaces the only recreational space with way out of proportion, out of zoning, high occupancy land use. An addition of 96 homes will drastically increase traffic, is many times more dense than the surrounding community, has only 1 road in and out, and is simply not in-kind with the surrounding land use. No buyer in this community sought this type of land use in their prospective community when making their purchase. There simply is no benefit to the community here.

Please realize that I do not believe I have the right to tell the owner he must operate a tennis club. He knew the rules when he bought the land. He can always sell it to someone who will continue to operate the club. I am aware of multiple fair offers to buy the land for the sole purpose of club operation. As stated, the seller, the developer, and the current owner are collectively and individually not good-faith buyers without knowledge of substantial and almost universal community opposition to their development plans. Moreover, the current buyer purchased the property after the public statements from supervisor Don Wagner in opposition to the development.

I strongly encourage you to perform your civic responsibilities and take into account the considerations of the community over the financial benefits of a developer seeking to drastically change the nature of our North Tustin community.

John Grover

Partner

949-721-2946 Direct

Knobbe Martens

www.knobbe.com

Home Onwer

2311 Pavillion Dr.

Santa Ana, CA 92705

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Canning, Kevin

From: Roe Gruber <roe@escapesltd.com>
Sent: Monday, June 1, 2020 3:31 PM
To: Canning, Kevin
Subject: Tustin Hills Racquet Club planned development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi Kevin,

This Tustin Hills community has been here a long time, built with good size lots, a multi-purpose tennis club for the community's use, and a covenant to guarantee that this will stay in place in the future. That is why many of us bought here and have remained in this area.

Now GREED has set it, the opportunity for a developer to enrich himself (or themselves) at the expense of our community. The impact this development would have in this area would be devastating. You can't simply convert a neighborhood like this into a high density area without severe consequences. This project with 37 homes would change our environment dramatically. For what purpose? For the benefit of a developer? That is unacceptable and inappropriate.

Many years ago I worked on a volunteer effort to stop ongoing development in Orange County. The project was called TINCUP (Time is Now. Clean up Politics). Orange County became notorious for allowing random development, with many officials benefitting financially from this at the expense of local communities. Shirley Grindle spearheaded the movement which ended up gathering over 100,000 signatures to stop the too close relationship between developers and officials. We succeeded in limiting the amount of contributions developers could make to elected officials and it slowed the process down. It also helped save some of the county's older, established communities from developments that did not fit into their area.

I feel that with this Tustin Ranch Racquet Club, we are in a similar position, an attempt at disregarding the community that will be impacted for the benefit of the developer. The Tustin Hills Racquet club has other options available other than mass development. It's the only open space, park like area we have and to put 37 homes on it would be an outrage. Please help us stop this.

Roe Gruber
2012 Lerner Lane
Santa Ana, CA 92705

Canning, Kevin

From: Susan Harbour <susharbour@gmail.com>
Sent: Thursday, June 4, 2020 10:10 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Racquet Club Property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Kevin,

My name is Susan Harbour and I live at 11601 Las Luces which is 1/4 mile from THRC. I strongly oppose the re-zoning and re-development plan of the Tustin_Hills Racquet Club ("THRC"). I am very concerned with the proposed plan for high density housing being placed in a community that has minimum 1/2 acre lots.

My husband and I purchased our single story home on a roughly 1/2 acre lot in March 2017 specifically to escape tight/dense subdivisions, noise and traffic in exchange for larger private space with a view, peace and quiet in a more rural setting. We previously lived in West Irvine in a 3 story home on a small lot. We specifically moved to North Tustin to have more space and a quieter home environment. We absolutely love our community and adding 37 townhomes would be catastrophic to our community not to mention that our view would be negatively impacted.

There is absolutely no rationale justification to convert THRC into housing with density any higher than 2 homes per acre. The surrounding area to THRC and most of the North Tustin Hills community consist of minimum 1/2 acre lots. The character of the community is semi-rural. The re-development plan of THRC is inconsistent with the character of the community.

Re-zoning the property would set a dangerous precedent for the North Tustin Hills community. North Tustin Hills has always offered and continues to offer an attractive alternative to higher density housing in most of Orange County. This community was established with large lot residential land use designations and it is UNITED in preserving them. If the County approved a new subdivision with lots of anything less than half acre minimum, it would establish a very dangerous precedent that would forever negatively impact our community (Property values, traffic, park/open space, quality of life, etc). It would be reckless for our County leaders to approve any project that does NOT protect the character of the community as the basis for which my neighbors and my family moved into it.

I strongly oppose any kind of zone change. An environmental impact study is demanded to address the impacts of traffic to the area should the club be developed. The feeder streets to the club can not safely accommodate more traffic flow and would create additional safety issues to our pedestrians/bikers and residents who live on those streets. Please do everything to protect our hidden gem. THRC is the only recreation/open space in North Tustin and we want to preserve it!

Thank you,
Susan Harbour

Canning, Kevin

From: David Harbour <dharbour@wdland.com>
Sent: Wednesday, June 3, 2020 10:27 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition Memo re: Tustin Hills Racquet Club Re-Zone Application

Importance: High

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin,

I would like to open by pointing out that you and I used to discuss land acquisition opportunities while you were at Brehm Communities in the early 2000's. I continue to broker residential land and otherwise provide land development advisory services in my professional career. I am a strong advocate of the homebuilding industry and longtime member of the BIA. With that said, I strongly oppose the re-zoning and re-development plan of the Tustin Hills Racquet Club ("THRC"). In summary, my overwhelming concerns are focused on 1.) density/housing plan egregiously inconsistent with the character of the community and 2.) removal of one of the very few recreational use/open space parcels in the North Tustin Hills community.

I live at 11601 Las Luces (92705), which is roughly a ¼ mile from THRC. My wife and I purchased our single story home on a roughly ½ acre lot in March 2017 specifically to escape tight/dense subdivisions, noise and traffic in exchange for larger private space with a view, peace and quiet in a more rural setting. Previously, we owned a 3,200 sf two-story home with a 3rd story finished attic on a roughly 4,500 sf lot down the hill on Jamboree Rd at the border of Tustin Ranch and Irvine. It was a typical Irvine Co subdivision consisting of a mix of small detached lots and townhomes with a central pool, tot lot and common green space. Additionally, the immediate area included a plethora of parks and recreational open space. This type of living served its purpose while we were a family with two young boys. However, as my sons approached High School age, we were worn out by the higher density housing, traffic, noise, lack of private space, etc. My wife, who grew up here, sold me on trading a higher energy suburban (Tustin Ranch) setting for a more rural setting in the unincorporated North Tustin Hills.

While these two homes are located within 1 mile away from each other as the crow flies, they are within vastly different communities. The lots surrounding the THRC and throughout the unincorporated North Tustin Hills (including our home above THRC) are half-acre minimum. What the Tustin Hills community offers is a semi-rural setting as it always was intended consistent with large lots/private space, peace and quiet. What the Tustin Hills community lacks is public open space and recreational amenities. In fact, THRC is the only park or recreational amenity within reasonable walking distance of our home and one of the very few in the entire North Tustin Hills community. THRC serves as a default community center that we don't otherwise have in North Tustin Hills. I have regular conversations with neighbors who walk by my home to/from tennis outings at THRC. We absolutely love the North Tustin Hills community including the THRC and feel it is a hidden gem in Orange County that must be preserved.

There is absolutely no rationale justification to convert THRC into housing with density any higher than 2 du/ac. As mentioned above, the surrounding area to THRC and most of the North Tustin Hills community consist of minimum ½ acre lots. The character of the community is semi-rural. The re-development plan of THRC is egregiously inconsistent with the character of the community. As a real estate professional and new housing advocate, this plan makes ZERO sense. I would support a well designed plan with minimum half acre lots consistent with the character of the community

EXCEPT for the fact that the THRC serves as our only community recreational amenity and default community center. Our community simply lacks parks and open space and THRC provides a welcomed oasis.

Re-zoning the property would set a dangerous precedent for the North Tustin Hills community. North Tustin Hills has always offered and continues to offer an attractive alternative to higher density housing in most of Orange County. This community was established with large lot residential land use designations and it is UNITED in preserving them. If the County approved a new subdivision with lots of anything less than half acre minimum, it would establish a very dangerous precedent that would forever negatively impact our community (ie. Property values, traffic, park/open space, quality of life, etc). It would be reckless for our County leaders to approve any project that does NOT protect the character of the community as the basis for which my neighbors and my family moved into it. I challenge staff, the planning commissioners and the Board of Supervisors to educate themselves on the North Tustin Hills community and consider their support or lack thereof assuming they lived within it.

Demand for semi-rural living in Orange County, which the North Tustin Hills community offers, is increasing due largely to the congestion and high density housing that has been recently added in Orange County. Orange County has added over 50,000 apartment and condominium units in the last five years and largely in surrounding communities like Anaheim and Irvine. While this high density housing has addressed a need for affordable housing in the County, it has come at a big price as our infrastructure especially our roads and freeways are overburdened. Many people are growing increasingly weary of the traffic, congestion and cramped lifestyles and are seeking safe havens like the North Tustin Hills community as a high quality of life alternative. This community and its semi-rural character must be preserved to maintain balance of housing options and address the increasing demand for larger lots and private living space.

The fact that Orange County is even considering a Mitigated Negative Declaration for such a dramatic zone change is a significant concern. While re-Development of THRC would create negative environmental impacts that must be studied more thoroughly, this detracts from the focus of my primary opposition arguments above: 1. Re-Development would forever negatively alter the character of the North Tustin Hills community and set a dangerous precedent for future spot re-zoning within it and other unincorporated areas of Orange County. 2. THRC offers one of the very few recreational amenities in our North Tustin Hills community that otherwise lacks parks and open space.

One important side note re: traffic impacts of the THRC vs. the proposed development...I walk by THRC regularly and rarely see more than 10 cars in the parking lot. Many members walk to/from the club to access it. This is important because there is only one winding residential street that provides access to THRC. Any higher density housing re-development of the property would have significant negative impacts on traffic. It would not even be comparable to the current traffic in my experience despite the argument the developer may try to manufacture.

Don Wagner has consistently pledged his opposition against the re-zoning of THRC. He made this pledge prior to his election to the Board of Supervisors and has ratified his opposition in support of the Tustin Hills community in writing and verbally on multiple occasions. We ask for his continued and consistent support and ask that he helps with the education process of staff, planning commission and his fellow supervisors to help them understand why preserving THRC is so important to the community and why any new home development should be well planned and consistent with its character. The current plan fails miserably and appears to be a typical ill conceived start-high-and-compromise approach. Please don't be fooled by this developer and I encourage you and other County leaders to deny any change of zoning and preserve the North Tustin community and one of its only recreational/open space amenities!

Thank you,



DAVID HARBOUR, *Partner*

BRE LIC. NO. 01344587

OFFICE 949.789.4555 x16

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EMAIL dharbour@wdland.com

WEB wdland.com

MAIL 530 Technology Dr, Suite 100 Irvine, CA 92618



[vCARD](#) | [BIO](#) | [LISTINGS](#)

Canning, Kevin

From: Benjamin Harden <Benjamin.Harden@xperi.com>
Sent: Friday, June 5, 2020 3:49 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tract 3883 significant safety and environmental impact - rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hello Kevin,

It appears that the owners of the racquet club in my tract 3883 are confident that they have done everything needed win their way and begin work. The parking lot has the construction crews and equipment already starting work from what I can see. Very intimidating and point has been made. The rest of us who never saw this coming when we invested our life savings into the neighborhood, are at home during Covid-19. I am less concerned with the economic damage hundreds of families face, and more about how our families are put in an unsafe position. The bank owns most of my home and I just moved in last year. I am stuck with whatever safety issues remain and cannot simply move. Very sad.

I am writing you to voice my concern that hundreds more residents will cram together in an already tight single ingress/egress neighborhood entry point where there was already safety issues with blind corners and a bottlenecks. As you know every new resident brings with them all the services and outside vendors causing an exponential multiplier effect. Forever. From general maintenance and amazon, to postal, trash, construction, social, parties, family, extended families etc.

With average half acre lots the ingress/egress is already a bottleneck and a concern. These hundreds of proposed residents will bring thousands more vehicle traffic and without adding an additional egress or significantly widening the single ingress, I do not see how this is safe. The proposed new residents, who I am sure will be very nice folks in million dollar homes, will over time naturally disregard the neighborhood streets that were designed for much fewer residents. It will be natural to forget that families live on the road and will naturally be more concerned with getting home to their cramped spacing and land locked homes. Especially after long waits in traffic. A significant increase in vendors will also forget that this oversubscribed ingress/egress and path to the back is where families live. It will be impossible to police the increase in speed expected for those to get all the way to the back corner of the neighborhood where now most residents will reside.

Hill fires are common. So much that Allstate would not even insure my home. When a hill fire starts as they have before, I expect a lot of tough questions about how something like this was approved and why so many people had to die. Who is to blame etc. Why was there no way for people to get out? Sadly resending this feedback with a "told you so" will not change the fact that so many died unnecessarily and could have been prevented. Who will be blamed? Will those blamed pass the blame to others did not receives this dire warning? Sadly the majority of the deaths will be those in the homes that were all on top of each other and no way out. Others will find the log jams further towards the single egress, and with no way for fire trucks to get to help even more will die. I hope we all take a step back and consider what is best for the majority and not the few. And what is safe and reasonable.

I have a few questions:

- 1) Was the exponential increase in long term vendor, delivery, services taken into account for determining this is safe?

- 2) What is the impact on change in open space to the wild life? What happens the wild life that has depended on the current arrangement for 62 years? Which wild life was considered not relevant and disregarded? It seems like many will suffer as they have become dependent on the current environment.
- 3) What is the hill and structure fire egress plan? How do fire crews get in while hundreds more are trying to survive? It was already a dangerous.
- 4) Does the drastic change in density raise the risk of danger for the homes surrounding?
- 5) What is the path the fire department will take in the event of an MDU fire?
- 6) Will a new entry/exit be added towards Tustin ranch road? What is the plan for a secondary exit for so many people?
- 7) Will the roads be widened to accommodate the substantial increase in traffic? How will the blind corners be handled?
- 8) Will a traffic light be added? Speed bumps?
- 9) What am I missing in the benefit to the county that its so valuable that its worth hurting so many people and putting their safety at risk. How many benefit from this and how is that benefit offset by damage to many more?
- 10) What are the fire safety requirements for the structures to ensure there is not an increased fire hazard? Will all buildings have full sprinkler systems? Will this extend to protect surrounding homes?
- 11) Given the hillsides and brush, will the city keep surrounding areas mowed and safe from spreading to the densely populated area? Hundreds more residents means greater chance of accidents.
- 12) Will we be compensated for increased insurance premiums due to the increased fire and death risk?
- 13) I am new to the sudden change in zoning and I am curious how it all works. Are the decision makers elected officials and what are the goals and mission statement?
- 14) Since the plans show almost zero recreation space, I assume the recreation is expected to be walking on the now super busy streets with no sidewalks. Will there be a lot more recreation on the now double busy streets? Will sidewalks be added to address these safety issues?
- 15) How far is the fire station from a location where hundreds of new residents are trapped? What will be done to clear the log jam so fire trucks can get by the panicked single exit point?
- 16) What is the expected time to reach hundreds of trapped people in almost 1 million square feet of newly added structures with just a few feet between them? I am guessing at 1 million based on 2,500sf *37 including garage etc. That is a lot of new structure in a remote and land locked area and a tiny bottlenecked road to get there.

I also have a couple observations I would like to voice.

- 17) Is it normal practice for a builder to know so much about how to work the system that they start work? It feels arrogant, intimidating, and like rubbing salt in the wounds. Perhaps this is par for the course when you know how things work with city planning.
- 18) Do you anticipate the new owners will immediately bulldoze all the infrastructure and habitats as a way to make the issue of recreational loss a non-issue? I hear this is a common strategy against the people. Make it ugly and wait for those that needed the space for recreation to simply give up after the buildings are gone.
- 19) Why all the equipment in the ready position? Is time so critical that before a decision is made they start work? Or was the decision already made?
- 20) It does not feel appropriate to move on such a big and long lasting economic safety and environmental impact that it would be done during a pandemic while everyone is worried about the families and jobs. Why is this going on right now? So may are suffering and this needs to pile on right now?
- 21) Does the developer in consideration here have a history of success in flipping properties in Orange County? I am curious of the probability as it seems like it's a done deal based on all the activity.
- 22) Does the developer live in the communities or have a vested interest in how it impacts others?
- 23) Will those that paid premiums for their views be compensated for taking this away from them? There is inherent trust in the county to protect investments. While the economic impact is not the point here, I would like to know how and if that was addressed. While I will not be impacted for views I feel very sad that someone can take that away so they can make money. These nice people invested their life into those homes and it feels unjust that someone can change the game to make money at the expense of others losses.

Thank you for your time and help on this very important matter. I hate to ask all these questions and I am sure you are a good guy that anyone would love to have a beer with. There is a lot at stake so I appreciate your time on this matter and for listening to my concerns.

Regards,
Benjamin Harden
2232 Salt Air dr.
North Tustin, CA
92705

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Canning, Kevin

From: Adam Harita <adam.harita@yahoo.com>
Sent: Tuesday, June 2, 2020 5:15 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club Re-Zoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Adam Harita
7593 E. Endemont Ct
Anaheim Hills, CA 92808
adam.harita@yahoo.com

Canning, Kevin

From: Sherry Hart <hartofopa@gmail.com>
Sent: Friday, June 5, 2020 8:31 AM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: North Tustin Racquet Club
Attachments: Letter to OC Public Works (North Tustin Racquet Club).docx

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Please see the attached letter as the Orange Park Association response to the MND of the North Tustin Racquet Club.

Should you have any questions or concerns feel free to contact me directly.

Sherry Panttaja
President
Orange Park Association

Canning, Kevin

From: Carol Hay <cahay@cox.net>
Sent: Tuesday, May 26, 2020 1:19 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

We have lived in the Tustin Hills since 1979, within walking distance of the Tustin Hills Racquet Club. The Club has been an important part of our neighbor for decades—not just a place to enjoy tennis. It has also served the wider Tustin community as a place for community involvement: fund-raising events to benefit hospitals, churches, schools, youth activities and sports as well as support for non-profit organizations. The club will be sorely missed! But, to now develop it into a high-density 37 unit condominium project adds to the distress this project is causing.

Here are some of our concerns:

- *The only access to the property is by one residential street, not suited for the increased heavy traffic once the project is completed;
- * We are worried about the wear and tear on this street by the construction equipment that will be involved in the project;
- * Situating 37 residences on this 5.88 acre property completely changes the character of this residential area which consists of properties of much less density than this project (our own home/property is over an acre);
- * We already worry about how emergency equipment can access this area as it is now, but to ADD so many residences gives us great concern;
- * The unique quality of our neighborhood means a great deal to all of us and we simply cannot welcome such a drastic and permanent change.

Thank you for your consideration of our concerns.

Sincerely,
Carol Anne Hay
11651 Plantero Drive
Santa Ana, CA 92705
714-731-6608
cahay@cox.net

Canning, Kevin

From: ROY HERNDON <royherndon92705@yahoo.com>
Sent: Friday, May 22, 2020 2:35 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to rezoning of the property known as The Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

As a homeowner and resident in tract 3883 for over 40 years I am strongly opposed to the possible rezoning and potential construction of the 37 condos on the Tustin Hills Racquet Club property. The property was never zoned for high density housing and those of us who purchased 1/2 acre lots assumed this would not be changed for some developer. The potential increase in autos, trucks, deliveries and traffic would be devastating to our community and quality of life. Roy L and Susan M Herndon of 11842 Skyline Drive, Santa Ana, CA 92705

Canning, Kevin

From: Lynn Hess <lynnmhess@yahoo.com>
Sent: Wednesday, May 27, 2020 3:45 PM
To: Canning, Kevin
Subject: Fw: North Tustin Update

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

I received the following email from the FCA requesting that we reach out to you to express our 'fearful concerns' regarding the proposed development of the Tustin Hills Racquet Club (THRC) into a condominium community.

I would like you to know that we, along with others in our community, fully support this project.

FCA does not speak on behalf of the residents of North Tustin. They are a small minority with NIMBY agendas. They were neither elected nor appointed by the residents of North Tustin and their self assumed mandate to be the voice of our community is presumptuous. Rather than waste precious resources on an unnecessary environmental study, we can think of so many better uses for these funds, such as improving the condition of our roads and clearing green overgrowth debris that would both improve property values and fire safety.

Like many in our community, we seek to enhance the value and improve the safety of our neighborhood. We believe that this development is in accordance with that goal. This development will not only benefit the residents of North Tustin, it will generate jobs, provide affordable housing, be good for the businesses in our community and benefit the County of Orange as well. With the grave economic impact of COVID-19 on our county and the small business owners in our community, civic leaders should be doing all they can to encourage development. This is not the time for narrow minded selfish agendas. I urge you to take the broader perspective and seek the greater good. Support this development and the wishes of the greater community, not just the limited interests of the entitled few.

Sincerely,
Lynn Hess
North Tustin Resident

----- Forwarded Message -----

From: Foothill Communities Association
To: Lynn Hess
Sent: Friday, May 22, 2020, 06:11:28 PM PDT
Subject: North Tustin Update



North Tustin Update

Racquet Club Environmental Study

The County has released a document (Mitigated Negative Declaration or MND) that asserts that an environmental impact study is not necessary for the high density housing

project that is proposed to replace the racquet club because the development will not have significant environmental impacts. We believe this is not the case. For example, there will be an increase in traffic on the surrounding roads (more cars on the one 2 lane road in and out of the community), more housing requires more water in a drought-prone region, and the destruction of the racquet club will remove the only outdoor recreation area in the area. Several generations have grown up enjoying this resource.

The Racquet Club Steering Committee needs everyone to respond to the county stating that a full environmental study is needed to make clear the environmental consequences of replacing the club with high density housing. You can see the MND document [on the County website](#). Send your responses to Kevin.Canning@ocpw.ocgov.com with a copy to Kirkwatilo@gmail.com (a Steering Committee member). The responses do not have to be detailed or technical. Just supply your heart-felt, or logical, or fearful concerns. The number of responses matter. The larger the number of responses, the more the County will know people care about this change. Anyone can respond.

If you prefer to use postal mail rather than email, send your response Kevin Canning, OC Public Works, Development Services/Planning, 601 North Ross Street, Santa Ana, CA 92701. Please send a copy to FCA, P.O. Box 261, Tustin, CA 92781.

Responses need to be received before 4:30 on June 5, 2020.

Donations & Expertise Needed

FCA needs to hire specialists to defeat this incompatible development. FCA charges very little for membership, so donations are needed to raise funds for projects. You can donate at the FCA Website at www.fcahome.org/raise-money/ or mail a check to FCA, P.O. Box 261, Tustin, CA 92781. If you mail a check, please put "Racquet Club" in the memo line in the lower left in order to have your donation properly accounted.

If there are funds left at the end of this project, all remaining funds will be returned to the donors. Donations to this project are segregated and will not be used for any other purpose.

Project expenses can be avoided if volunteers can help. Help is needed in these areas:

- Construction Aesthetics
- Housing Development
- Agriculture & Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources / Scientific Resources

- Energy
- Geology and. Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Land Uses & Planning
- Mineral Resources
- Noise
- Population & Housing
- Public Services
- Recreation
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities & Service Systems
- Wildfire - Fire Safety

In addition, volunteers are needed to deliver yard signs, deliver documents, and data input (Excel input). If you can help with any of these, please reply to this email.

Letters to The Editor

Please send letters to the Editor of the Foothills Sentry newspaper. The Editor will publish the letters and FCA will ensure that all decision makers receive a copy. A large number of letters will document public opposition to this high density housing development.

Email Address: editor@foothillssentry.com

Postal Address: 1107 E. Chapman Ave., #207, Orange 92866

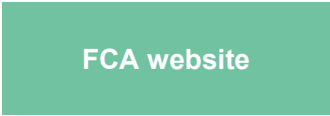
COVID-19 has caused a loss of advertising, the June issue will be online only. [More Here.](#)

Keep Up to Date

The [racquet club page](#) on the [FCA website](#) will provide continuing updates on the club status.

FCA has provided support to North Tustin residents and protected our desirable living environment since 1964. Thank you to our members who give decision makers the need to listen to us. If you are not a member you can [join here](#). If you are unsure of your membership status, send an email to membership@FCAhome.org.

Rick Nelson,
FCA President



FCA Facebook Page

[View this email in your browser](#)

This message was sent to lynnmhess@yahoo.com by melson@fcahome.org
PO Box 261, Tustin, CA 92781



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Canning, Kevin

From: Ken Higman <ken.higman@gmail.com>
Sent: Monday, May 25, 2020 3:31 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: proposed housing development located at 11782 Simon Ranch Road (Application nr. PA180034).

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hello Mr. Canning,

I just read the "Proposed Mitigated Negative Declaration" prepared by the County for the proposed housing development located at 11782 Simon Ranch Road (Application nr. PA180034).

I was surprised to see the stated conclusion that this project will have minimal or no impact in each of the categories outlined in the report. Also, in the section outlining mitigation measures, several concerns are not adequately addressed or mentioned at all:

- A main concern is evacuation / fire safety. There is only one road to enter and exit this development. In the event of an emergency, this could present a significant danger for the residents within the tract as well as the surrounding neighborhood.
- With 37 new homes, traffic will increase on the streets leading to and surrounding the planned site. Our roads are winding and without sidewalks in many places. This will increase the risk to the many pedestrians in our community. Air and noise qualities will be impacted as well.
- Noise, traffic, and road closures will all have an adverse impact on our neighborhood during the construction. In the event of any emergency, these factors would increase danger as well.
- This project requires a zone change, something our community is against and that sets a bad precedent for future developments.
- The existing neighborhood has a unique character with open spaces and low-density housing. This project will change that feature that we value and will obstruct views of neighboring houses.
- This is the only site in N Tustin zoned for recreational open space. It is a place we have cherished for decades, and we hate to see it eliminated to benefit a private developer.

Several statements referenced in the impact report seem to be based on questionable assumptions about the current use of the property. Examples include an assumption that nighttime lighting and traffic flow would decrease with the planned development. The property is not used every day at full capacity. As such, assumed lighting and traffic as it stands now is less than suggested. Adding 37 homes which would be occupied continuously with additional traffic from guests, workers, deliveries, etc... will surely result in increases to all categories considered under the environmental study.

I believe this analysis is inaccurate and am opposed to the planned zone change and development of this property.

Sincerely,

Ken Higman

2242 Salt Air Drive

Santa Ana CA 92705

Canning, Kevin

From: Amy Hodge <amybwelles@yahoo.com>
Sent: Sunday, May 31, 2020 5:40 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Amy Hodge

Canning, Kevin

From: David Holt <dholt@holtlawoc.com>
Sent: Thursday, June 4, 2020 2:29 PM
To: Canning, Kevin
Subject: Opposition to Proposed Mitigated Negative Declaration and Rezoning of the Tustin Hills Racquet Club (Initial Study No. PA 180034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning:

The purpose of this e-mail is to express my family's opposition to the development PA180034/TTM18119 due to the loss of property value and highlight, among other things, the need for a comprehensive Environmental Impact Report, especially as it relates to traffic.

In 2002, my wife and I purchased our home at 2171 Pavillion Drive, which is adjacent to the Tustin Hills Racquet Club ("THRC") and one of two properties that border the only entrance or access point to THRC. We previously lived in a planned development in Orange. However, we were drawn to the North Tustin area due to the larger available lots. We ultimately purchased our home in Tract 3883 at nearly triple the cost of our Orange residence due to its lot size and open space, the tranquil beauty of the neighborhood and the close proximity of THRC and the recreational and social amenities (pool, exercise room and tennis). We enjoy our tranquil home life and still take advantage of the THRC amenities. We vehemently oppose any idea to trade our nearly twenty year home life for a developer with a carpetbagger mentality to build 37 cookie cutter condominiums in our backyard. We paid a premium for the privilege to live in this neighborhood, which would be completely wasted by the proposed development.

I have reviewed the transportation section of the Mitigated Negative Declaration and from a lay man's view, find it completely inaccurate. First, the banquet facility is rarely used at full capacity, even on the weekends. Second, the tennis courts are also rarely fully occupied, except for events like summer league and summer tennis camps. Third, many of the families and players drive in one car to THRC, so the parking lot is rarely ever even at 50% capacity, which is why THRC can currently rent 50% of the parking lot to a local water contractor and not affect the members. Simply put, there is no doubt that the traffic generated by 37 homes with multiple drivers and multiple home to home trips would drastically increase the traffic in the only access point above my residence (not to mention additional noise and littering). Therefore, a comprehensive Environmental Impact Report is necessary.

Finally, I have had a copy of the Covenant that Runs with the Land that was executed between Tract 3883 and the prior owner of THRC property since 2002. I was given legal research from a former neighbor, who was also a Justice of the Court of Appeal for twenty years, on the covenant's validity and binding effect. I have updated that research. There is a high probability that members of the Tract could legally prevent the proposed development if the tract is forced to file a lawsuit to enjoin the current property owners to comply with the covenant. This no doubt would involve protracted litigation but the members of the tract are unified in their opposition to the proposed project.

Very truly yours,

David C. Holt, Esq.
The Holt Law Firm
1432 Edinger Avenue, Ste. 130
Tustin, CA 92780

(714) 730-3999 Main

(714) 665-3991 Facsimile

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Canning, Kevin

From: Richard Hoppe <rthoppe@cox.net>
Sent: Friday, June 5, 2020 4:19 PM
To: Canning, Kevin
Subject: Rezoning Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised we are opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

My son and his family live off of Racquet Hill on Vista Mar and their home is walking distance to THRC. They purchased this home in North Tustin 8 months ago because of the larger lot size, quiet neighborhood and because the area was already built out and had been significantly "developed" when the Racquet Hill streets were completed in 1976. They also purchased the home relying on the close proximity to the THRC because it provides open space, recreational opportunities and a sense of community. Our family is a member of the THRC and enjoys all that it offers both to its members and the local community. Their use of the facility includes tennis, the pool and banquet facilities for school functions, meetings and weddings. THRC also serves these same functions for the community at large including tennis matches, tennis camps for children, family pool memberships, weddings, Bar Mitzvahs/Bat Mitzvahs, Quinceaneras/Quinceneros, school fundraisers and other functions, funerals and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community. Building high density housing behind our home would result in years of construction and noise and greatly reduce the enjoyment of their home as well as the short and long term property values of their home.

The Developer, Ranch Hills Partners, LP's (the "Developer") partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disengeniously claims he is building these condominiums to address a claimed need for housing for "active adults of 55 years and older" in the North Tustin area. This claimed

justification for the change in zoning is a complete fabrication and is not supported by any studies or even anecdotal needs for this type of housing in this area. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as our son, relied upon when we purchased our home on Racquet Hill. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

Increased Traffic:

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developers assumptions are in inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
- (3) The banquet facility is not used ever days. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner I know the current ADTs are not as high as the Developer claims and we are highly

doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have at least 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
- (3) The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.
- (4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the Development on neighboring streets will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.
- (5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.

There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.

Cumulative Negative Impacts:

The MND inaccurately states there would be "less than a significant impact" caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than "spring of 2017" as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in "spring of 2017" illustrates the many flaws and inaccurate conclusions made in the current MND.

The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.

High Density Housing Will Eliminate North Tustin’s Only Open Space And Limit Recreational Uses:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.

Additional the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between

the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic through out the surrounding area rather than concentrating walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also decrease the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will not have houses and roofs to look at rather than the more open space provided by the current use.

Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was build over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.

Increased Strain on Local Resources and Safety Concerns:

Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter’s Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the adjacent neighborhood and North Tustin at large by allowing for spot rezoning for high density housing and increase traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values, but if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on

the community and its environment. Thoughtful consideration of the Developer's rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer's plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Respectfully submitted on behalf of our son, his wife and 4 children,

Carol and Rich Hoppe

1522 Seacrest Drive

Corona del Mar, CA 92625

Canning, Kevin

From: Howard <hjmj1@cox.net>
Sent: Friday, June 5, 2020 4:30 PM
To: Canning, Kevin
Subject: Tustin Racquet Club rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

We do not want the parcel to be rezoned for high density residents.

There are many safety, traffic, and environmental concerns Howard Brostoff Sent from my iPad

Canning, Kevin

From: Steve Howard <steve@howardoclaw.com>
Sent: Friday, June 5, 2020 7:54 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Steve Howard

--

Steven P. Howard, JD CPA LLM

The Law Offices of Steven P. Howard
27442 Portola Parkway, Suite 155
Foothill Ranch, CA 92610

Telephone: 949-770-1200

Fax: 949-891-0219

Email: steve@howardoclaw.com

www.howardoclaw.com

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Canning, Kevin

From: Kevin Hungerford <kevin_hungerford@yahoo.com>
Sent: Tuesday, June 2, 2020 5:00 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: No Rezoning in N. Tustin

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Kevin Hungerford

Canning, Kevin

From: elihunz <elihunz@yahoo.com>
Sent: Monday, June 1, 2020 4:53 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club zoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

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This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Elizabeth Hunsaker

Canning, Kevin

From: Mika Ikeda <mikanikeda@gmail.com>
Sent: Tuesday, June 2, 2020 12:56 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: The opposition for developing condos after Tustin Raquet club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Mika Ikeda

Canning, Kevin

From: Mike Jennings <Mike.Jennings@armaninoLLP.com>
Sent: Saturday, May 23, 2020 11:25 AM
To: Canning, Kevin
Subject: Tustin Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin,

I am a resident of Cowan Heights/North Tustin, and I want to convey my whole-hearted support for the redevelopment of the Tustin Hills Racquet Club (THRC) into a condominium project. This is an attractive project that will enhance the value of the entire neighborhood. Further, it is a positive trade-off to eliminate the transient occupancy of THRC (by tennis players, wedding guests, birthday guests, etc.) with the stable occupancy of residential units.

The Foothills Community Association (FCA) would have you believe that they speak for the entire community in their opposition to this project. They do not. The FCA has encouraged residents to send you “fearful” concerns to support an unnecessary environmental study. The notion that FCA is concerned about environmental studies is absurd. FCA is concerned about only one thing: NIMBY opposition to all projects at all locations at all times. FCA opposed the senior living facility on Newport Avenue for no good reason. I supported that development as an enhancement to the community. FCA opposed the residential development between Newport Avenue and Briar Street. I supported that project (despite living only a short walk away from it, unlike the FCA board members) because it is a high-end development that will enhance property values.

I am not a NIMBY. Most of my neighbors are also not NIMBYs and support the THRC development. The FCA claims to oppose the development because “several generations have grown up enjoying this resource (THRC).” That is no reason to prevent a quality development. If the FCA wants to continue “enjoying this resource,” they can raise money to buy it, rather than stealing the property rights from the owner.

I welcome the Ranch Hills development as community neighbors, and urge the county to allow this development to proceed.

Michael Jennings

Partner, Tax

mike.jennings@armaninollp.com

Armanino^{LLP}

18101 Von Karman Avenue 14th Floor | Irvine, CA 92612

949 224 3300 main | 949 224 3399 fax

armaninoLLP.com

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Canning, Kevin

From: Duane Jensen <djensen@catalinahome.com>
Sent: Thursday, June 4, 2020 2:21 PM
To: Canning, Kevin
Cc: Kirk Watilo
Subject: THRC Proposal Opposition

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am writing to let you know that I am opposed to any zoning change that pertains to the Tustin Hills Racquet Club.

There are a number of reasons for my opposition.

1. I grew up in North Tustin very close to the club and started playing tennis there in the summer camps back in the mid 1970's. Many of my friends in the neighborhood also played tennis there, it was kind of a place everyone eventually got to experience. 15 years ago my wife and I purchased a home back in the neighborhood, the club was one of the reasons we went back. Today my 14 year old daughter plays tennis there everyday and has been for the last 5 years. The club still provides a great outdoor experience for today's youth at a time when we need it more than ever. Over the years thousands of kids and families have benefited from the club. Why would anyone want to consider depriving all the future kids and families from this opportunity.
2. Our neighborhood is very quiet and safe. Contrary to what the developer will tell you, currently we have very little traffic that is created by the club the proposed development would add many more cars going up and down Simon Ranch road which has many blind corners and drops on it. Any kind of high density development will greatly increase the traffic and noise. The entrance to the club is located in an area where adding traffic will be unsafe for the neighborhood. There is only one way into the club and one way out, all the traffic will land on Simon Ranch, Browning, and SE Skyline.
3. Many of the homes near and around the club will suffer a significant decrease in property value. These are home owners who purchased homes in the neighborhood because it was an area with half acre lots not high density housing. Obviously the developer doesn't care about these homeowners as long as he sees big profits. His profit will cost the existing homeowners greatly.
4. This piece of property was made into a tennis club for a reason. It was intended to be a club from the time Chuck Pate purchased and he was told that was all it would ever be. Chuck and the developer who purchased the club don't live in our community and don't care about our community; they only care about the profit it can provide them. This club has been a part of our housing tract since the homes were built, it was part of the original master plan. The plan wasn't to have 37 condos planted in the middle of our neighborhood.

Rezoning the club for development has no positive outcome for our community. The club is one of the true gems of North tustin. I hope you and others at the county will consider the quality of life our neighbors wish to preserve for themselves and future generations to come.

Regards,

Duane Jensen
2325 Pavillion Dr.
Santa Ana, CA 92705

Canning, Kevin

From: Amy Jensen <amyjensen2325@gmail.com>
Sent: Thursday, June 4, 2020 12:36 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC Proposal Opposition

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning:

Please be advised I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. I have been a resident and home owner on Pavillion Drive for the last 15 years and my home is located approximately 12 houses away from Tustin Hills Racquet Club. One of the factors in moving to this neighborhood was the proximity of a recreational club to my home.

THRC is particularly special to our family since our 14 year old daughter is currently a junior member. She has grown up at the tennis club and has been taking lessons and attending clinics at the club since she was 9 years old. She walks every day to her tennis lesson or match. She has benefited from the proximity of THRC to our home and has cemented close relationships with other children she has met through attending tennis clinics, matches and lessons at the club. Our daughter's passion for tennis began with her first clinic at THRC and she plans to pursue tennis while attending Foothill High School in the Fall. She is a perfect example of how a local club can foster a lifelong love for sport and strengthen a bond to her community.

The developers, principals and employees have no vested interest or ties to the North Tustin community. They have erroneously calculated the impact of traffic and do not have a true understanding of the current use of the tennis club or the dynamics of our neighborhood. The following are only a few of reasons I am vehemently opposed to any re-zoning or development of this parcel:

-The impact of this project would negatively impact the traffic in our area, especially on Southeast Skyline, Browning and Simon Ranch Roads. These roads are already congested by the rise in population by our local schools. Our schools were originally designed for much fewer students, but now our local schools are at maximum capacity. School traffic in the mornings and afternoons are already extremely busy along Southeast Skyline and Browning in particular. Adding additional condominiums will only exacerbate this problem.

-Our neighborhood has no sidewalks or street lights. Additional traffic from construction congestion and ultimately, condominium residents, would negatively impact the ability of adults and children to walk safely in our immediate neighborhood.

- Having 37 condominiums built in a land locked parcel makes little sense in a neighborhood of (minimum) 1/2 and mostly 1 acre lots. This counters the feel and look of our neighborhood and shows little thought into the ingress and egress issues that could arise with the possibility of a catastrophic event.

Most importantly, I am opposed to any change in the zoning because this community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhood and counter to our restrictive land use covenant. This development would be detrimental to my property value and as well as the quality of life in our neighborhood.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer's plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Respectfully Submitted,

Amy Jensen
2325 Pavillion Drive
Santa Ana, CA 92705
714-675-5916

Canning, Kevin

From: Carmina Johansson <carminaj@sevengables.com>
Sent: Friday, June 5, 2020 1:42 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Ranch Hills Partners, LP's Project and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

My family and I live on Racquet Hill. We purchased this home in North Tustin three years ago because of the large lot size, quiet neighborhood and because the area was already built out and had been significantly "developed" when the Racquet Hill streets were completed in 1976. We also purchased the home relying on the close proximity to the THRC because it provides open space, recreational opportunities and a sense of community. I work with The O'Dell Group at Seven Gables Real Estate which is the number one real estate team and Brokerage in North Tustin. I work with many Buyers and Sellers that love the Racquet Hill neighborhood because it offers large lots, large homes in a well established neighborhood. Changing the zoning in this neighborhood would absolutely destroy values and the appreciation of why people want to move to the area. I have three children and they love playing tennis at the club. If the club is no longer there, many people would be forced to go else where losing the sense of community in Tustin. Our use of the facility includes tennis, the pool and banquet facilities for school functions, meetings and weddings. THRC also serves these same functions for the community at large including tennis matches, tennis camps for children, family pool memberships, weddings, Bar Mitzvahs / Bat Mitzvahs, Birthday Parties, school fundraisers and other functions, funerals and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community. Building high density housing would result in years of construction and noise and greatly reduce the enjoyment of our home as well as the short and long term property value of our home.

The Developer, Ranch Hills Partners, LP's (the "Developer") partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and

the entire area by eliminating several recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disingeniously claims he is building these condominiums to address a claimed need for housing for “active adults of 55 years and older” in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anecdotal needs for this type of housing in this area. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

Increased Traffic:

The Developer’s Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developers assumptions are in inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
- (3) The banquet facility is not used ever days. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have at most 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
- (3) The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.
- (4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the Development on neighboring streets will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.
- (5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.

There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.

Cumulative Negative Impacts:

The MND inaccurately states there would be "less than a significant impact" caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than "spring of 2017" as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and

Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in “spring of 2017” illustrates the many flaws and inaccurate conclusions made in the current MND.

The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.

High Density Housing Will Eliminate North Tustin’s Only Open Space And Limit Recreational Uses:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.

Additional the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic through out the surrounding area rather than concentrating walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also decrease the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will not have houses and roofs to look at rather than the more open space provided by the current use.

Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was build over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.

Increased Strain on Local Resources and Safety Concerns:

Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter’s Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the the adjacent neighborhood and North Tustin at large

by allowing for spot rezoning for high density housing and increase traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values, but if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer's rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer's plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Respectfully submitted,

Carmina Johansson

The O'Dell Group | Seven Gables Real Estate

Cell: 949.933.5414 | Office: 714.665.7178 | Fax: 714.505.2833

BRE # 01851643

www.theodellgroup.com

Canning, Kevin

From: Hollydjoseph@gmail.com
Sent: Wednesday, June 3, 2020 10:02 PM
To: Hollydjoseph@gmail.com
Cc: Canning, Kevin; kirkwatilo@gmail.com
Subject: Opposition to Ranch Hills Partners, LP's Project and Request for EIR.

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

My family and I live on Las Luces near the Tustin Hills Racquet Club. We purchased our home three years ago when our young daughters were just one, three and five. We purchased our home eager to join this quiet neighborhood and have more space for our children to grow up. At the time, it was also clear that this Spores a well established community with little change on the horizon. Since that time, my children have started taking lessons at the racket club. My youngest daughter has her preschool performances at the club. We also play in the weekly clinics. This summer, my kids are all looking forward to summer camps.

We also purchased the home relying on the close proximity to the THRC because it provides open space, recreational opportunities and a sense of community. Our family is a member of the THRC and enjoys all that it offers both to its members and the local community. If the zoning is changed this would require members to play for other teams in Anaheim, Yorba Linda or Irvine (as closest). Further losing the sense of community in Tustin. Our use of the facility includes tennis, the pool and banquet facilities for school functions, meetings and weddings. THRC also serves these same functions for the community at large including tennis matches, tennis camps for

children, family pool memberships, weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras/Quinceneros, school fundraisers and other functions, funerals and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community. Building high density housing behind our home would result in years of construction and noise and greatly reduce the enjoyment of our home as well as the short and long term property value of our home.

The Developer, Ranch Hills Partners, LP's (the "Developer") partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disengeniously claims he is building these condominiums to address a claimed need for housing for "active adults of 55 years and older" in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anactodal needs for this type of housing in this area. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND)is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

Increased Traffic:

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developers assumptions are in inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
- (3) The banquet facility is not used ever days. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have atlases 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
- (3) The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.

(4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the Development on neighboring streets will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.

(5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.

There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.

Cumulative Negative Impacts:

The MND inaccurately states there would be "less than a significant impact" caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than "spring of 2017" as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in "spring of 2017" illustrates the many flaws and inaccurate conclusions made in the current MND.

The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill

development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.

High Density Housing Will Eliminate North Tustin’s Only Open Space And Limit Recreational Uses:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.

Additional the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic through out the surrounding area rather than concentrating

walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also decrease the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will not have houses and roofs to look at rather than the more open space provided by the current use.

Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was build over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.

Increased Strain on Local Resources and Safety Concerns:

Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter’s Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the the adjacent neighborhood and North Tustin at large by allowing for spot rezoning for high density housing and increase traffic both because of the addition of 37 housing units, but also because

people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values, but if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer's rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer's plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Rarely does such a unique opportunity arise where the decision lies solely between maintaining and respecting a North Tustin cultural community beacon versus the sole financial enrichment of a developer.

Respectfully submitted,

Holly Joseph, Esq. and Dr. Jeffrey Joseph

Sent from my iPad

Canning, Kevin

From: Hollydjoseph@gmail.com
Sent: Wednesday, June 3, 2020 9:57 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

My family and I live on Las Luces near the Tustin Hills Racquet Club. We purchased our home three years ago when our young daughters were just one, three and five. We purchased our home eager to join this quiet neighborhood and have more space for our children to grow up. At the time, it was also clear that this Spores a well established community with little change on the horizon. Since that time, my children have started taking lessons at the racket club. My youngest daughter has her preschool performances at the club. We also play in the weekly clinics. This summer, my kids are all looking forward to summer camps.

We also purchased the home relying on the close proximity to the THRC because it provides open space, recreational opportunities and a sense of community. Our family is a member of the THRC and enjoys all that it offers both to its members and the local community. If the zoning is changed this would require members to play for other teams in Anaheim, Yorba Linda or Irvine (as closest). Further losing the sense of community in Tustin. Our use of the facility includes tennis, the pool and banquet facilities for school functions, meetings and weddings. THRC also serves these same functions for the community at large including tennis matches, tennis camps for children, family pool memberships, weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras/Quinceneros, school fundraisers and other functions, funerals and community gatherings. These events allow residents of North Tustin and surrounding cities,

including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community. Building high density housing behind our home would result in years of construction and noise and greatly reduce the enjoyment of our home as well as the short and long term property value of our home.

The Developer, Ranch Hills Partners, LP's (the "Developer") partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disengeniously claims he is building these condominiums to address a claimed need for housing for "active adults of 55 years and older" in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anactodal needs for this type of housing in this area. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

Increased Traffic:

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since

THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developers assumptions are in inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
- (3) The banquet facility is not used ever days. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have at most 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
- (3) The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.
- (4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the Development on neighboring streets will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.
- (5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.

There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.

Cumulative Negative Impacts:

The MND inaccurately states there would be “less than a significant impact” caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than “spring of 2017” as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in “spring of 2017” illustrates the many flaws and inaccurate conclusions made in the current MND.

The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to

undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.

High Density Housing Will Eliminate North Tustin's Only Open Space And Limit Recreational Uses:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.

Additional the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic through out the surrounding area rather than concentrating walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also decrease the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will not have houses and roofs to look at rather than the more open space provided by the current use.

Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is "developed," it was build over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.

Increased Strain on Local Resources and Safety Concerns:

Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter's Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the the adjacent neighborhood and North Tustin at large by allowing for spot rezoning for high density housing and increase traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values, but if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer's rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer's plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Rare does such a unique opportunity arise where the decision lies solely between maintaining and respecting a North Tustin cultural community beacon versus the sole financial enrichment of a developer.

Respectfully submitted,

Holly Joseph, Esq. and Dr. Jeffrey Joseph

Sent from my iPad

Canning, Kevin

From: Kallet, Lois <Lois.Kallet@kyl.com>
Sent: Monday, June 1, 2020 2:55 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Lois Swensen

Canning, Kevin

From: Todd Katzman <tkatzmanmd@yahoo.com>
Sent: Saturday, May 23, 2020 6:34 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Sir-

As you are aware, the Tustin Hills Racquet Club has been sold and the new owners are now attempting to change the zoning of the property and build a condominium complex. As over 20 year residents of this community, my wife and I are adamantly opposed to this project. We would clearly prefer that the facility remain as is, as a racquet club. It has been a fixture of the Tustin Hills for more than 50 years- it is zoned for recreation and should remain so. High density housing is not a part of this community and turning this property into condominiums would have a negative impact on the surrounding area. Traffic would be a significant issue as would the increased noise from years of construction, loss of views for the homes nearby, increased pollution and increase trash issues. Homes in our neighborhood are and always have been low density in nature and should remain so. There is no need for condominiums in this area. There is a need, however, for recreational areas such as the tennis club.

Please do not allow this travesty to be approved.

Sincerely,

Todd Katzman, MD
Kelly Katzman

Canning, Kevin

From: Amanda Keays <amanda@downeyplumbing.com>
Sent: Sunday, May 31, 2020 3:00 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposed to Rezoning Tustin Hills Raquet Club Property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club (“THRC”) property. Changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environmental Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and greenhouse gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increased strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Amanda Keays

Canning, Kevin

From: Barry Kentrup <barke13@gmail.com>
Sent: Friday, June 5, 2020 12:37 PM
To: Canning, Kevin
Subject: File No. PA 18-0034

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

This is my response to your request for comments on the MND for the Tustin Hills Racquet Club.

First let me say that none of this is needed because of the Covenant which the homeowners in this tract have which specifically prevents such expansion.

The environmental impact of the proposed project is significant. This area is moving. Cracks in the streets are a telltale sign that this hill is sliding down. The additional weight of this project will only accelerate the movement.

A Structure height of 30 feet will obstruct the view of many homeowners who paid a premium to get the view..

The surrounding neighborhoods are zoned for a MUCH LOWER density, This change is not gradual...but drastic!

I am seriously concerned about a disaster such as a fire/earthquake. People wanting to leave this neighborhood in such an emergency with only one point of access/egress will not be happy.

Other problems such as increased traffic construction traffic/noise are also concerns.

It seems to me that one person (the developer) benefits and many persons (the owners) suffer. This project has too many problems which will present themselves quickly should it be approved..

Thank you for your time.

Barry Kentrup
2202 Pavillion Drive

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Respond to Barke@pobox.com

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Respond to Barke@pobox.com

Canning, Kevin

From: Kimberly Kessel <kimberlykessel@yahoo.com>
Sent: Saturday, May 23, 2020 7:04 AM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: Tustin Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Good Morning,

I am a resident of North Tustin and frequent the Racquet Club several times a week. I believe an environmental study is critical and the community will be impacted if replaced with high density housing.

There will be an increase in traffic on the surrounding roads (more cars on the one 2 lane road in and out of the community), more housing requires more water in a drought-prone region, and the destruction of the racquet club will remove the only outdoor recreation area in the area. Several generations have grown up enjoying this resource.

I feel strongly that the future of youth tennis will suffer if the Racquet Club is replaced with housing. There are many kids that use the club daily and if it is torn down, where will they go? The club provides these kids, including my own, a place to exercise and socialize with peers in a safe setting. The future of high school tennis will be impacted greatly in a negative way as there will not be enough courts to support practice/playing time.

I am urging you to stop the progress of high density housing. I don't understand why this location is of importance. I am guessing there is other land in the city that can be used for this project without disrupting hundreds, possibly thousands of people's homes and lives.

A concerned resident,

Kimberly Kessel

Canning, Kevin

From: Becky Klug <beckyklug3@gmail.com>
Sent: Friday, June 5, 2020 4:02 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposed to Redevelopment of Tustin Hills Racquet Club Property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr Canning,

I am writing to you to express my opposition to the redevelopment of the Tustin Hills Racquet Club property into high density housing.

At the top of my concerns about building high density housing on the tennis club property is the change to traffic along Simon Ranch Road. Such an increase in number of cars using this road would be a very dangerous situation. Simon Ranch not only has a substantial elevation gain as you approach the tennis club property, but it also is very curvy. The combination makes driving visibility limited. Simon Ranch Road is a favorite walking path for many of the local walkers and bike riders alike. It does not have sidewalks. If a driver does not drive slowly and with attention, they can easily become a danger to the many pedestrians and cyclists that make use of this road. I estimate that for the proposed 37 dwellings, average two cars per dwelling, that's an additional 74 cars coming and going along this precarious strip of road. I have lived 19 years just 6 houses away from the entrance to the tennis club site. I walk Simon Ranch pretty much daily, and don't see how I could continue to walk it in safety if so many more drivers would be using this road.

I would also tell you that this project as proposed would greatly hurt the beautiful aesthetics of this unique neighborhood. I, of course, would love to see the racquet club continue with a new owner but realize that this may not be financially feasible. I object to changing the density of new home development on the site to something that is unlike the rest of the tract. The property is part of an existing group of homes. Changing it to such high density affects everyone in the area. What about the value of our homes? You impact that if you make such a big change.

Please do not approve this proposal.

Becky Klug

Canning, Kevin

From: Jack Knoll <jackgknoll@aol.com>
Sent: Tuesday, June 2, 2020 5:10 PM
To: Canning, Kevin
Subject: Tustin hills

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

J. Knoll

Sent from my iPad

Canning, Kevin

From: Christer Fiege-Kollmann <ckollmann@earthlink.net>
Sent: Friday, June 5, 2020 4:13 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com; lkollmann@earthlink.net
Subject: Proposed Ranch Hills Community - Planning Application No. PA180034, Vesting Tentative Tract Map No. TT18119

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

June 5, 2020

Mr. Kevin Canning
County of Orange, OC Public Works
Development Services/Planning
601 North Ross Street
Santa Ana, CA 92701-4048

Dear Mr. Canning:

The purpose of this email is to inform the Orange County Public Works Development Services Department my objection to the 37-unit condominium development proposed for the Tustin Hills Racquet Club.

I grew up in North Tustin, attended Tustin Memorial Elementary School, C.E. Utt Middle School, and Foothill High School. My mother played tennis at the Tustin Hills Racquet Club in the 1960's. I have attended several events at the Racquet Club including weddings. My wife and I live within one (1) mile of the Racquet Club, near the intersection of Browning Avenue and La Colina Drive. On a daily basis, we walk in the Tustin Hills neighborhood, walking nearby and/or through the Racquet Club, utilizing the 10-foot wide pedestrian accessway connecting with the residential neighborhood, north of the Racquet Club, located and accessed from Racquet Hill.

I have reviewed the [CEQA Initial Study Proposed Mitigated Negative Declaration](#) ("MND"), dated May 2020, for the proposed Ranch Hills Community. The following points should be given consideration as reasons why higher density housing is not appropriate in this neighborhood.

General Plan/Land Use

Figure 2 of the MND depicts the Land Use designation of 1B Suburban Residential Community (0.50 to 18 du/ac) for Racquet Club property. This is the same designation for all the existing homes in the North Tustin community bordering the Racquet Club. The neighboring North Tustin homes have been developed at a density of two (2) units per acre. The proposed 37-unit development reflects a density of 6.29 du's/ac based on the gross land area of 266,218 sq. ft. (5.88 acres) and 8.52 du's/acre based on the reported net land area 188,918 sq. ft. (4.34 acres). Deducting the common area space (Lot 6 at 16,075 sq. ft. and Lot 7 at 5,340 sq. ft.), the true net area is 167,503 sq. ft. (3.85 acres), which relates to a density of 9.62 du's/acre. These proposed densities are a significant increase and not supported by the neighboring residential estate lot uses.

If the property were redeveloped, the density should not exceed 2.00 du's/acre based on net area (which would exclude required street right-of-way). As a result, the maximum number of homes would be around 10 to 11 singled-family detached residences.

Zoning

Figure 3A of the MND depicts a zoning designation of A1 (General Agriculture) for the Racquet Club property. The property owner is requesting a zoning change from A1 to R2 (5000). Although this designation is consistent with the General Plan designation of 1B (Suburban Residential), R2 (5000) reflects a high density multi-family use that is totally incompatible with the existing North Tustin residential neighborhood. The zoning adjacent to the Racquet Hill property is E4-20000, which relates to a minimum lot size of 20,000 square feet, and also consistent with the General Plan. Like the General Plan, the E4-20000 zoning is geared toward larger estate lots.

The Vesting Tentative Tract Map (Figure 6A) indicates a net land area of 188,915 square feet divided by 37 du's, resulting in an average lot size of 5,106 sq. ft. Two (2) common area lots, identified as Lot 6 at and Lot 7, should be excluded from the calculation. Deducting the common area space (Lot 6 at 16,075 sq. ft. and Lot 7 at 5,340 sq. ft.), the true net area is 167,503 sq. ft., which results in an average lot size of 4,527 sq. ft. ($167,503 \text{ sq. ft.} / 37 \text{ du's} = 4,527 \text{ sq. ft.}$). As a result, the minimum lot size is actually lower than what the proposed R2 (5000) would allow. This form of small-lot development is incompatible with the existing residential neighborhoods and unprecedented within the North Tustin/Cowan Heights/Lemon Heights communities.

Traffic

Per the Traffic Analysis included in the MND, the condominium project is reported to generate 205 fewer traffic counts than the existing racquet club. The traffic analysis is flawed. The Study relies on tennis and banquet club uses at maximum occupancy seven (7) days a week. A new traffic study should be conducted, addressing the actual and historical uses, which will result in a significantly lower traffic count for the existing use. The 37-unit development will generate a different type and flow of traffic compared to the existing racquet club use. With the proposed 37-unit development, the neighboring streets, including, Browning, SE Skyline, Ranchwood, Red Hill, and La Colina will experience increased commuter and school traffic in the mornings and evenings and various times throughout the day.

Consequently, traffic will increase as a result of the proposed 37-unit development not decrease. Furthermore, given the number of walkers, bikers, children playing, increased traffic will create safety issues on the already busy streets, many of which do not have sidewalks.

All vehicle traffic generated by the existing residential community and Racquet Club property must travel through a "pinch point" on Simon Ranch Road near the intersection of Beverly Glen Drive and Browning Avenue. Based on a review of aerial photographs included in the MND, there are approximately 104 homes located on the neighborhood streets, which include: Outlook Lane, Valhalla drive, Highview Drive, Lerner Lane, Salt Air Drive, Liane Lane, Pavilion Drive and Simon Ranch Road. The developer of the Racquet Club property now proposes 37 homes, representing an increase of nearly 36% from the 104 homes that currently exist and must travel through the "pinch point". Without a second emergency ingress/exit point, the pinch point is problematic and a safety issue during emergencies and/or evacuations.

Pedestrian Walkway

The proposed development will eliminate the ability to use the 10-foot wide pedestrian accessway connecting with the residential neighborhood, north of the Racquet Club, located and accessed from Racquet Hill. This is a commonly used pedestrian corridor by residents in the local area. Any redevelopment of the Racquet Club property should preserve this desirable amenity serving the community and providing connectivity to various neighborhoods.

Thank you for your consideration in this matter.

Respectfully

Christer Fiege-Kollmann

Christer Fiege-Kollmann
1941 La Colina Drive
North Tustin, CA 92705
(714) 925-2898

Canning, Kevin

From: Natalie Krudwig <nataliekrudwig@icloud.com>
Sent: Monday, June 1, 2020 8:25 AM
To: Canning, Kevin; Kirkwatilo@gmail.com
Subject: Tustin racquet club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services.

Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Natalie Krudwig



On Jun 1, 2020, at 8:17 AM, Canning, Kevin wrote:

Dear Mr. Canning,

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Best regards,

Natalie Krudwig

Canning, Kevin

From: Joseph Labrum <j.labrum@berkeley.edu>
Sent: Tuesday, June 2, 2020 6:34 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: OPPOSITION EMAIL TO ZONING CHANGE AT TUSTIN HILLS RACQUET CLUB

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

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Best regards,

Joseph Labrum
1800 N Lynn St
Arlington VA 2209

--

Joseph Labrum
UC Berkeley 2017
B.S. Nuclear Engineering
Cell: 609-706-2207

Canning, Kevin

From: Howard Lambert <hlambert8@hotmail.com>
Sent: Tuesday, June 2, 2020 2:19 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club - Zoning Change

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning, because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighbourhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built, it will cause increased traffic (both during construction and after), noise, light and greenhouse gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increased strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

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Yours sincerely,

Howard Lambert

Canning, Kevin

From: Tom Leahy <tom@onehopewine.com>
Sent: Monday, June 1, 2020 6:45 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

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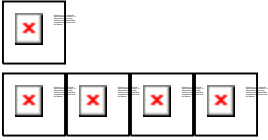
Best regards,

Best,

Tom Leahy

cco | Co-Founder

C 858-337-1437



Canning, Kevin

From: gcblee@aol.com
Sent: Tuesday, June 2, 2020 10:53 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Fwd: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

|
Dear Mr. Canning,

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Best regards,

Gordon C. Lee, Jr
1594 SE Skyline Drive
Santa Ana, CA 92705

Canning, Kevin

From: Ryan Lee <ryanlee8712@gmail.com>
Sent: Wednesday, June 3, 2020 8:16 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

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Best regards,

Ryan Lee

Canning, Kevin

From: KENYON LEE <lisalee05@cox.net>
Sent: Thursday, June 4, 2020 5:16 PM
To: Canning, Kevin
Subject: THRC Property Development Opposition

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

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Best regards,

Lisa Lee

714-376-7709

Canning, Kevin

From: Lisa Lee <asilee@aol.com>
Sent: Tuesday, June 2, 2020 10:01 AM
To: Canning, Kevin
Cc: kirtwatilo@gmail.com
Subject: Fwd: Opposition to rezoning at Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of

Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. I have live in my home on Skyline dr for 32 years and have been a member of the tennis club for 25 years. I purchased this home for the size of the lot, the rural, country-like feel and the beauty of the open spaces between homes and the close proximity to the tennis club. I would hate to have that ruined for greed, taxes and disregard for our neighborhood.

Best regards,

Lisa Lee

Canning, Kevin

From: betsyleth@cox.net
Sent: Friday, June 5, 2020 1:58 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Ranch Hill Planned Development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

As a former resident living at 2296 Pavillion Dr. for 19 years, my husband and I are strongly opposed to the re-zoning of the area Racquet Hill Tennis Club property. We moved from the area in January of this year in order to downsize but we loved the area for it's open space, family oriented feel along with having a great asset in the Racquet Club that tied it together with a sense of a community. It was the major reason we moved to the area. For that reason alone, we oppose changing the zoning to allow a high density development – there are way too few of areas like that in Orange County.

One of our major concerns is the impact a high density development would have on traffic, especially in the event of a wildfire – twice in our time there, wildfires came within 3 miles of our home.

There is essentially one road in and one road out – Simon Ranch Rd – for not just Pavillion Drive but of all the other little areas surrounding the Racquet Club. Yes, the Racquet club would have events when congestion was the result, but that was on occasion and if needed you could plan for that. It was not when you are unexpectedly fleeing to save your life from a windblown fire. The normal amount of traffic would be bad enough but the addition of a high density development would make it impossible to get out.

We still love the area and miss it but I would never consider returning if the zoning is changed and the essential character of a wonderful open community is lost.

Elizabeth Leth
58 Shadowplay
Irvine, Ca 92620

Canning, Kevin

From: JLIDDLE@roadrunner.com
Sent: Friday, June 5, 2020 12:48 PM
To: Canning, Kevin
Cc: 'kirkwatilo@gmail.com'
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

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Best regards,

James K. Liddle

Canning, Kevin

From: Steve Lind <stephendlind@gmail.com>
Sent: Friday, June 5, 2020 2:51 PM
To: Canning, Kevin; kirkwalito@gmail.com
Cc: Lind, Kathryn
Subject: No on change in North Tustin zoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning and Mr. Watilo,

Please accept this letter as a clear statement we are strongly opposed to any and all rezoning of the Tustin Hills Racquet Club (“THRC”) property in the North Tustin plan. The current zoning has been in place since 1958 and any change to that zoning would have an immediate and long-lasting negative impact to one of the oldest and most charming communities in Orange County.

We have lived in the North Tustin area for more than sixteen years and are raising our children here because of what it offers. We were initially drawn to North Tustin because of the larger lot sizes as well as the older homes with unique character and individuality. We were looking for a home that wasn’t the “cookie cutter”, high-density type you so often find in Southern California. We’ve owned 3 different homes in the North Tustin area, purchasing our most recent one at 2032 Racquet Hill, again because of the lot size, single story design, proximity to THRC, ultimately paying a premium for the safety and amenities at the heart of what makes North Tustin great.

Beyond the well managed density that the 1958 zoning provided, North Tustin is an active community with limited sidewalks that has walkers, joggers, and bikers enjoying our roads and open spaces, very often near and around THRC. Without question, adding 37 high-density units packed into lot sizes often 75% smaller than all surrounding homes will add significant traffic levels from commercial vehicles, delivery drivers, solicitors, and home services providers. While no amount of development is worth one child’s life, a close read of the potential plan clearly doesn’t come close to providing any community benefits other than for the developer and its contractors. If providing senior living facilities is the Developer’s core mission, it would seem appropriate to build them closer to food, dining, and retail areas consistent with those types of developments. While it's reasonable that the developer, Ranch Hills Partners, LP’s (the “Developer”), principals and employees are not citizens of North Tustin, it is absolutely appropriate that they acknowledge and have the overall community, its safety, and the citizens’ investments as an equal, if not higher priority. No reasonable and arms-length review of the plan of the high-density housing could be justified beyond the profit for the Developer at the expense of the existing community. The zoning laws have had the exact impact as they had envisioned, quality living, high property value to support our community tax needs, and reasonable cost to serve from a public safety standpoint.

In North Tustin, we’ve proven ourselves to be a welcoming, open, diverse and progressive community focused on preserving and sustaining our unique Southern California environment. In the clearest terms, our strong opposition is driven by the continued safety of our families, reasonable preservation of the investment we’ve made into our properties and the intrinsic value of our immediate neighborhood and the North Tustin community as a whole.

Sincerely,

Steve & Kathryn Lind

Canning, Kevin

From: Stacy Lovein <stacylovein@gmail.com>
Sent: Friday, June 5, 2020 3:31 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com; Mark Lovein
Subject: Opposition to Ranch Hills Partners, LP's Project and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised we are opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

Our family lives on Pavillion Drive and our home is adjacent to THRC. We decided several years ago that our dream neighborhood was North Tustin because of the larger lot sizes, quiet neighborhood, and it was not simply a bunch of "tiny boxes on a hillside" ...it had character. In fact, we initially looked at the neighboring Orchard Hills development and realized manufactured homes and communities were not for us, we loved the charm of this community and the elbow room these homes provided. This year, that dream became a reality when we purchased our home. We purchased the home relying on the close proximity to the THRC because it provides open space, recreational opportunities, and a sense of community. Our four year old daughter started playing tennis just before we sold our last house. Since moving into our home, she insists on riding her bike to the THRC to see the "grown-ups playing tennis" and has outlined her plan for riding her bike to practice when she is older and dreams about playing there for years to come. We also use the flat parking lot to teach her how to ride her bike, it is a fuTHRC also serves functions for the community at large including tennis matches, tennis camps for children, family pool memberships, weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras/Quinceneros, school fundraisers and other functions, funerals and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community. Building high density housing near our home would result in years of construction, traffic, and noise and greatly reduce the enjoyment of our home as well as the short and long term property value of our home.

The Developer, Ranch Hills Partners, LP's (the "Developer") partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disingenuously claims he is building these condominiums to address a claimed need for housing for "active adults of 55 years and older" in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anecdotal needs for this type of housing in this area. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home in the neighborhood. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, we are opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

Increased Traffic:

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developer's assumptions are inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
- (3) The banquet facility is not used every day. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it (like my daughter).

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner, we know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have an average of 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
- (3) The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.
- (4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the Development on neighboring streets, specifically my street that my two young daughter ride bikes on, affecting the safety of my children and the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.

(5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.

There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.

Cumulative Negative Impacts:

The MND inaccurately states there would be “less than a significant impact” caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than “spring of 2017” as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in “spring of 2017” illustrates the many flaws and inaccurate conclusions made in the current MND.

The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.

High Density Housing Will Eliminate North Tustin’s Only Open Space And Limit Recreational Uses:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool

memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.

Additionally, the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic through out the surrounding area rather than concentrating walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also decrease the views and open green spaces, which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will now have houses and roofs to look at, rather than the more open space and a charming reminder of our community provided by the current use.

Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was build over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.

Increased Strain on Local Resources and Safety Concerns:

Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter’s Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the the adjacent neighborhood, and North Tustin at large by allowing for spot rezoning for high density housing and increase traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values. But, if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer’s rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer’s plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Respectfully submitted,

Mark and Stacy Lovein

Canning, Kevin

From: Michael Mann <mik_mann@me.com>
Sent: Wednesday, June 3, 2020 10:07 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Michael Mann

Canning, Kevin

From: Harold Marshall <halowha@sbcglobal.net>
Sent: Friday, June 5, 2020 2:12 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: PROPOSED REDEVELOPMENT OF RACQUET CLUB IN NORTH TUSTIN

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr Canning,

The proposed redevelopment of the Racquet Club property in North Tustin to permit construction of highly dense condominium dwellings is highly disadvantageous to the immediate unique neighborhood as well as the surrounding areas. The areas of concern are:

- 1) Incompatibility of dense housing on 5000 square foot lots compared to the existing to 20,000 square foot lots around it.
- 2) Congested and limited evacuation routes during wildfires or earthquakes
- 3) Traffic congestion and disruption on SE Skyline Beverly Glen, Simon Ranch and Browning Ave. As a long time resident on Browning, I can attest to the current congested Browning Ave. Congestion on Browning during construction would be odious due to large trucks and will be continuously thereafter due to increased auto traffic
- 4) Loss of the only existing recreational facility in North Tustin.
- 5) Likely decrease in property values of the existing highly desirable homes in the immediate surrounding housing development

Please take these concerns into serious account when deliberating the proposed conversion to high density housing. Thank you.

Hal Marshall
12561 Browning Ave
North Tustin, CA 92705
714-544-7463

Canning, Kevin

From: Martin Mathews <mkmathews@gmail.com>
Sent: Wednesday, June 3, 2020 7:08 AM
To: Canning, Kevin
Subject: Fwd: Tustin Tennis club and open space.

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I have been a resident of Tustin for over 15 years and consider it my home and feel proud of what we have within our community. The below information was sent to me and I completely agree with the statements below. The beauty of Tustin is the community. Dropping high density housing in the middle of a community where it's being proposed would be horrible and a detriment of what has evolved over the past 100 years of Tustin.

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

-Martin

Canning, Kevin

From: Chris McCormack <ctm665@gmail.com>
Sent: Thursday, June 4, 2020 6:03 PM
To: Canning, Kevin
Cc: Wagner, Donald [HOA]; kirkwatilo@gmail.com; M Fioravanti
Subject: Re: Ranch Hills Community Project (PA 18-0034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning:

I writing to you out of concern for the proposed residential development of the Tustin Hill Racquet Club. I am an adjacent neighbor to the club and I am adamantly opposed to the rezoning and subsequent high-density development plan for that property.

It's inconceivable to me that someone would look at this neighborhood and then set out to redefine it.

My wife and I fell in love with Lemon Heights in 1992 when our close friends took us for a drive down Racquet Hill and then around to the club. We were hooked. Eight years later we moved to Racquet Hill. Twenty years later, we still consider ourselves lucky to call Lemon Heights home.

Lemon Heights is unique to Southern California. I'm reminded every time a visitor says, "I didn't know this neighborhood was back here... it's beautiful.". I'm reminded when the mail carrier chooses a shady spot on our street to eat lunch. I'm reminded when virtually every house on our street flies an American flag. And, because Lemon Heights is anchored by the Tustin Hills Racquet Club, I'm reminded every time my wife walks out the front door and over to the club to attend league, Pilates or social occasions with friends.

Unchecked, this developer would "improve" this neighborhood by bulldozing its heart and soul and then erecting his signature, one-size-fits-all, still-have-the-materials-from-my-last-job, pop-up neighborhood... and then, he will leave town. In his wake, we are all left mourning our loss.

It is true that 37 units in my backyard would negatively impact my property value. It's true that I don't relish the thought of these multi-story, high-density residences peering over my house, straight down on my street of single story homes. And, it's true that I wish that the twenty year younger me had questioned the commitment of the club owner next door. But, it's also true that Lemon Heights could lose the defining treasure of our community.

The prior owner of the Tustin Hills Racquet Club rejected an offer to keep his club operating under new owners. Why? Money, of course. I understand the prior owner's motive and I don't condemn him for it. I also understand that this developer paid too much for this property - i.e. more than can be justified by the revenue of a tennis club. This is not my fault. And, this is why we have public officials like you, to protect tax payers from unchecked and non-conforming development, and to protect us from developers too blinded by dollar signs to see the beauty they are destroying.

Mr. Canning, please reject the rezoning and subsequent high-density development plan for the Tustin Hills Racquet Club property.

Sincerely,

Chris McCormack

2212 Racquet Hill, Santa Ana, CA 92705

714-975-4556

Canning, Kevin

From: mmccourt@redhillgroup.com
Sent: Wednesday, June 3, 2020 10:26 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: North Tustin Rezoning from Agricultural to Higher Density Housing

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

M. Canning,

I am a former resident of the area, having recently sold our home and relocated to Laguna Woods. So my comments cannot be attributed to NIMBYism, only an interest in fairness for what is currently a great neighborhood community.

I used to live on Skyline Drive on the hill, Red Hill. My bottom line is that changing the zoning to higher density housing is completely inconsistent with the rest of the area and will permanently change/destroy the character of the neighborhood as well as significantly reducing property values for everyone currently living there.

In spite of what was submitted in the Proposed Mitigated Negative Declaration. It seems highly likely that adding 37 homes vs a racquet/tennis club will in fact significantly increase traffic volume on Skyline, Beverly Glen and Browning.

Further, saying there is no significant impact on recreation when replacing 12 tennis courts with higher density housing seems a stretch at best.

I previously was one of the first 50 homeowners in Portola Hills where the marketing brochure said there would only be 700 homes on the property and would include an equestrian facility and a park. When I moved out there were 2,400 homes on the same property and no equestrian facility or park. This was approved by the County with increases from 700 to 1,100, to 1,700 and finally to 2,400. I'm sure every change came with the statement that there was "no significant change" from the previously approved plan.

I hope you will take these factors into consideration and change the recommendation to reject the proposed plan to change the zoning from agricultural to higher density housing.

Please feel free to contact me if you have any questions.

Sincerely, Mark

Mark McCourt,
Principal
Redhill Group, Inc.
18010 Skypark Circle, Suite 275
Irvine, CA 92614
Ph: 949-752-5900 Ext. 901
Email: mmccourt@redhillgroup.com
Web: www.redhillgroup.com

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Canning, Kevin

From: Steve McCrosky <steve@discoverpropertiesllc.com>
Sent: Monday, June 1, 2020 6:55 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: RE: Opposition to Mitigated Negative Declaration and Rezoning of the Tustin Hills Racquet Club (Ranch Hills Community Project PA 18-0034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report (EIR) prior to the Orange County Supervisors consider its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing on the surrounding community. If this project is built it will cause increased traffic (both during construction and after), noise, light and greenhouse gas emissions. It will interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space and recreational facilities in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding

homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Steve McCrosky
resident of North Tustin

--

Steve McCrosky
Discover Properties LLC
714-389-0112

Canning, Kevin

From: Stacy McKellar <stacy4re@gmail.com>
Sent: Wednesday, June 3, 2020 11:48 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Stacy L. McKellar

STACY MCKELLAR | LUXURY AGENT

T 714.264.2294 | BRE#01452334

WWW.STACYMCKELLAR.COM

1400 NEWPORT CENTER DRIVE #100 | NEWPORT BEACH, CA 92660



Canning, Kevin

From: David Meredith <dmeredith@rocketmail.com>
Sent: Tuesday, June 2, 2020 3:52 PM
To: Canning, Kevin
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning:

I am writing you with regard to the proposed redevelopment of the Tustin Hills Racquet Club, a project I and my family emphatically oppose. We moved to our current residence at 11882 Simon Ranch Road five years ago, and the tennis club was a primary draw for us. I am a lifelong tennis player and envisioned my kids (ages 5 and 8) learning to play the game and using the pool, which are just a few steps from our home. We have been members since we moved here in 2015. The tennis club is a beautiful amenity, replacing it with a high density residential development is wrong. The entire neighborhood is zoned with homes on a ½ acre or more, so the proposed project would not fit in, regardless of the fact that it requires a zoning change. In addition, Simon Ranch, a street with no sidewalks, provides the only access to that location. This would increase traffic on our street considerably, as the traffic assumptions in the developer's environmental report are completely unrealistic.

Our neighborhood is unanimously opposed to this project which will result in the loss of a valued amenity, increased traffic, and very negative impact to the character of our area. In your review of the proposed development, I hope you will consider the voices of our residents.

Sincerely,

David Meredith
11882 Simon Ranch Road
310.745.1692

Canning, Kevin

From: Barbara Messick <barbaramessick@gmail.com>
Sent: Wednesday, June 3, 2020 8:48 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Ranch Hills Community MND

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To the Orange County Planning Commissioners and Board of Supervisors,
As residents of North Tustin, a Realtor and an Architect, we are writing to express opposition to the proposed Ranch Hills Community development project.

North Tustin is a uniquely special community with a distinct blend of rural and suburban character. We were drawn to it and had dreamed of being able to afford a home here for many years. Fourteen years ago we were able to make that dream a reality when we purchased our family home and raised our children here. Our home is located less than a mile from the project site on one of the routes of ingress/egress to the proposed development. Our neighborhood and our home will be directly affected and impacted in the following ways:

Traffic:

Our home is located on SE Skyline near the intersection of Beverly Glen and Skyline, which is one of the routes which would provide access to the proposed development. Although the MND traffic study suggests a lower traffic count as a result of this development, we expect the actual impacts to be significantly different. Traffic generated by the Tustin Racquet Club is minimal with no real peak times. Traffic generated by households proposed by this project will likely result in peak traffic times for work and school related traffic. Red Hill Elementary is the current elementary school assigned to the homes in this area and is not within walking distance of the project site. School age children will need to be driven to and from the school. Traffic on Skyline, which runs adjacent to our house and which provides access to our property will be severely impacted not only by morning and evening commuter traffic but especially during school drop off and pick up times.

In addition, the residential streets adjacent to the proposed development do not have sidewalks or street lights. Pedestrians frequently walk and exercise their dogs along those streets. Increased traffic will be dangerous to area residents who enjoy these peaceful and safe neighborhood strolls.

Density/Property Values:

The proposed project of 37 units on less than 6 acres conflicts with the character of the adjacent residential area and is not consistent with existing zoning. Existing zoning in this area is for single family homes on estates of 20,000 sq ft or more. The proposed project homesites appear to be 5,000 sq ft or less and are inappropriate for this site.

We were drawn to North Tustin due to the large lots and commonly available single level homes. The density of this project is not consistent with North Tustin, and is more appropriate for newer planned developments in Tustin and Irvine. While the MND suggests these homes would provide an option for residents who wish to stay in the area, the project lacks the character that many are drawn to when they seek out North Tustin. In addition, the claim that the downstairs master and office configuration would appeal to those desiring single level living, does not make sense, as much of the area is currently single level homes already.

As a Realtor, it is my business to understand the real estate market and what makes certain areas appealing to homeowners. The proposed Ranch Hills Community is not consistent with what people seek when they buy in North Tustin. In addition, it will reduce the property values of adjacent homes due to the density, traffic and inconsistency of neighborhood aesthetics brought about by this project.

Recreational Impacts:

The large lot sizes of North Tustin homes provide for private areas for neighborhood children to play in their own yards. Area parks are not relied upon for recreational use since most properties are large enough for children to play in their own yards, and many feature outdoor living spaces perfect for social gatherings. Children's birthday parties and other

social gatherings are often hosted in resident's homes and backyards. The proposed project does not allow recreational space for residents of that development to enjoy. Areas where projects this dense are most appropriate are those with neighborhood parks within walking distance. Area parks that could be used by this development are more than 2 miles away, requiring access by car. Meeting the recreational needs of the proposed development will be a challenge in an area where parks for children to play or where social gatherings can be held are not close by and will create additional traffic impacts not accounted for in the MND.

Lastly, the Tustin Racquet Club provides a recreational amenity that will be impossible to replace. The tennis courts, pools and banquet facilities have co-existed in this residential neighborhood since 1958 and have become a cherished community asset. The impact of the loss of the Tustin Racquet Club will be felt by countless North Tustin residents who desire to recreate and gather within their own community.

In conclusion, we urge the Orange County Planning Commission and Board of Supervisors not to approve the proposed Ranch Hills Community Project. It is not consistent with the density and character of North Tustin and will be a significant detriment to our neighborhood.

Sincerely,

Barbara and Keith Messick
12232 Country Lane
North Tustin, CA 92705

Canning, Kevin

From: jmm972@cox.net
Sent: Sunday, May 31, 2020 9:52 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Proposed Mitigated Negative Declaration and Rezoning of the Tustin Hills Racquet Club (Initial Study No. PA 180034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Thank you for the opportunity to comment on Initial Study No. PA 180034. I have had substantial experience with environmental documents of all types in my 25-year career and the Initial Study (IS)/Proposed Mitigated Negative Declaration (MND) document fundamentally falls short of the environmental review required for a project of this nature in this unique setting.

First, I am strongly opposed to **ANY** zoning changes at the Tustin Hills Racquet Club property. This zoning has been in place for decades and changing the zoning would be a disservice to the North Tustin community. I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the proposed changes described in the IS are inconsistent with the surrounding neighborhoods.

Moreover, the IS clearly shows that the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report (EIR) prior to the Orange County Supervisors considering its request to change the zoning. An EIR would show significant impacts of the proposed high density housing on the surrounding community. The IS erroneously glosses over the significant impacts of the project and these impacts cannot be mitigated below the threshold of significant as incorrectly described in the proposed MND. If the proposed project is built, a proper environmental evaluation would reflect significant impacts in the following areas:

- Transportation/Traffic - the proposed project will increase traffic both during construction and after the project is complete. The traffic section of the IS incredibly states that traffic will be decreased from the existing use of the property. Anyone who has any experience in traffic studies know that the traffic will increase from the existing use to the proposed use of high density housing.
- Land use and planning - even though Figure 4a clearly shows the proposed use is incompatible with the surrounding community, the IS somehow concludes that the proposed impact is "less than significant". The simple fact that a zoning change is being requested reflects the significant impact on land use.
- Greenhouse gas emissions - the IS does not adequately evaluate or address the greenhouse gas emissions impacts associated with the proposed project.
- Noise - the IS underestimates the noise impacts associated with the proposed project.
- Biological resources - the proposed project will interfere with the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. Again, these impacts are not appropriately addressed in the IS.
- Cultural resources - the IS describes significant cultural resources in the area but then significantly underestimates the potential impacts to such resources.
- Recreation - the proposed use will eliminate one of the very few open spaces and recreational facilities in North Tustin. Yet, the IS states this a "less than significant impact" to the community.
- Wildfire - there is one entrance and exit to this area of North Tustin. Building proposed high density housing would have a significant impact on emergency services access to this area during natural disasters such as fires or earthquakes, both of which are prevalent in this area. The IS incorrectly concludes there is "no impact".

- Water quality - the IS underestimates the water quality impacts associated with the proposed project.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners.

However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate EIR is required pursuant to CEQA.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Thank you for your consideration,

Jeff Mills (North Tustin, CA)

Canning, Kevin

From: Samantha Miner <sminer9981@gmail.com>
Sent: Wednesday, June 3, 2020 4:27 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Racquet Club - Pro Housing But Density Concerns

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi Kevin and Kirk,

I live in North Tustin adjacent to the 6 acre "Sheldon" development project on Newport Boulevard in North Tustin. I learned a lot during that process and thought I'd share a few thoughts about the Racquet Club project currently being considered by your team at the County.

While I appreciate the recently passed SB330 and the fact just about every parcel in North Tustin has a GP zoning designation of 0-18 du / acre, it appears this developer is taking advantage of this new law and pushing for a project with a density that looks nothing like any other project within our community. We are very happy with how the Sheldon project turned out, and it's under construction - yeah!! It's 16 homes on approximately 6 acres, which is a density of 2.6 homes per acre. Why not use that project as the model for this one? Seems that the Racquet Club's attached housing project at approximately 6 units / acre is grossly out of place.

For perspective ... I guess the developer could developer 18 units / acre per the General Plan, but that obviously doesn't make sense. I think we can all agree half acre lots, or something close, is the way to go!

I'm all for housing, but let's try to make it at least somewhat similar to the community.

Thanks!
Samantha

Canning, Kevin

From: Monique <gasquem@gmail.com>
Sent: Sunday, May 24, 2020 7:04 PM
To: Canning, Kevin

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To Whom It May Concern,

As a North Tustin resident, we oppose the rezoning of the Racquetball courts property. We chose to buy in North Tustin neighborhood as we fully appreciate lower density housing and the opportunity to have unique resources like the Racquetball facility. If we don't preserve this dynamic we might as well move to Irvine.

Sent from my iPhone

Canning, Kevin

From: WF <hzlnutz@pacbell.net>
Sent: Friday, June 5, 2020 1:39 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning,

This letter is an opposition to the conversion of the Tustin Hills Racquet Club into townhomes.

After reading the Intent to Adopt Mitigated Negative Declaration it is clear that the assumptions used by the developer are clearly wrong. Two sections of the report, traffic and power are clearly not accurate.

Traffic assumptions used are incorrect and clearly will not result in less traffic. There are not additional events at the club everyday which is used to inflate the current traffic numbers.

Also, the power grid cannot support the additional loads on the system. Based on discussions with SCE the lines can clearly not handle the additional demand for power. This fact was not mentioned in the report. This could spell disaster to the area if a fire were to result of overload of power lines. There have been multiple transformers problems / explosions in the summer months when power is at its peak.

In addition, changing the zoning from A1 is not within the desires of the surrounding community. The club is the reason why many people bought in the area. It is a valuable resource for the community.

Please reconsider the County of Orange's Intent to Adopt Mitigated Negative Declaration.

Sincerely,

Andrea Moreno

Canning, Kevin

From: Doug <douglaswneary@aol.com>
Sent: Friday, June 5, 2020 8:46 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning,

I live in the community of North Tustin, very close to the Tustin Hills Racquet Club.

I am writing to you today to express my opposition to the rezoning and proposed development by Ranch Hills Partners, LP of the Tustin Racquet Club. I suppose I could point out the obvious concerns to the local citizens (i.e traffic, noise, etc) or to the wildlife (too many to express); so instead I want to just stick with the obvious: the new project just doesn't fit.

The unincorporated area of Santa Ana is one of the last existing connections to what many would call the nostalgic glory of Orange County. All one needs to do is just drive through the area and they will see that a large condominium complex is out of place here amongst all the unique homes, small and large, old and new.

This is not the repetitive representation so perspicuous in the other developments of our county. Our uniqueness for orchards and groves has been lost to the efficiency of "cookie cutter" housing.

I would like to leave you with one story to that hopefully encompasses the North Tustin feeling:

I have a neighbor in her 80's who has lived here all of her life. She told me that when she was a little girl, the fire chief of Santa Ana owned the home next door. He and his family would come up on the weekends to their "weekend mountain home" to "get away from it all". Well that feeling still exists here, please don't put it in jeopardy. A development like this is the top of the slippery slope of no return for rural life adjoining urban localities.

I implore you to please deny these types of corporate requests that endanger a connection to the great history of Orange County.

Sincerely,

Douglas W. Neary

Canning, Kevin

From: Sheri <slnerland@aol.com>
Sent: Monday, June 1, 2020 6:43 PM
To: Canning, Kevin
Subject: Fwd: Opposition to rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin Canning: kevin.canning@ocpw.ocgov.com
and cc:
Kirk Watilo - kirkwatilo@gmail.com

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being

considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Sheri & Jeff Nerland

Canning, Kevin

From: Bill Netro <bill.netro@yahoo.com>
Sent: Friday, May 22, 2020 6:37 PM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: Full Environmental Study needed for The Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

There are significant potential environmental impacts of replace the Racquet Club with high density housing (which also does not fit the areas). These include an increase in traffic, more water in a drought-prone region, and removal of the only outdoor recreation area near us.

Please make sure that a full environmental study is done to address these and other issues.

Thank you,
William Netro
2131 Vista Privada
North Tustin, CA 92705

Canning, Kevin

From: Yahoo <hdnauci@yahoo.com>
Sent: Tuesday, June 2, 2020 6:08 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

An Nguyen

Canning, Kevin

From: Nugent, Jay <Jay.Nugent@ngkf.com>
Sent: Tuesday, May 12, 2020 9:13 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin

I am writing as a resident of the County of Orange and more specifically the North Tustin neighborhood to express my opinion to vehemently oppose any redevelopment of The Racquet Club. Our street runs adjacent to the club and any redevelopment to residential never mind high density residential would have a big impact. After living on the East Coast for many years, we specifically choose this neighborhood because of the proximity to the club and the quiet suburban feeling not typically found in Southern California. The existing zoning brought us peace of mind that this was our forever home and forever neighborhood. To allow a zoning change would be detrimental to the tranquility of our neighborhood and hurt not only our property values but have us lose that "neighborhood" small town feel that so many people come to the area for. My wife and children use the club frequently and gives my kids an opportunity to not only walk somewhere they can be active but also a feeling of independence in a quiet safe environment.....it is why we choose North Tustin, it is WHY we choose this neighborhood. Approving a zoning change would be detrimental.

We strongly urge the County of Orange to do the right thing and honor the residents wishes and choose to raise their family here.

Jay Nugent

Senior Managing Director

NEWMARK KNIGHT FRANK

18401 Von Karman Avenue, Suite 150

Irvine, CA 92612

O 949.608.2035

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Canning, Kevin

From: April O'Dell Nugent <april@theodellgroup.com>
Sent: Monday, June 1, 2020 5:16 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Ranch Hills Partners, LP's Project and Request for EIR.

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised I am opposed to ANY zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

My husband and I purchased a home on Racquet Hill about three years ago. I grew up just down the street and now I am raising my children here. After living in other areas like Newport Beach, one of the things that drew us back to North Tustin was the ranch style homes on large lots as well as the sense of community. A large part of the 'community' is and has been for decades The Tustin Hills Racquet Club. I feel safe sending my kids there to play tennis and countless children in our town, not just within walking distance to the club, have learned to swim and play tennis there. Relationships have been formed and traditions made. I can't tell you how many families are thrilled that the club is open for summer camps and matches for both kids and adults!! Also as a residential real estate agent, the club is a bid draw for out of area buyers looking for a family friendly, inviting area to buy a home and plant roots. There are so many 'vanilla, cookie cutter' communities in Orange County. North Tustin is different and the THRC is a huge part of what sets us apart from other areas! My children love the parrots and they love watching them take flight and listen to them. Where will these parrots go that have nested here for years and years? The traffic is also a very big concern. I feel safe letting my kids ride bikes through the club and surrounding streets. Not only will the construction be an inconvenience, but it will also be a safety concern in need of close monitoring. After construction, the proposed development will surely bring increased traffic which will be a safety concern as well as negatively impact the resale value of homes nearby. The entire proposed project will negatively impact the resale value and value of our community. There is no benefit to adding housing which doesn't fit the current zoning. Replacing the Tustin Hills Racquet Club with a new development of smaller homes, mostly condos and town houses, brings no benefit or value to the surrounding homes or the community in general. Please do not let this happen!!!!

The Developer, Ranch Hills Partners, LP's (the "Developer") partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disengeniously claims he is building these condominiums to address a claimed need for housing for "active adults of 55 years and older" in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anactodal needs for this type of housing in this area.

Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

Increased Traffic:

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developer's assumptions are inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
- (3) The banquet facility is not used every day. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have at least 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
- (3) The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.
- (4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the Development on

neighboring streets will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.

(5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.

There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.

Cumulative Negative Impacts:

The MND inaccurately states there would be “less than a significant impact” caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than “spring of 2017” as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in “spring of 2017” illustrates the many flaws and inaccurate conclusions made in the current MND.

The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.

High Density Housing Will Eliminate North Tustin’s Only Open Space And Limit Recreational Uses:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall

physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.

Additional the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic through out the surrounding area rather than concentrating walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also decrease the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will not have houses and roofs to look at rather than the more open space provided by the current use.

Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was build over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.

Increased Strain on Local Resources and Safety Concerns:

Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter’s Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the the adjacent neighborhood and North Tustin at large by allowing for spot rezoning for high density housing and increase traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values, but if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer’s rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer’s plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Respectfully submitted,

April O'Dell Nugent

-

April O'Dell Nugent

Realtor Associate, CalBRE# 01955551

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Canning, Kevin

From: Dean O'Dell <dean@theodellgroup.com>
Sent: Friday, June 5, 2020 3:24 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Tustin Hill Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Gentlemen,

I'd like to introduce myself to you as a resident of North Tustin for 47 years and the number one selling Residential Broker agent here every year since 1994; I have participated in about 1,200 home sales in this zip code since beginning my career in 1990 and have hundreds of past clients here and a very large network of people I know within this community. I'm a legacy to my parents who started selling homes here in 1978; my Sister also has been selling with us for 5 years. Honestly, I don't think there is anybody in this zip code as familiar with the history of homes sales, development projects, or the type of people who live here, than our family

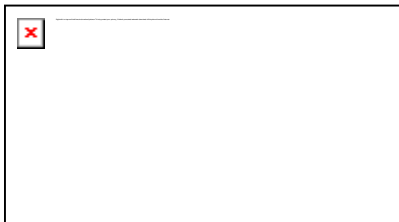
The Developer's current attempt to change this to club to condos is laughable, it's not desired by this community, doesn't conform to this community, and everyone would prefer to see improvement to the club as it's one of the few social spots for the community in existence and hosts weddings, graduations, events, etc. It keeps kids busy with activities and out of trouble. Condos would definitely rank as one of the least desired uses for this property and does not conform with the area or the surrounding homes. Tustin Ranch has higher density and borders one side of the parcel, but is an entirely different community, and the higher density should not be allowed to impede into the North Tustin area, or conflict with the North Tustin Specific Plan.

If I can be of any assistance to you, please don't hesitate to call. I just wanted to be sure that I reached out regarding this project and voiced my concerns for myself and the community.

Dean O'Dell
TheODellGroup.com
714-665-7107 direct
714-665-7115 office
BRE 01060767

O.C and Tustin Markets Quick Video Update !

Watch and subscribe to be automatically updated every two weeks.



Canning, Kevin

From: Marta Prietto O'Hara <martapriettoohara@gmail.com>
Sent: Monday, June 1, 2020 12:29 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hello,

I have lived at 2281 Pavilion Drive for 24 years. As a child, my family became members of the tennis club in the early 1970s and I walked to the club, living approximately 1/2 mile from my current address. For approximately 50 years, I have driven in this neighborhood. My parents continue to reside on Park Skyline Rd.

Developing high density housing on the THRC property will most certainly create a negative impact in the following ways:

1. Traffic will definitely be an issue. 37 residences, with a minimum of 2-3 cars per household, will create a dangerous and high flow of traffic with an unsafe entry/exit point. In an emergency or catastrophic situation, this neighborhood would not be able to tolerate the high volume of cars. Presently, when many cars enter/exit, residents need to exercise extreme caution; and that is when approximately 5 cars line up in either direction of the entry.
2. This is a residential neighborhood of single family homes that enjoys the use of THRC for recreational purposes, as it was intended per the covenant that was established years ago. If the proposal were for 6-8 homes to include community recreational activities and open space for recreation, my opposition would not be so strong.
3. Simon Ranch is one, small street and it would be forced to accommodate an unrealistic number of residents daily. Besides that, Browning and Skyline would become a nightmare and unsafe to navigate given the huge increase in traffic. It would become a logjam. Your documents and declarations indicate better or decreased traffic—no way! Access via Tustin Ranch Road (close off Simon Ranch at Pavillion) would be the only way I could begin to possibly consider supporting this housing project as described.

Thank you,

Marta Prietto O'Hara

Sent from my iPhone

Canning, Kevin

From: Thomas Olbricht <olbricht@att.net>
Sent: Friday, June 5, 2020 11:44 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet club
Attachments: 2020-06-05_112028.pdf; Tennis club sale letter.doc

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,
Please find attached my letter of opposition to the proposed development of the property.
Thank you for your consideration
Thomas Olbricht

THOMAS R.OLBRICHT
11862 SIMON RANCH ROAD
SANTA ANA, CA. 92705
(714) 609-4838
tom@olbricht.org

Mr. Kevin Canning
OC Development Services
300 Flower Street
Santa Ana, CA 92703
Via e-mail kevin.canning@ocpw.ocgov.com

Re: Tustin Ranch Racquet club redevelopment

Dear Mr. Canning,

6/5/2020

I am contacting you in opposition to the proposed 37 homes on the 5.88 acres lot which currently is the Tustin Hills Racquet Club.

We had purchased our home in 2000 as we were impressed by the ambiance and the quality of the neighborhood. The addition of the proposed development would drastically change the life style that is being expressed by the current ½ acre lot requirement.

Traditionally the smaller lots and houses are located on the lower slopes of hills with the homes gaining in size and value as the elevation rises. This planned project however is turning the traditional value progression on its head.

I am not going to pursue the inevitable decline in property values once the proposed development is approved but I shall concentrate on 2 significant points as follows.

TRAFFIC

Simon Ranch Road is a winding street that is very tempting for drivers to ignore the 25 mile speed limit and exceed it considerably.

Every time I am exiting my driveway I am putting my safety on the line as cars and motorcycles are approaching fast and due to the curves in the road their approach can not be seen.

Adding 37 homes to the immediate area is bound to increase the traffic and along with that the danger to egress my driveway. I am sure other homeowners are in a similar situation, maybe not as severely, based on the location of their driveway relative to the curves.

The conclusion in the "Negative Declaration" that traffic will be reduced by 205 trip/day is preposterous and not based on to be expected reality.

EVACUATION

I pray that God prevent us from a serious wildfire, similar to the one in 1967 that destroyed countless homes in the North Tustin area.(see attached article)

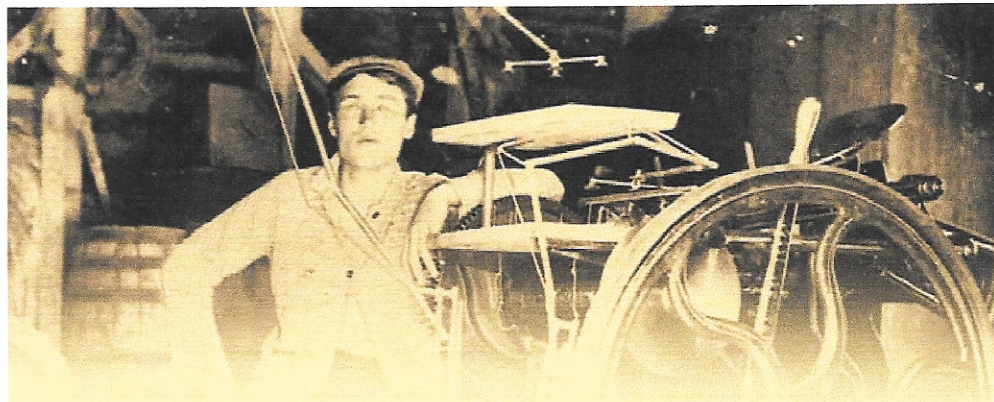
Should such a fire happen, we could be seriously landlocked as Simon Ranch Road and connecting streets would not be able to handle the traffic influx of the incoming emergency vehicles and at the same time accommodate the fleeing home owners.

In closing, I hope that my thoughts have given you valuable information to contemplate before making your decision mindfully.

Thank you for your serious consideration,

Sincerely

Thomas Olbricht



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Local homes destroyed in '67 wildfire

by Juanita Lovret

Reprinted courtesy of the *Tustin News*



Tinder, dry countryside, Santa Ana winds, and incendiary materials are a sure prescription for fires such as the Paseo Grande which swept through the Tustin foothills in October 1967.

Photo courtesy of the Orange County Archives

Fear prevailed over Tustin residents and their neighbors on the day before Halloween in 1967.

All thoughts of trick and treat, parties or costumes were abandoned as the community anxiously watched the dark clouds of smoke sweeping in from the northeast. Suddenly a deep red flush crossed the sky and waves of flames crested into the Cowan Heights area. The wildfire that started in Riverside County had arrived in Tustin.

Newspaper accounts of its origin differed. One news report said "possibly started by equestrians." Another claimed "believed to have been started by children playing with matches." Regardless of its source, the Paseo Grande Fire, as it was labeled, scorched 50,000 acres before it was subdued.

The fear that Tustin residents felt was well-deserved. As the flames raced across the canyons between Riverside County and Orange County in conditions labeled "the driest season since 1887," out-of-control fire damaged or destroyed thousands of acres of vegetation, hundreds of dwellings and caused millions of dollars of damage before firefighters were able to contain it on Nov. 2.

In the Lemon Heights-Santa Ana Canyon-Cowan Heights area alone 66 homes were destroyed at a collective value of more than \$2.5 million. Enforced evacuations limited the loss of lives, but one woman was killed when she was struck by a runaway vehicle and at least nine other people, including four firefighters, were injured. Fifty cattle, horses and sheep were believed to have perished.

The Tustin Area Historical Society - 1967 Wildfire in the Tustin Foothills

Santa Ana winds blowing at more than 50 miles an hour propelled the flames quickly across the area. Jim Sleeper, a Tustin resident as well as Orange County historian, described the situation well when he wrote in 1971 "Nothing can compare to the devastation wrought by a santana pushing a brush fire. Indelibly seared on the memory of countians are such incendiary nightmares as the Green River Fire (1948), which blackened 46,000 acres and consumed 22 homes; the Stewart (1958), 66,400 acres and 16 homes; and ... the Paseo Grande (1967), 47,639 acres and 66 homes."

The combination of dry conditions and Santa Ana winds has been responsible for many fires in this area. More than 100 conflagrations have been recorded since the California Department of Forestry and Fire Protection began keeping records in 1914. The cost of these fires has run high: 1914 to 1939, \$45,686; 1931 to 1950, \$64,184; 1951 to 1970, \$196,858; 1971 to 1990, \$169,643; 1991 to 2008, \$72,735.

Interestingly, the period in which the Paseo Grande fire took place recorded the highest dollar damage. Larry Holmes was Orange County Fire Chief at the time of the Paseo Grande disaster and directed firemen from throughout the county as well as those who came from all over the state to aid in battling the blaze. Tustin's combination of paid and volunteer firemen worked around the clock under the direction of Fire Chief Morgan Hilton

© Tustin Area Historical Society; 395 El Camino Real; Tustin, CA 92780

Canning, Kevin

From: Sherry Hart <hartofopa@gmail.com>
Sent: Friday, June 5, 2020 8:31 AM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: North Tustin Racquet Club
Attachments: Letter to OC Public Works (North Tustin Racquet Club).docx

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Please see the attached letter as the Orange Park Association response to the MND of the North Tustin Racquet Club.

Should you have any questions or concerns feel free to contact me directly.

Sherry Panttaja
President
Orange Park Association



June 4, 2020

Mr. Kevin Canning
OC Public Works
Development Services/Planning
601 N. Ross Street
Santa Ana, California 92701

Subject: In response to the Mitigated Negative Declaration decision on the property known as the North Tustin Racquet Club

Dear Mr. Canning,

Orange Parks Acres (OPA) is a unique part of North Orange County, abuts North Tustin and shares many of North Tustin's architectural and lifestyle identities.

OPA has fought diligently in the past to preserve its identity and maintain its rural lifestyle. During the past 20 years, developers have attempted to alter our identity – to no avail. A recent proposed development of the Ridgeline Golf Course mirrors the pattern of the North Tustin Racquet Club development. As you may know, the Ridgeline development was prohibited by the California Supreme Court on a unanimous vote.

What mattered to OPA residents, and still matters, was the loss of its identity. The traffic implications were huge and dramatically underestimated. Like North Tustin, OPA has narrow streets, few sidewalks and streetlights. Walkers, hikers and bikers abound on our streets – and we have a large number of equestrians. All of these are similar to the North Tustin experience and require serious attention to change

It's worth noting, as OPA learned, that traffic studies are conducted within a short distance of the site, and do not reflect, by law, the traffic impacts on feeder streets and arterial highways. Of course, most developers have no way of projecting traffic impacts reasonably. In fact, in almost all cases, traffic impacts are underplayed for the developer's benefit.

During the Canyon Fire 2, OPA was forced to evacuate. The experience was less than desirable and has caused city and county governments to reconsider how this should be done. Should another evacuation occur, it's quite possible that some of OPA would be required to evacuate through parts of North Tustin, and perhaps vice-versa. The roads and traffic patterns are not capable of handling the current number of residents. Several hundred more people in North Tustin may prove calamitous to residents of both communities

Finally, if this property were to fall under proposed state zoning laws demanding high density housing and the elimination of single family residential zoning, the character and rural lifestyle of OPA and North Tustin would be destroyed forever and homeowners would suffer dramatic, unwarranted and unwanted decreases in home values – a tragedy for many whose retirement plans require significant equity in their homes.

It is with these matters in mind – safety, lifestyle, traffic, evacuation, home equity – that the Orange Park Association, relying on its long history of fighting for these important ingredients and being respectful of North Tustin’s similarities, asks you for a full EIR on the North Tustin Racquet Club. These matters are important and deserve serious consideration by OC Public Works and the developer. The people of north Orange County want to understand how their lives will be negatively impacted.

In the hopes of a reconsideration in the spirit of the North Tustin lifestyle,

Sherry Panttaja
President
Orange Park Association

Canning, Kevin

From: Rick Oreilly <rickreilly@sbcglobal.net>
Sent: Friday, June 5, 2020 9:34 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Rick O'Reilly

A resident, concerned citizen and taxpayer

Canning, Kevin

From: Robert <rpage2@cox.net>
Sent: Friday, May 22, 2020 1:10 PM
To: Canning, Kevin
Cc: KIRKWATILO@gmail.com; Falco Mellissa And paul; Green John
Subject: Opposition to the proposed changes to the Tustin Hills Racquet Club
Attachments: Opposition to Racquet Club 5.22.20.pdf; ATT00001.htm; pastedGraphic.pdf; ATT00002.htm

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning:

Please review the attached letter opposing the further proposed changes to the land currently known as the Tustin Racquet Club off Simon Ranch Road in North Tustin, in unincorporated Santa Ana (Orange County, CA)

We further support Supervisor Don Wagners efforts to stop further planning on the development of this property as well.

Stop the Broader Development of the Tustin Racquet Club



THE PAGE GROUP
2152 SALT AIR DRIVE/LEMON HEIGHTS, CA 92705
PH: (714) 389 – 4792 FAX: (714) 389 – 4793
EMAIL: RPAGE@THEPAGEGROUP.US
WWW.THEPAGEGROUP.US

5/22/20

To: Kevin Canning (KEVIN.CANNING@OCPW.OCGOV.COM)

cc.: Kirk Watilo (KIRKWATILO@GMAIL.COM)

Subject: OPPOSITION TO THE DEVELOPMENT OF THE TUSTIN HILLS RACQUET CLUB ASSOCIATED WITH TRACT 3883

My family is adamantly opposed to the proposed development of housing units on the property currently known as the Tustin Hills Racquet Club, and vigorously oppose any changes to the land covenants, restrictions, or zoning of this property as has been clearly recognized in all title reports and prior agreements between the developer of the Racquet Club facilities, the city, the county, and the citizens affected by its presence in our community.

There are numerous reasons we disagree with the proposal:

- 1) We disagree with the assumptions raised related to the traffic studies and demand that a full environmental report be contracted for and supplied by the developer. Our belief is that traffic from this new project will significantly increase traffic, and more importantly it will affect the single road egress from the community in the case of fires or other catastrophe's occurring that will jeopardize the safety of our citizens in tract 3883
- 2) We disagree that any changes can be made to the title and covenants already approved for this property as they have been clearly negotiated by the original developer of the property as well as accepted fully by the subsequent property owners.
- 3) We disagree with the pure land and money grab that the developers are attempting to achieve while having SIGNIFICANT negative impact on the current members of the clubs, homeowners adjacent to the club, as well as the community as a whole.
- 4) We believe it will have a negative impact on property values to build a high-density project within the confines of a single-family community with very strict guidelines related to lot size, and type of construction.
- 5) This project will have a significant negative impact on the views of those homes surrounding the property that WERE PAID for by those homeowners when they purchased their homes, and with their knowledge that the Racquet Club was titled to remain as it currently stands as a community asset.
- 6) This has been proven in the past, thru litigation, that the property could not install cell towers as it did not fit within the title and covenants that exist for the property, so what makes this different...a precedent already exists saying no changes are allowed.
- 7) The disruption during construction, along with the construction of the new water storage tanks, will impact this community for the next 3-5 years significantly. Increased construction traffic

May 22, 2020

- alone, workers, trucks, city services being added, and more will negatively impact the entire community surrounding the club including Browning, Skyline Dr, Beverly Glen, Racquet Hill, Pavilion and Salt Air as well as indirectly the gated communities below on Tustin Ranch Road.
- 8) This has been a special community asset that many homeowners chose this neighborhood because of its existence so families could be raised with this wonderful asset as part of the community. To take that away takes away the passionate commitment that those community members have to support what is truly a special part of North Tustin (Santa Ana).
 - 9) Greed should not prevail when this community has tried time and again to negotiate with the prior owner to purchase and retain the facility as it is, but his greed (even knowing the restrictions that exist on the property) is what is driving the request for these changes WITHOUT any consideration for those existing agreements, nor the community in which this facility serves. Proposals have been presented to the prior property owner giving him a fair and considerable profit on the property which would have allowed it to remain as is for the coming years with the addition of very significant improvements to the facilities which would have added value to our community once completed.

Thank you for reviewing my comments. Failure by the Orange County Planning Department to support the community in which we live will have an impact on our family as well as our neighbors not favorable to our significant investments made in our homes and lifestyles. The greed of a developer who has not shown any consideration for the communities surrounding their prior developments also shows the character of those developers/investors which is not favorable for the community in general. This has further been shown as the developer has consistently tried to avoid inviting the "Neighborhood" into the conversation by trying to hide his actions and reduce his exposure to the project and the efforts they are undertaking in developing this property.

I ask, I demand, I respectfully suggest that the OC Planning Department demand of the developers to fully engage in the submission of ALL appropriate required research and documentation, but most importantly I demand that they understand that this is a unique community asset that this community will fight to the end to deny their ability to pursue this project.

Sincerely

Robert and Nancy Page
2152 Salt Air Drive

Canning, Kevin

From: Team Ed Park <teamedpark@gmail.com>
Sent: Thursday, June 4, 2020 5:25 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Save the Racquet Club Personal Letter
Attachments: Ranch Hills Community letter.pdf

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hello Mr. Canning.

We have included a personal letter requesting to reconsider the Rezoning of our Racquet Club. Thank you.

Best Regards,

Team Edward Park

Re/max Premier Realty
DRE: 00994662
5299 Alton Pkwy
Irvine, CA 92604
Office Phone: (949) 451-1200
Team Fax: (949) 743-2723

Edward Park

DRE: 01344588
Office: (949) 451-1207
Cell: (714) 329-1212

Yeon Park

DRE: 02084089
Office: (949) 451-1217
Cell: (949) 400-6833

Canning, Kevin

From: Team Ed Park <teamedpark@gmail.com>
Sent: Thursday, June 4, 2020 5:25 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Save the Racquet Club Personal Letter
Attachments: Ranch Hills Community letter.pdf

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hello Mr. Canning.

We have included a personal letter requesting to reconsider the Rezoning of our Racquet Club. Thank you.

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Team Edward Park

Re/max Premier Realty
DRE: 00994662
5299 Alton Pkwy
Irvine, CA 92604
Office Phone: (949) 451-1200
Team Fax: (949) 743-2723

Edward Park

DRE: 01344588
Office: (949) 451-1207
Cell: (714) 329-1212

Yeon Park

DRE: 02084089
Office: (949) 451-1217
Cell: (949) 400-6833

May 27, 2020

Attn: Kevin Canning
OC Public Works, Development Services/Planning
601 North Ross Street
Santa Ana, CA 92701

RE Project: Ranch Hills Community (File No. 18-0034)

Hello Kevin.

I'd like to introduce myself and my family. My name is Edward Park and I am a Realtor who resides at 2242 Pavillion Drive with my wife, daughter, and our two white Jindo dogs. We work hard in our Real Estate family business to be able to afford our precious stay here in our beautiful home, in its wonderful neighborhood. Our family has moved to this community from Irvine specifically because we were seeking the peace and quiet that a more diffusely populated area can allow as well as the upper-class feel this neighborhood provides given its higher price point and location.

We really appreciated the fact that this community offered a luxury such as the Racquet Club since it really adds to the feeling of prestige as well as exclusivity. We feel that the proposed project will be greatly detrimental to not only all our home values but to the actual enjoyment of living here. Needless to say, the significant number of additional residents that would occupy 37 condominiums right next to our property will greatly impact our street traffic as well as our safety. There are no sidewalks and the roads in this area are very narrow and windy as it is. Walking our two dogs is challenging but still enjoyable and possible due to our close-knit and very considerate neighbors. Monitoring and advising a new group that large (such as the possible residents of 37 new condominiums) to be mindful when driving would be very difficult, if not impossible.

Was not this club initially created for the enjoyment and benefit of this community? Merely taking away that kind of luxury and convenience would be one thing, but to Rezone and replace it with so many densely populated homes that it will actually negatively impact our daily lives in even the most basic activities (like driving to and from home or walking our dogs) for the rest of our time here seems insensensitive and unfair. We could understand using the allotted area for a few classy and elegant Single Family Residents to be built according to the average standard of half-an-acre per lot to match our current neighborhood; but adding a whole whopping 37 lesser homes right into our neighborhood, it would completely alter our whole neighborhood appearance, value, and experience.

We ultimately just really love our home and our neighborhood. It's not that we are against any kind of change altogether. No, we are totally on board with any changes that we feel could possibly enhance our lives and the lives of our community. We feel that we are reasonable thinkers, and after careful consideration, we would like to strongly urge you to reconsider approving this project for the sake of our whole community's well being. Our family thanks you for giving us your time and attention when you really don't have to. We hope that you can empathize with us, and we appreciate any help towards our cause. Once again, thank you very much.

Sincerely,
Edward Park and Family

Canning, Kevin

From: Larry Perrin <rome1205@live.com>
Sent: Sunday, May 31, 2020 3:49 PM
To: Canning, Kevin
Subject: Racquet club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

We oppose any zoning changes to Racquet Club. This zoning has been the same since 1958. A change could adversely affect our property value and community. Larry Perrin

Canning, Kevin

From: Glen Piper <gpiper@peacockpiper.com>
Sent: Monday, June 1, 2020 11:21 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition and Concerns Regarding Rezoning of the Tustin Hills Racquet Club and the Proposed Adoption of the CEQA Initial Study Mitigated Negative Declaration (Ranch Hills Community Project PA 18-0034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Thank you for the opportunity to comment on CEQA Initial Study Proposed Mitigated Negative Declaration (No. PA-180034) (“MND”). Please be advised that I oppose any zoning changes to the Tustin Hills Racquet Club property located at 11782 Simon Ranch Road, Santa Ana, CA 92705 (hereinafter “THRC”). This zoning has been in place since before the Racquet Club was built in 1958 and changing the zoning will be catastrophic to the North Tustin community.

A. Opposition to Proposed Rezoning of THRC Property:

My family and I live on Racquet Hill (the street is aptly named because of the THRC) and our home is adjacent to the THRC. We purchased this home in North Tustin seven years ago because of the larger lot sizes, quiet neighborhood and because the area was already built out. This area had already been significantly “developed” when the Racquet Hill streets were completed in 1976. We moved from Irvine to North Tustin because of North Tustin’s unique character and environment of less dense housing and single family residents on larger lots. Moreover, we specifically purchased our home on Racquet Hill, adjacent to the Racquet

Club, because of the open space and recreational opportunities it provides to my family, such as tennis, swimming and walking.

When purchasing our home, we relied upon the County of Orange's zoning of the area, with its large lot sizes and specifically the zoning of the THRC as agricultural/recreational. We were comfortable that the THRC property next to our home could not be redeveloped for housing. We never imagined the THRC would be, or could be, rezoned and redeveloped into the very same high density housing we moved away from in Irvine. This is not a criticism of Irvine, but planned communities with high density housing such as Irvine also plan for open space, parks and other recreational facilities. North Tustin is not a planned community with a master plan and CCR's to govern property uses and provide for important things like open space, parks, pools and recreational facilities, rather we only have the County's zoning to rely upon. Much like my family, the other neighboring homeowners have similarly relied upon the County's zoning when purchasing their homes here. The current zoning must be protected to preserve the unique character of the area, our property values and the amenities and recreational uses provided by the THRC property.

Our family is a member of the THRC and enjoys all that it offers both to its members and the local community. Our use of the facility includes tennis, the pool, children's camps and the banquet room for school functions, meetings and other special events. My wife also belongs to a tennis league through the THRC which plays against other tennis leagues from surrounding Orange County communities. We have also played together in "couples leagues" organized through the Club. If THRC is rezoned for condominiums, the THRC will be closed and this will require THRC users to drive to other cities such as Anaheim, Irvine or Yorba Linda (as the closest) to play in leagues. This will eliminate my wife and likely other tennis players' ability to play regularly because these other tennis

facilities are too far to travel to while juggling busy family and work schedules. Rezoning the property will force our neighbors to seek recreation in other cities and eliminate this valuable community gathering place that is so vital to providing a sense of community within North Tustin.

THRC serves the community at large by hosting tennis matches, camps for children, swimming lessons and family pool memberships. The banquet facility also provides an affordable alternative to other Orange County venues which are either too large or too expensive for weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras / Quinceneros, school events and other functions, such as funerals, school and sports team fundraisers and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community.

The Developer, Ranch Hills Partners, LP's partners, principals and employees (hereinafter the "Developer") are not citizens of North Tustin and do not have a vested interest in our community except to maximize its profits by squeezing in as many homes as possible on the THRC property. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses which consist of large half acre lots. The construction (anticipated to last for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several recreational uses and open space in the area (which is already lacking), increasing noise, dust and traffic and placing a strain on resources. Building high density housing behind our home will also result in years of construction, dust and noise and greatly reduce the quiet enjoyment of our home and yard. It will also have a dramatic effect on the short and long term value of our home.

The Developer disingenuously claims it is building these condominiums to address a claimed need for housing for “active adults of 55 years and older” in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anecdotal needs for this type of housing in this area. Ironically, the proposed development consists of two story condos which is difficult for older adults to live in. Additionally, there is no access to public transportation or nearby amenities such as grocery or other stores that can be accessed by older citizens without driving. This does not seem to be a suitable location for the proposed development. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. The THRC property is zoned for agricultural/recreational uses and the owner of the Club was aware of this when he purchased it. The zoning must not be changed without substantial justification and maximizing profits for a small group of out of town Developers is not a substantial justification that warrants this significant change in use which will be detrimental to the community.

B. Opposition to the County’s Adoption of the Mitigated Negative Declaration:

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes, the proposed changes are inconsistent with the surrounding neighborhoods and there is no substantial justification for the change. However if a zoning change is still being considered, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. The baseline for considering any environmental impact is its current use (a tennis club) and as such an

Environmental Impact Report will show significant impacts because of the proposed change to high density housing.

1. Increased Traffic:

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. From reviewing the MND it appears that in order to develop its car trips into the THRC, the Developer assumes all 11 and ½ tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used every day. This is simply not the case. There are cars coming into the parking lot at select times of the day, but not continuously all day and all night, especially since THRC closes and its gate is locked each evening. The Developer claims his Ranch Hills Project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developer's assumptions are in inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Outside of peak morning and evening hours, most of the day there is little activity at THRC.
- (3) The banquet facility is not used every day. There are limited numbers of events at the banquet facility each month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the THRC during the day or by reviewing its records regarding the number of

bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner, I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

(1) Traffic volumes for the current club use is much lower than claimed by the Developer.

(2) The residents of the proposed 37 condominiums will have at least 37 to 148 cars, assuming occupancy of 1 to 4 residents per household.

(Note: the proposed units are designed to have 2 to 3 bedrooms with bonus rooms and home offices).

(3) The Developer is planning for the condominium units to have 2 car garages and allow for 2 cars to be parked in the driveways and also allow for on street parking.

(4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests.

Therefore, the Development's residents will be required to park outside the development on neighboring streets which will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot which has always been able to handle the number of vehicles for its users.

(5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic

on the windy roads leading to the single access point for the proposed development raise major safety concerns for all residents.

There are significant questions regarding the Developer's traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study to determine the actual ADTs generated by the current club use, so the severity of the new planned use can be determined and mitigated.

2. Cumulative Negative Impacts:

The MND inaccurately states there would be "less than a significant impact" caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station (Project CIP No. 60114). This project just started in March of 2020, rather than "spring of 2017" as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in "spring of 2017" illustrates the many flaws and inaccuracies of the data and conclusions contained in the Ranch Hills Developer's MND.

The Simon Ranch Reservoir and Booster Pump Station project alone generates increased and significant noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hills Developer is granted the requested zoning change and its development project is commenced as

proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hills development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough environmental impact review.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hills Development is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment, vehicles and construction. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units over three phases during two and half years of construction. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large projects, especially when the Ranch Hills Development is not consistent with the neighborhood, is not a permitted use under the current zoning and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. This is too much for this once peaceful neighborhood.

3. High Density Housing Will Eliminate North Tustin’s Only Open Space, Limit Recreational Uses and Impact Aesthetics:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, an exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the Club is open to any member of the public who would like to join.

Additionally the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian pathway between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic throughout the surrounding area rather than concentrating walkers on the same streets. The proposed Development will create a situation where there is only one way in and one way out for pedestrians. This also creates a safety concern for emergency evacuations because it will eliminate another potential pedestrian evacuation route. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also impact the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will now have houses and roof tops to look at, rather than the open space provided by the current use

and zoning. This is a significant impact on the aesthetics of the neighborhood.

4. Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was built over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. This is to name just the wildlife I have personally observed. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe will have a more significant impact on local wildlife than is outlined by the MND and should be the subject of a formal Environmental Impact Study.

5. Other Concerns Regarding Increased Strain on Local Resources, Safety Concerns and Pollution:

Both during construction and after construction, this project will place a significant strain on the North Tustin area, which must be fully reviewed and understood. Some of the other concerns we have that have not been fully studied are:

- a) Increased demand for police and fire services.
- b) There will be an increased noise (both during construction and thereafter) due to the construction of an additional 37 more homes, increased traffic and corresponding greenhouse gasses and higher water usage.

- c) Increased pedestrian and vehicular traffic at all hours create safety hazards and concerns for both drivers and pedestrians since the surrounding streets which have no sidewalks.
- d) Increased lighting impacts with the addition of street lights and houses. Unlike the Racquet Club which closes, the housing lighting will be 24 hours a day.
- e) The Development will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion and reduce possible evacuation routes, when evacuation of the area is necessary in times of wildfires and earthquakes.
- f) Water quality concerns due to increased pollution from storm water runoff from the added streets (the addition of cul-de-sacs and roads) and vehicular traffic.
- g) Increased greenhouse gas emissions from construction and increased traffic.

In summary, the THRC property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the adjacent neighborhood and North Tustin at large by allowing for “spot rezoning” for high density housing. It will increase noise and traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the lack of a substantial justification by Ranch Hills Partners for the rezoning and the significant impact on the current residents of the area. However, if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer’s rezoning request cannot be done

without a complete and accurate Environmental Impact Study and Report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Respectfully submitted,

Glen Piper
2182 Racquet Hill
Santa Ana, CA 92705



Glen Piper | 100 West Broadway Suite 610, Long Beach, CA 90802 | gpiper@peacockpiper.com | Phone: +1 (562) 320-8885 | web: www.peacockpiper.com

Canning, Kevin

From: Ann Leahy Piper <annl Piper@gmail.com>
Sent: Sunday, May 31, 2020 1:45 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Ranch Hills Partners, LP's Project and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

My family and I live on Racquet Hill and our home is adjacent to THRC. We purchased this home in North Tustin seven years ago because of the larger lot size, quiet neighborhood and because the area was already built out and had been significantly "developed" when the Racquet Hill streets were completed in 1976. We also purchased the home relying on the close proximity to the THRC because it provides open space, recreational opportunities and a sense of community. Our family is a member of the THRC and enjoys all that it offers both to its members and the local community. I am also a member of a league that plays against other tennis teams throughout the County of Orange. If the zoning is changed this would require members to play for other teams in Anaheim, Yorba Linda or Irvine (as closest locations). Further losing the sense of community in Tustin. Our use of the facility includes tennis, the pool and banquet facilities for school functions, meetings and weddings. THRC also serves these same functions for the community at large including tennis matches, tennis camps for children, family pool memberships, weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras/Quinceneros, school fundraisers and other functions, funerals and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community. Building high density housing behind our home would result in years of construction and noise and greatly reduce the enjoyment of our home as well as the short and long term property value of our home.

The Developer, Ranch Hills Partners, LP's (the "Developer") partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and

the entire area by eliminating several recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disingeniously claims he is building these condominiums to address a claimed need for housing for “active adults of 55 years and older” in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anecdotal needs for this type of housing in this area. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

Increased Traffic:

The Developer’s Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developer’s assumptions are inaccurate and flawed for several reasons:

- (1) The tennis courts are rarely fully occupied.
- (2) The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
- (3) The banquet facility is not used every day. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer’s artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the

number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have at least 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
- (3) The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.
- (4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the Development on neighboring streets will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.
- (5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.

There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.

Cumulative Negative Impacts:

The MND inaccurately states there would be "less than a significant impact" caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than "spring of 2017" as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via

Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in “spring of 2017” illustrates the many flaws and inaccurate conclusions made in the current MND.

The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.

High Density Housing Will Eliminate North Tustin’s Only Open Space And Limit Recreational Uses:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.

Additional the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic through out the surrounding area rather than concentrating walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also decrease the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will not have houses and roofs to look at rather than the more open space provided by the current use.

Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was build over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.

Increased Strain on Local Resources and Safety Concerns:

Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter’s Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the the adjacent neighborhood and North Tustin at large by allowing for spot rezoning for high density housing and increase traffic both because of the

addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values, but if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer's rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer's plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Respectfully submitted,

Ann Piper
2182 Racquet Hill
Santa Ana, CA 92705

Canning, Kevin

From: Miguel Prietto, MD <mppmd1@gmail.com>
Sent: Thursday, June 4, 2020 4:30 PM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: North Tustin, Racquet club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

No re zoning in North Tustin.

Miguel Prietto
1462 Foothill Blvd, Santa Ana, Ca., 92705

Canning, Kevin

From: przywam@aol.com
Sent: Wednesday, June 3, 2020 1:25 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Kevin Canning,

We are deeply saddened, disappointed and extremely disturbed that the new owner of The Club is attempting to rezone the property, take away this beautiful legacy from the community and ignores all the legal restrictions associated with this parcel. We were absolutely appalled that the MND report released by the county suggests that the 37 units, high density, completely incompatible project will not have significant environmental impacts. Are You Serious???

How about the huge **water** demand **required to extinguish fire**, increased demand for residential use of potable water and wastewater/sewage? These would require related pipelines construction, upgrades and constant street repairs. We feel our safety would be compromised, as it would create serious issues in case of emergency evacuations.

This shows that something is not right and the OCPW is not factual.. The proposed project would have a terrible consequences for our property values, fire hazard, safety, increased traffic and environment. It would change the integrity of this community forever.

We are emigrants, worked very hard for many years and spent all of our savings to purchase our home at 2272 Salt Air Dr. We love this home, this community and are determined to leave it to our son.

Please support the people who love this club and this neighborhood and help us to preserved this very special and unique community.

Thank you very much for your time,
Best Regards, The Przywara Family

Tim and Kim Churton
kchurton@cox.net
11762 Highview Drive
North Tustin, CA 92705

To: Orange County Planning Commissioners and Board of Supervisors

We live very close to the Tustin Hills Racquet Club. The proposed zone change and development of this property concerns us greatly. The high density of the project will not only increase the number of vehicles traveling our neighborhood streets, but, also the type of flow. Only two days ago, we encountered a close call while turning on to Valhalla. The entrance to the racquet club and proposed project is dangerously close to the peak of Simon Ranch Road. The convergence of Simon Ranch Rd, Valhalla, Leanne, Pavilion, and the entrance of the property in question is very precarious. We know to approach with caution as you cannot see what may be approaching from the other side of the peak. Also of concern is S. E. Skyline, one of the few main roads leading to said property. This street is very narrow and winding with many blind curves and driveways coming from it. Another concern regarding the increase of traffic is the fact that you cannot reach this neighborhood without crossing traffic from two different public elementary schools, Tustin Memorial and Redhill. Living so close to the club we are extremely aware of the number of cars and how infrequently they come and go. Such a high density of living quarters will necessitate that many more vehicles must come and go through our neighborhood on a very regular basis throughout the day. Whereas a member of the racquet club may come once a day or even once a week or less, residents of this project will most likely need to come and go very often daily. In reviewing the proposed plan, we are concerned about parking and the problems created when the additional vehicles associated with such a high density spills out onto our streets. Besides vehicles, our neighborhood is very popular with pedestrians getting exercise and walking their dogs. Being an older neighborhood in unincorporated Orange County, most of our winding streets do not have sidewalks or street lights.

The type of development proposed would fit better in a newer community, where there are more neighborhood amenities such as parks and shopping within walking distance. My husband and I are longtime residents of the area. My husband graduated from the Tustin School District as did our three children. We have a business in Tustin and worked hard to live in this desired neighborhood. It is my understanding that there is a covenant governing the land used for the racquet club, the only recreational property in the area. The owner of this land knows of this covenant and I would suspect that the value of the land would reflect that. Besides the very real dangerous situations I have presented before, a project like this would greatly affect the aesthetics and value of our existing homes which we have worked so hard to attain. To allow this project and ignore the covenant is to promote a lie to all current residents for the financial benefit of a few. Please do not approve a zone change or allow this project to proceed.

Sincerely,
Tim V. Churton
Kimberly J. Churton

Canning, Kevin

From: T. Raymond <dedeandthomas@gmail.com>
Sent: Thursday, June 4, 2020 10:23 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of

the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

I had my wedding reception here 16 years ago and my grandpas funeral celebration this has been apart of my family for generations.

Best regards,

DeDe Raymond

Canning, Kevin

From: Reekstin, Scott <SReekstin@tustinca.org>
Sent: Thursday, June 4, 2020 2:20 PM
To: Canning, Kevin
Subject: Comments on MND for Ranch Hills Community Project
Attachments: June 4 2020 MND letter.pdf

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Attached is a comment letter on the MND for the Ranch Hills Community Project from the City of Tustin.

If you have any questions regarding our comments, I can be reached at sreekstin@tustinca.org.

SCOTT REEKSTIN | PRINCIPAL PLANNER
City of Tustin | Community Development Department
300 Centennial Way | Tustin, CA 92780
P. 714 - 573 - 3016 | F. 714 - 573 - 3113
<http://www.tustinca.org>

Please note that at this time public counter services will be performed by City Staff online, or by telephone.

Community Development Department

June 4, 2020

Mr. Kevin Canning
Contract Planner
Orange County Public Works
Development Services
601 N. Ross Street
Santa Ana, CA 92701



SUBJECT: REVIEW OF THE PROPOSED MITIGATED NEGATIVE DECLARATION (MND) FOR THE PROPOSED RANCH HILLS COMMUNITY PROJECT

Dear Mr. Canning:

Thank you for the opportunity to provide comments on the Initial Study (IS) and Proposed Mitigated Negative Declaration (MND) for the proposed Ranch Hills Community project located at 11782 Simon Ranch Road in North Tustin. The proposed project proposes a Zone Change, Use Permit, and Vesting Tentative Tract Map to allow the development of 17 buildings consisting of 34 townhomes, three (3) separate detached single-family homes, and a recreational facility at the existing Tustin Hills Racquet Club site.

The City of Tustin offers the following comments:

General Comments

1. The proposed Ranch Hills Community is directly adjacent to the Tustin Ranch neighborhood of Treviso. Tustin Ranch is a master planned community within Tustin that is regulated by the East Tustin Specific Plan. When the Specific Plan was approved, a requirement was included that limits the height of residences on lots along the boundary between Tustin Ranch and North Tustin to a maximum of one story in Sector 8 of the Specific Plan. In addition, those same lots were required to be a minimum of 10,000 square feet in size. These requirements were put in place to maintain compatibility between the existing North Tustin residential community and Tustin Ranch.
2. The proposed Ranch Hills Community includes attached residences that are up to two stories in height and have a minimum net lot area per residence of 5,000 square feet. This height, development pattern, and density are inconsistent with the height, development pattern and density of the adjacent Treviso properties. The proposed Zone Change to R2(5000) would allow an incompatible land use along the border between North Tustin and Tustin Ranch, and would be in conflict with the restrictive requirements that were agreed to when the East Tustin Specific Plan was adopted and that were imposed upon the developer of the Treviso neighborhood. The County of Orange should respect this land use restriction and reciprocate by not allowing incompatible residential development directly adjacent to the Treviso neighborhood and by also limiting the heights of the proposed buildings within the Ranch Hills Community along the City/County border to a maximum of one story.

Mr. Kevin Canning
Orange County Public Works
June 4, 2020
Page 2

Aesthetics and Views

3. The site photographs provided in Exhibits 9a through 9e of the MND were all taken from vantage points within Unincorporated North Tustin. None of the photographs was taken from the adjacent Treviso neighborhood in Tustin. There is also no narrative analysis of views of the site from the Treviso Neighborhood. Despite the lack of a complete visual analysis, the MND states on page 34 that the “Project would not substantially degrade the visual character or quality public views of the Project site or the surrounding area during construction or operation, or conflict with applicable zoning and regulations governing scenic quality. Therefore, impacts would be considered less than significant once developed and no mitigation is required.” The City of Tustin requests that the MND be amended to include a view analysis from vantage points within Tustin to determine whether the proposed Project would have any significant impacts and whether mitigation is needed. This view analysis should include photographic simulations that show the views of the proposed buildings from various locations.
4. Although it is stated on page 32 of the MND that “private views are not protected and for purposes of this CEQA analysis would not be considered a significant impact,” it is recommended that dense landscaping be required to be maintained in the proposed Ranch Hills Community along the City/County border to ensure that there are no visual impacts to the adjacent properties and to provide a greater level of privacy for the residents of the established Treviso neighborhood.

Thank you again for the opportunity to provide comments on the Initial Study and Proposed Mitigated Negative Declaration. The City of Tustin would appreciate receiving written responses to our comments when they become available and all future public notices regarding this project.

If you or your staff have any questions regarding the City’s comments, please feel free to contact me at (714) 573-3031 or ebinsack@tustinca.org, or to contact Scott Reekstin, Principal Planner, at (714) 573-3016 or sreekstin@gmail.com.

Sincerely,

Elizabeth A. Binsack

Elizabeth A. Binsack
Community Development Director

cc: Matthew S. West, City Manager
Nicole Bernard, Assistant City Manager
David Kendig, City Attorney
Douglas S. Stack, Public Works Director
Ken Nishikawa, Deputy Director of Public Works/Engineering
Justina Willkom, Assistant Director – Planning
Kris Saldivar, Public Works Manager
Scott Reekstin, Principal Planner

Canning, Kevin

From: srieth@goldenwesttech.com
Sent: Monday, June 1, 2020 10:11 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, and it will also interfere in the wildlife currently found in the area.

If it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Scott Rieth
18792 Silver Maple Way
North Tustin, CA 92705

Canning, Kevin

From: Chuck and Mimi Roby <chuckroby@prodigy.net>
Sent: Monday, May 25, 2020 2:55 PM
To: Canning, Kevin
Subject: CEQA INITIAL STUDY PROPOSED MND Ranch Hills Community - INITIAL STUDY NO. PA 180034

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Regarding:

CEQA INITIAL STUDY
PROPOSED MITIGATED NEGATIVE DECLARATION
Ranch Hills Community
PLANNING APPLICATION NO. PA180034
VESTING TENTATIVE TRACT MAP NO. TT18119
INITIAL STUDY NO. PA 180034

What is the value of family? What is the worth of friends? What is the price of memories? What is the importance of a healthy lifestyle? What is the significance of a life well-lived in a home for over forty years? What is the impact of negatively changing the nature and character of a community forever?

None of these questions are answered in the Mitigated Negative Declaration for the Tustin Hills Racquet Club property in North Tustin. Nor can they ever be.

Our family moved to North Tustin in June 1979 from Rochester, New York. Despite paying 2.5 times what we sold our house for in New York, we were ecstatic to find a house in the recently built John Lyttle homes in Lemon Heights. That was because we could **walk** to the Tustin Hills Racquet Club! The tennis club was the **single most important** reason that we bought the house we did.

We immediately joined the club after paying \$1200 (about \$4500 today) for a membership. Forty one years later, I am still a member. Our children, ages two and seven when we moved here, grew up at the club; first in the swimming pool and later on the tennis courts. Our son wound up playing tennis for Foothill High School. He also got his first job tending the snack bar at the club. This is significant because he went on to a career in the hospitality industry. From little acorns, big oaks grow. Today, our three year old granddaughter is learning to swim at the club. What is the value of family history like this?

My wife and I played years and years of mixed doubles in summer league, winter league and just for fun with many, many other wonderful couples that became our circle of friends. My wife played for years on Tustin Hills traveling teams that played other clubs throughout Orange County. We enjoyed parties at the club, dinners at local restaurants, birthdays and other occasions celebrated, road trips taken. We still are friends with some after forty years. What is the worth of friends and memories such as we have because of our tennis club?

As somewhat of a fitness fanatic, I would play tennis Saturday morning, lift weights in the club weight room and then run five miles in the hills. My wife and I would walk down to the club after dinner just to hit balls. We played tennis regularly at the club for over twenty five years. To this day (pre-Covid 19), I walk to the club and use the weight room three days a week. Now in my seventies, it has helped me recover from knee surgeries, retain muscle tone and generally stay very healthy. There is no facility anywhere in North Tustin that provides the recreational and social opportunities offered by the

Racquet Club and its tennis courts, pool and fitness center. What is the importance of a healthy lifestyle for so many in our community provided by the availability of the tennis club?

When we moved from a place where half acre lots were the norm to southern California we never thought we would find similar property. But we **did** in Lemon Heights. We have lived here now for forty one years. We have put our heart and soul into our house and it is now our family **home**. We have diligently worked to maintain and significantly upgrade our home over the years. We did this knowing/believing that we were not only improving our lifestyle, but enhancing our property value in a neighborhood that was highly desirable. We love our home and where we live.

In the early eighties, with nearly three hundred of our neighbors, we banded together to prevent Racquet Hill Drive from becoming a through street to the new Tustin Ranch development, preserving the tranquility and beauty of our neighborhood. It was, and still is, a neighborhood that is relatively unique in Orange County with all half acre lots. It is a bucolic neighborhood where the vast majority of residents have, likewise, maintained and improved their properties. The proximity to the Tustin Hills Racquet Club, its open space and recreation opportunities, remains a large part of the allure of this area. What is the significance of a life well-lived in a home for over forty years?

Our life story in North Tustin is not all that unique. There are many stories like ours. What is the impact of changing the nature and character of a community forever?

The Mitigated Negative Declaration does not address a single one of these questions, nor can it ever. That is because it does not address the **human** elements at play with this proposal. **People** live here because they have **chosen** to live here for reasons like I have cited above. It is a tranquil, beautiful area where **homes** are not jammed together as they are elsewhere in Orange County. It is a truly **special** place that this proposal would completely change **forever** in a wholly **negative** way. Proposed is an island of ugly, jammed-in duplexes at 6.3 dwelling units per acre amidst a sea of beautiful single family homes on spacious lots at two to an acre. How horribly it would disrupt the lives and impact the property values of hundreds of Orange County residents in North Tustin. How completely and insanely incongruous this development would be in its proposed location.

Without addressing the human, esthetic and property value impacts to the residents in the neighborhood of this proposal, the Mitigated Negative Declaration is altogether and consequentially fatally incomplete.

Sincerely,
Charles Roby
11682 Via Rancho
North Tustin, CA
92705
714-832-3399

Canning, Kevin

From: Derrin Roe <derrinroe@cox.net>
Sent: Friday, June 5, 2020 2:21 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: PA180034 / VTTM 18119 – Ranch Hills Planned Development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

My name is Derrin Roe, I'm the homeowner at 2111 Salt Air Dr, Santa Ana, CA 92705. I've been a resident here for almost five years with my wife and two sons. I'm writing to express my opposition to the Ranch Hills Planned Development proposed to replace the Tustin Hills Racquet Club.

While I strongly believe in an individual's property rights, this project absolutely does not fit in this community. Not only will the increase in density lower the quality of life for surrounding residents such as myself, it will also create unsafe conditions. The only ingress/egress to the new development would be via Simon Ranch Road/Browning Street. Simon Ranch Road is already a very narrow double loaded street with no public sidewalks and homes built very close to the street due to the steep grades in the area. As Simon Ranch transitions into Browning Ave, there are at least sidewalks but this is also a very narrow street with parking on both sides. These streets simply cannot handle the additional traffic from such a high density development. Browning is already heavily impacted from commuter traffic being routed by Waze most evenings in an attempt to bypass the 5/55 interchange.

In addition to negatively impacting the quality of life, the increased traffic will also create other safety hazards. Our neighborhood has a built-in "exercise loop" on the public streets Simon Ranch Rd, Pavillion Dr and Simon Ranch Road; they form a loop around the hill with the proposed project sitting at the top. Most of the residents up here walk the loop daily and my kids ride their bikes around the loop all the time. Even with no public sidewalks and narrow streets it is relatively safe to share the streets with the traffic. The exception is the very steep section on Simon Ranch, the same section that would be the most impacted by the development. Another safety issue would be in the event of an evacuation, which I've already experienced once up here when Peters Canyon was on fire and we had to leave. The narrow streets are not conducive to a larger number of residents trying to get down the only street there is, especially with large fire fighting equipment trying to get up the same street!

I know you're probably reading a lot of these emails so let me conclude quickly. Unlike most of my neighbors I don't believe saving a racquet club no one apparently wants to own is feasible. I do believe a residential project in that space is the second best solution, but this area just doesn't have the infrastructure to support a high density development. Anything built must be consistent with the zoning already in place for single family residential homes on larger than average lots.

Thank you for taking the time to read my concerns.

Derrin Roe

2111 Salt Air Dr

Santa Ana, CA 92705

Canning, Kevin

From: Bob Roice <grroice@gmail.com>
Sent: Friday, June 5, 2020 11:31 AM
To: Canning, Kevin
Subject: Project: Ranch Hills Community File No. 18-0034
Attachments: Tustin Racquet ltr.pages-tef.zip

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Attached please find our letter strongly requesting that you deny the rezoning application for the Ranch Hills Community Project. We believe the project is ill-conceived and inappropriate for our neighborhood.

Bob and Susan Roice
12121 SE Skyline Dr.
Santa Ana, Ca. 92705

June 5, 2020

OC Public Works, Development Services/Planning
601 North Ross Street
Santa Ana, CA 92701
Attn: Kevin Canning

Project: Ranch Hills Community File No. 18-0034

Dear Mr. Canning:

We have lived on Skyline Drive in North Tustin for over 40 years. We moved into this neighborhood because of its beauty, peacefulness and the opportunity it provided for our children to grow up in the safety of a small town community.

It is our understanding that the proposed Ranch Hills Project will tear out the historic Tustin Hills Racquet Club and replace it with 37 high density, low value condos. These condos will be squeezed into the space previously containing 11 tennis courts, a pool and a Clubhouse and parking lot. There is only one access road into this area and no possibility of creating another entryway or exit as the land is completely surrounded by single family homes. The entry point into this area is the intersection of Simon Ranch Road and Pavilion Dr. This is one of the most dangerous intersections because it is at the top of a rise coming from both north and south directions, has no stop sign, and is unlighted.

The Project is located in a very rural area. There are no businesses so everyone in the neighborhood has to drive to work, school, grocery store, etc. At a minimum, assuming that each condo only has one licensed driver, you will have at least 37 vehicles leaving in the morning and returning at night. More realistically, many, if not all, will have multiple drivers coming and going throughout the day. These condos are low value and will attract young couples and families where both adults will need to work. Thus, instead of 37 vehicles, there will be twice that number. This is significantly more traffic on a daily basis than a few weekend tennis matches and the occasional wedding banquet. The roads in North Tustin are narrow, winding, and unlit with many blind curves. There are no sidewalks for pedestrians. It is dangerous for joggers, dog walkers, bicyclists and parents with strollers to safely navigate the streets, especially Skyline, Beverly Glen, Pavilion and Simon Ranch Road.

This area of North Tustin has always been zoned for Single Family Residences. Lots are large and homes are expensive. Our home, like many others, is located on a large parcel of land. The length of our property is the same as a football field. We are by no means unique in size. This new project would squeeze several condos into this space,

thus changing the very nature of our community. It will affect home values, the peacefulness of our community and the safety of our neighborhood. This project makes no sense, other than to create income for a developer, and we asked that you deny the request to re-zone this peaceful community that we have lived in for over 40 years.

Sincerely,

Bob and Susan Roice

Canning, Kevin

From: Patrick Ross <pkross223@gmail.com>
Sent: Monday, May 25, 2020 8:46 AM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: North Tustin - Ranch Hills Planned Development (PA 18-0034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning,

Please be advised as a resident of North Tustin, our family believes this project should have a full environmental impact study. This will allow the neighbors and community to understand the complete impact of this dense housing project. We are particularly concerned regarding the increased traffic volume and loss of open space. Additionally, such dense tract housing is not consistent with the make up of our community and developments such as this will only encourage more unwanted projects of this nature to proceed.

Sincerely,

Patrick Ross
1462 Longmont Pl.
North Tustin, CA 92705

Canning, Kevin

From: Abdul Saquib <saquibal@hotmail.com>
Sent: Tuesday, June 2, 2020 11:13 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club Rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Canning, Kevin

From: John Scolaro <jscolaro56@yahoo.com>
Sent: Sunday, May 24, 2020 8:22 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin,

I read with interest the conceptual site plan and Proposed Mitigated Negative Declaration that pertains to the planned development on the Tustin Hills Racquet Club property. My family and I moved to this area just under two years ago and I am shocked that such a high density development plan would be considered for this area. We re-located to the North Tustin area because of the beauty and unique nature of the neighborhoods and believe that this will be seriously compromised by the creation of nearly 40 homes in a confined area in our backyard. First, the environmental impact of the build will be significant. Noise and air pollution will significantly increase during and after the build from construction equipment and increase in traffic around the area. Maintenance of road safety will be seriously compromised. As is, Browning and Skyline see a significant amount of traffic near houses with children. A large increase in traffic on either of these two streets during and after construction could potentially be disastrous. I am an orthopaedic trauma surgeon at UCI so I see road traffic accidents and pedestrian versus auto events too frequently and I would hate for even one event to occur in our neighborhood because more vehicles are winding around the neighborhood. Finally, this area is tremendously special to all those who reside here and know about it. The homes and lots are all very different, the views of the surrounding land and wildlife can be spectacular, the feeling of community is strong. I firmly believe that this development will compromise many of the reasons that so many original owners still reside in this area and negatively affect the entire community forever. I sincerely hope that anyone and everyone who closely looks at this plan will oppose it like our community and family do!

Sincerely,
John Scolaro and family
11772 Las Palmas Drive
North Tustin, CA 92705

Canning, Kevin

From: Damon Scott <ddscott89@gmail.com>
Sent: Sunday, May 31, 2020 4:58 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Mitigated Negative Declaration and Rezoning of the Tustin Hills Racquet Club (Ranch Hills Community Project PA 18-0034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am personally opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report (EIR) prior to the Orange County Supervisors consider its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing on the surrounding community. If this project is built it will cause increased traffic (both during construction and after), noise, light and greenhouse gas emissions. It will interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space and recreational facilities in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of

Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Our family of five has truly enjoyed spending quality time with friends and family over the years at the Tustin Hills Raquet Club. We are strongly in favor keeping the CURRENT zoning for this location as we live here for these types of assets that make Tustin a community, a unique place to live, and a place where we want to raise our family. Please contact me if you have any questions or would like more input.

Best regards,

Damon Scott, Local Tustin Resident

10901 Lake Court Road

Canning, Kevin

From: Bob Sellers <Bob_Sellers@Edwards.com>
Sent: Tuesday, May 26, 2020 4:48 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Please be informed that as a neighbor in the vicinity of the North Tustin Hill Racquet Club I am extremely opposed to the planned redevelopment given its inconsistency with the intended use of the existing property and the current private residences.

Respectfully,
Bob Sellers

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This message contains information which may be confidential and privileged. Unless you are the intended addressee (or authorized to receive for the intended addressee), you may not use, copy or disclose to anyone the message or any information contained in the message. If you have received the message in error, please advise the sender by reply and delete the message. To the extent contractual confidentiality obligations exist, this message and all information transmitted with it are designated "Confidential".

Canning, Kevin

From: joyshaikh@cox.net
Sent: Thursday, June 4, 2020 12:45 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: RE: FEAR AND CONCERN for Rezoning of Tustin Racquet Club property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To Kevin Canning,

I wish to express my heartfelt concern and fear of the rezoning request of our much loved Tustin Racquet Club property in North Tustin / Lemon Heights.

My concern for the builder not having passion for the neighborhood/our neighborhood by building too many home in such a small space is greedy, selfish, and lacking of character. He seems oblivious with no respect or concern for the beautiful surrounding neighborhood community and what it represents. The rezoning brings these concerns and fears to us:

*Traffic – The impact of this project will create hazardous neighborhood streets which are narrow, windy, without sidewalks and street lights. Residents living on or near “feeder” streets for commuters traveling from the freeways into the foothills (ie La Colina, Browning, Ranchwood, SE Skyline, Redhill) will be greatly impacted by the increased commuter traffic. As often as I walk , I will be fearful in my own neighborhood due to more traffic, construction and lack of safety. Families with children will certainly be affected and hesitant to allow outside play and activity. The neighborhood will become less desirable for young families I’m afraid.

*Evacuation concerns are raised if there is a fire, earthquake, etc as there is only one street to exit and it would be dangerous for those residing in the new construction as well as the existing residences.

*Rezoning to make this a high-density zone change will negatively impact our much valued North Tustin . Allowing a highly incompatible zone-change to multi-family R2 (5,000) will be 4 times the density of the surrounding community.

*Loss of views for neighboring Racquet Club homes and the negative financial impact of having likely paid a premium for such a location when purchasing homes.

*Traffic disruption on Simon Ranch Rd, SE Skyline and Browning Ave for up to 2 ½ years during major construction .

*Most importantly -The loss of this special community asset , Tustin Racquet Club, which has benefitted the community for decades and would be devastating. It is valuable, beautiful, full of nature and habitat to many animals and birds and a recreation space for the community. The destruction of this space would be a loss for the community and neighborhood. So many new residences would show such disregard for the beautiful North Tustin community and be a selfish, greedy gain for the builder at the expense of the existing homeowners .

Please reconsider rezoning!

Sincerely,

Joy Shaikh

1872 Las Brisas Dr

North Tustin, CA

Canning, Kevin

From: Alpaslan Sisman <alpaslan.sisman@gmail.com>
Sent: Thursday, May 28, 2020 1:24 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: North Tustin Racquet Club Rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Kevin Canning,

We as North Tustin residents are deeply saddened to hear the application on rezoning of the Tustin Racquet Club to a high-density housing project by the new buyer.

Paperwork submitted by the new owner/builder to the County reflects only one side of the story, and as we all know it will all look perfect on paper, legal and legitimate as per law permits them to do, there is no surprise on that.

But there is another side of the story which is, why current residents choose this beautiful and unique area in Orange County as their home, to have a life, have a family and raise their kids. I am not sure if you live close by or not, but I would like to invite you to go for a walk with me and my wife one evening, where we are walking through the parking lot of the Racquet Club every day for the past 7 years, that is correct every day for the last 7 years. It would be hard to describe the relaxing old charm of the entire surrounding community, which you can never feel/visualize by looking at the builder's application documents and pictures.

We moved to this location from an Irvine condominium community 7 years ago. Sellers were the original owners since 1976, raised 3 children in this house. Few reasons we choose this location because of its old-world charm, big lot homes and each one of them being different from the one next to it, and the most important reason is NOT a single high-density housing in the entire area. We know most of our neighbors, does not happen much in Condominiums. Not sure if you heard this before, this location is called the Beverly Hills of Orange County because of the unique looks.

Traffic study provided to you by the builder does not reflect the reality. As I mentioned earlier, we are walking through the club every day. We have hardly seen more than 20-25 cars at one time in the club parking lot, it only happens when there is an event/reception which is not often.

At this point we should ask the question to ourselves: do we want to be remembered as the folks who allowed this to happen and have the builder destroy the dreams of every household in this neighborhood for the single purpose "PROFIT" by building high density housing?

We are kindly asking you to consider the human aspect of this rezoning project, and do not allow it to happen as high-density housing.

We understand some day this may happen, there may not be a club house but at least we should not allow condominiums. Have the builders apply for a different project that fits to the current landscape, single family homes with lots anywhere ranging from 10,000-15,000 sqft and above. I am sure they will make great profit that way too, we as residents still need to deal with construction for 2+ years, at least no high-density housing.

We are surrounded by Condos everywhere in Orange County, let us protect this unique area as it is today, do not allow one builder to kill the dreams of hundreds of residents.

Kind Regards

Al Sisman

11551 Las Luces, North Tustin

949 - 836 7342 cell

Canning, Kevin

From: Rebecca Stabel <becky@ai-mgmt.com>
Sent: Thursday, June 4, 2020 10:15 AM
To: Canning, Kevin
Subject: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Rebecca Stabel

Sent from my iPhone

Canning, Kevin

From: Joy Stephens <joystephens@cox.net>
Sent: Friday, June 5, 2020 11:56 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Joy Stephens (Tustin resident for nearly 50 years)

Canning, Kevin

From: monica stocks <monicawidell@yahoo.com>
Sent: Thursday, June 4, 2020 3:46 PM
To: Canning, Kevin
Subject: Tustin Hills Racquet club (no rezoning)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Attn: Kevin Canning

Project: Ranch Hills Community File No 18-0034

Dear Kevin,

Since 1974 my wife and I have lived at 11751 Outlook Lane. Our community has 104 homes all located on half acre or 3/4 acre lots. This community is safe and peaceful. The Tustin Hills Racquet club has been a vital part of our community, I have been a member for many years. This project calls for jamming 37 high density, low value condos into a small parcel with limited ingress / egress. If you have 37 high density condos you have an average of 2.5 cars per condo this is equals 92 additional cars with only one exit - this would create a huge hazard to our community if an emergency were to occur; such as a fire with evacuation orders. A hydrologist should determine the acre feet of water needed to support this condo project, currently we are on a water rationing.

We strongly urge you to NOT support this re-zoning request for condominiums.

Sincerely,

John Green Monica Stocks
Commander retired
Los Angeles City Fire Dept.

Canning, Kevin

From: j sullivan <jmsully1964@outlook.com>
Sent: Thursday, June 4, 2020 7:43 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Sullivan Response to IS/MND No. PA-180034

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin Canning
County of Orange

Dear Mr. Canning,

Thank you for the opportunity to respond and comment on Initial Study Proposed Mitigated Negative Declaration (No. PA-180034) ("MND"). I am adamantly opposed to any zoning changes to the Tustin Hills Racquet Club property located at 11782 Simon Ranch Road, Santa Ana, CA 92705 (hereafter "THRC"). The zoning of this property has been in place for more than 50 years and any changes to the existing zoning will have significant and lasting detrimental impact on the North Tustin community.

Opposition to Rezoning THRC Property:

My wife Cathy and I live at 2192 Racquet Hill in Santa Ana, CA. Our property is adjacent to the THRC property. We purchased our home approximately 17 years ago in 2003. We made significant sacrifices 17 years ago to move to this current residence because of the larger lot sizes, quiet neighborhood and general maturity of the area. We moved because of North Tustin's unique character and its environment of less dense housing with single family residences on larger lots. We specifically purchased our home because it was adjacent to the open space of the Racquet Club. In purchasing our home, we relied upon the County of Orange's zoning of the area, with its large lot sizes and specifically the zoning of the THRC as agricultural/recreational. We were told even by developers that the THRC property adjacent to our home could not be redeveloped for housing. My neighboring homeowners have also similarly relied upon the County's zoning when purchasing their homes. The current zoning must be protected to preserve the unique character of the area, our property values and the amenities and recreational uses provided by the THRC property. THRC is one of the only remaining open space recreational areas in North Tustin. THRC serves the community at large not only as a Tennis Club but also as a recreational site that hosts both member and non-member tennis camps and clinics for both young and old. THRC also provides swim lessons to the community for member and non-members alike. The Developer, Ranch Hills Partners, LP's partners, principals and employees (hereinafter the "Developer") are not citizens of North Tustin and do not have a vested interest in our community except to maximize its profits by squeezing in as many homes as possible on the THRC property. The proposed project seeks to build high density housing (37 units in total) on small 5,000 sq. ft. lots. This is dramatically inconsistent with the contiguous surrounding residential houses which are predominantly (if not all) half acre lots.

The proposed project construction is expected to last well over two years and would eliminate several recreational uses and open space in our area which is already lacking. The project would also increase noise, dust and traffic and place a lot of strain on the surrounding community.

Building high density housing behind our home will also greatly reduce the quiet enjoyment of our home and property. It will also have a dramatic negative impact on the immediate and long-term value of our home.

There is nothing that justifies the changing of the existing THRC zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home. The THRC property is zoned for agricultural/recreational uses and the Developer and his investor group were aware of this when they purchased THRC. Furthermore, the Developer and Investor were made aware of the vast community opposition to any such rezoning prior to their purchase of the THRC property.

Opposition to the County's Adoption of the Mitigated Negative Declaration:

The MND shows many significant deficiencies in its analysis of the impacts on the environment and surrounding community of North Tustin from this proposed project. The MND glosses over many problem areas that a proper environmental evaluation would deem significant to the surrounding area and community. A proper evaluation of the environmental impact would reveal significant impacts in the following areas:

- Transportation/Traffic - the proposed project will undoubtedly increase traffic both during construction and after the project is complete. The traffic section of the MND mistakenly states that traffic will be decreased from the existing use of the property. There are numerous erroneous traffic assumptions in the MND including the existing traffic caused by the existing use of the tennis facilities as well as traffic caused by the existing use of the clubhouse which the MND refers to as "banquets".
- Land use and planning – The MND shows in exhibit the proposed land use is clearly incompatible with the surrounding community yet somehow it concludes that the proposed environmental impact is "less than significant". The fact that a zoning change is being requested is clear indication that there is a significant impact on land use.
- Noise - The MND underestimates the noise impacts associated with the proposed project both during the two plus year construction phase as well as any finished project.
- Animal Wildlife - The proposed project will undoubtedly interfere with the wildlife currently found in the area such as bald eagles, owls, hawks, coyotes, parrots and bats. These impacts are not appropriately addressed in the MND.
- Recreation - The proposed land use will eliminate one of the very few open spaces and recreational facilities in North Tustin. This recreational facility is used by both members and the general public. The MND somehow concludes that the impact is "less than significant impact" to the community.
- Fire and Safety- Building the proposed high-density housing would have a significant impact on emergency services access to this area during natural disasters such as fires or earthquakes, both of which are very prevalent in this area. The project would also eliminate a natural "fire break" in the area as well as eliminate a fire suppression staging area and emergency gathering area for residents. The MND incorrectly assesses the impact.

This rezoning application should be denied outright as it would destroy a valuable community asset and change the special nature and character of the adjacent neighborhoods and community of North Tustin. There is no reasonable justification for any such rezoning or justification for the significant negative impact any such proposed rezoning would have on the environment, community and North Tustin residents.

Respectfully submitted,
Jon Sullivan
2192 Racquet Hill
Santa Ana, CA 92705

Sent from [Outlook](#)

Canning, Kevin

From: Cathy Sullivan <jcsullivan@cox.net>
Sent: Friday, June 5, 2020 3:49 PM
To: Canning, Kevin
Cc: Cathy Sullivan; kirkwatilo@gmail.com; Jon Sullivan
Subject: Initial Study Proposed Mitigated Negative Declaration (No. PA-180034)

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Kevin Canning
County of Orange
Response to Initial Study Proposed Mitigated Negative Declaration (No. PA-180034)

Dear Mr. Canning,

I appreciate the opportunity to respond and comment on Initial Study Proposed Mitigated Negative Declaration (No. PA-180034) (“MND”). I want to start off by telling you and the County of Orange that I am adamantly opposed to any zoning changes to the Tustin Hills Racquet Club property located at 11782 Simon Ranch Road, Santa Ana, CA 92705 (hereafter “THRC”). The zoning of this property has been in place for more than 50 years and any changes to the existing zoning will have significant and lasting detrimental impact on the North Tustin community.

Opposition to Rezoning THRC Property:

My family and I live at 2192 Racquet Hill in Santa Ana, CA. Our property is next to the THRC property. We purchased our home in 2003 and have lived there 17 years. We made significant sacrifices to move to this home because of the larger lot sizes, quiet neighborhood and general maturity of the area. We moved to North Tustin because of its unique character and its environment of less dense housing with single family residences on larger lots. We specifically purchased our home because it was adjacent to the open space of the Racquet Club and have over the last 5 years invested an enormous amount of money into our home in improvements with the understanding that the Racquet Club is zoned to only be a racquet club and have relied on that fact in deciding to make our huge investment into our property. The original homeowners from whom we purchased the house paid a “lot premium” for our home’s location adjacent to the open space that is the THRC property and that premium was passed onto us when we purchased it.

In purchasing our home, we relied upon the County of Orange’s zoning of the area, with its large lot sizes and specifically the zoning of the THRC as agricultural/recreational. We were told even by developers that the THRC property

adjacent to our home could not be redeveloped for housing. The neighboring community has also similarly relied upon the County's zoning when they purchased their homes. The current zoning must be protected to preserve the unique character of the area, our property values and the amenities and recreational uses provided by the THRC property.

THRC is one of the only remaining open space recreational areas in North Tustin. THRC serves the community at large not only as a Tennis Club but also as a recreational site that hosts both member and non-member tennis camps and clinics for both young and old. THRC also provides swim lessons to the community for member and non-members alike.

The developer (Ranch Hills Partners) and primary investor (David Beachamp Family) are not citizens of North Tustin and do not have a vested interest in our community except to maximize their profits by forcing in as many homes as possible on the THRC property. The proposed project seeks to build high density housing (37 units in total) on small 5,000 sq. ft. lots. This is dramatically inconsistent with the contiguous surrounding residential houses which are predominantly (if not all) half acre lots. The proposed project construction is expected to last well over two years and would eliminate several recreational uses and open space in our area which is already lacking. The project would dramatically increase noise, dust and traffic and place a significant strain on the surrounding community. The finished project will also dramatically increase traffic, noise and cause life safety issues to increase.

Building high density housing on the THRC property will significantly reduce the quiet enjoyment of our home and property. It will also have a dramatic negative impact on the immediate and long-term value of our home.

There is absolutely nothing that justifies the changing of the existing THRC zoning that has been in place for more than 50 years. Homeowners in our community relied upon this zoning when we purchased our home. The THRC property is zoned for agricultural/recreational uses and the Developer and his investor group were well aware of this when they purchased THRC. The Developer and Investor were also made aware on multiple occasions of the vast community opposition to any such rezoning prior to their purchase of the THRC property.

Opposition to the County's Adoption of the Mitigated Negative Declaration:

The MND shows many significant deficiencies in its analysis of the impacts on the environment and surrounding community of North Tustin from this proposed project. The MND minimizes or dismisses the significant impact of many problem areas that a proper environmental evaluation would deem significant to the surrounding area and community. A proper evaluation of the environmental impact would reveal significant impacts in the following areas:

- Transportation/Traffic - the proposed development will increase traffic both during construction and after completion. The traffic section of the MND mistakenly states that traffic will be decreased from the existing use of the property. There are numerous erroneous traffic assumptions in the MND including the existing traffic caused by the existing use of the tennis facilities as well as traffic caused by the existing use of the clubhouse which the MND refers to as “banquets”. This is a private use tennis facility that is bound by a land use covenant. No banquets or gatherings should be occurring on the property other than those of tennis facility.
- Land use and planning – The MND shows in exhibit the proposed land use is clearly incompatible with the surrounding community yet somehow it concludes that the proposed environmental impact is "less than significant". The fact that a zoning change is being requested makes it obvious that there is a significant impact on land use.
- Noise - The MND underestimates the noise impacts associated with the proposed project both during the two plus year construction phase as well as the impact of any finished project.
- Animal Wildlife - The proposed project will undoubtedly interfere with the wildlife currently found in the area such as bald eagles, owls, hawks, coyotes, parrots and bats. These impacts are not appropriately addressed in the MND.
- Recreation - The proposed land use will eliminate one of the very few open spaces and recreational facilities in North Tustin. This recreational facility is used by both members and the general public for tennis and for swimming. The MND somehow and erroneously concludes that the impact is “less than significant impact” to the community.
- Fire and Life Safety- Building the proposed high-density housing would have a significant impact on emergency services access to this area during natural disasters such as fires or earthquakes, both of which are very prevalent in this area. The project would also eliminate a natural “fire break” that the THRC property currently creates in the area. The proposed project would also eliminate a fire suppression staging area for first responders and eliminate an emergency gathering area for residents. The MND incorrectly assesses these impacts.

This rezoning application should be denied outright as it would destroy a valuable community asset and change the special nature and character of the adjacent neighborhoods and community of North Tustin. It’s hard to understand and extremely odd how an “impartial” County Planner who is paid to represent the taxpaying citizens and residents of Orange County could propose such a rezoning as well as minimize the significance of the aforementioned environmental impacts of the project being proposed. In my opinion, any zoning change would constitute theft of property from

the current homeowners to the developer, with County officials being complicit. There is no reasonable justification for any rezoning of the THRC property and the impacts of any rezoning or project proposed herein would have significant negative impact on the environment, community and residents of North Tustin. In my opinion, any zoning change would constitute theft of property from the current homeowners to the developer, with County officials being complicit for property value decline and breach of contract as well as acting without good faith in protection of the current homeowners.

Respectfully,
Catherine Sullivan
2192 Racquet Hill
Santa Ana, CA 92705

Canning, Kevin

From: Lori Sullivan <loripsullivan1@gmail.com>
Sent: Sunday, May 31, 2020 3:01 PM
To: Canning, Kevin
Subject: Opposition to rezoning Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Allow us to introduce ourselves, we are Lori and Craig Sullivan and we live in North Tustin, CA. We are opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community. We have family in the Lake Forest area that have experienced zoning changes to their communities and have first hand account of the negative impact on the homeowners.

We are opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Like our family is experiencing in Lake Forest, streets surrounding condos and apartments are now overcrowded with parked cars due to multiple family members with cars that exceed the allowable spots within the complex. You can barely safely exit their street without straining to see past all of the parked cars lining the street. We think this would be severely problematic up and down Skyline and a true hazard.

Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the

community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Lori and Craig Sullivan

Canning, Kevin

From: Rob Templin <robtemplin@hotmail.com>
Sent: Wednesday, May 27, 2020 10:39 PM
To: Canning, Kevin
Subject: Tustin Racquet Club development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

I've sent very few requests like this over the years but, as local North Tustin resident for 5 decades, the possible development being considered for Tustin Racquet Club is wrong on so many levels. The area wasn't designed, and can't handle, a housing development like this. The area has been prone to wildfires over the years, and it's already a challenge getting the current residents evacuated in a safe manner when a disaster breaks out. We can't handle the increase in traffic safely - while maintaining the ambience of the neighborhood. And, finally, this development would eliminate a piece of culture that has been enjoyed by so many of us over the decades.

Please consider quality of life over the need of some to make a 'return on investment'.

Rob Templin

Canning, Kevin

From: Laura Thorne <laurat@sevengables.com>
Sent: Saturday, May 23, 2020 7:11 AM
To: Canning, Kevin; Kirkwatilo@gmail.com
Subject: Environmental report-current Racquet Club site

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To whom it may concern,

A full environmental study is needed to make clear the environmental consequences of replacing the club with high density housing. Thank you for your consideration.

Laura Thorne
Community Resident
(714) 420-5332

Canning, Kevin

From: Serge Tomassian <stomassian@ttilaw.com>
Sent: Tuesday, May 26, 2020 12:05 PM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com; Bill & Andrea Filbert; monalisat@cox.net
Subject: Lack of an Environmental Impact Report on Tustin Hills Community

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning:

In response to the suggestion that an Environmental Impact Study is not necessary before our Community (Red Hill Ridge Community/ HOA) loses its only tennis/pool recreational site/park area and rather allows an outside developer to come in and profit from high density housing with multiple Condominiums and a few Detached Single Family Residences, is clearly improper and violates clearly established County Residential Guidelines for proper and responsible planning, zoning and public safety. Access to our community is limited to a one two street (Simon Ranch Road), our homes have lots varying in size from ½ acre and up, water is scarce and such additional heavy traffic would endanger children, families and pets who regularly walk/jog along this limited and narrow road. Access for Fire Trucks, Medical Personnel and other life safety personnel would also be severely impacted. I understand that we are an unincorporated area and some builders believe they can come in exploit and profit at the expense of the community's safety and security but we expect responsible governmental personnel to not allow this to occur and not permit developers to compromise the security, safety and long term home investment of such a community.

This builder needs to be held accountable and to the same standards one would expect in any other community or city similarly situated.

We strongly oppose any such waiver or rezoning, the concept of high density housing in our already access limited community and will ensure that our community is protected from profit driven opportunists. We ask for your

assistance for responsible planning, zoning, and life safety issues in our community.

Regards, Serge Tomassian, 11771 Highview Drive, Santa Ana, 92705

SERGE TOMASSIAN | MANAGING PARTNER
TOMASSIAN, THROCKMORTON, INOUE & GRIGORIAN LLP
2601 MAIN STREET, SUITE 620
IRVINE, CALIFORNIA 92614
TEL: (949) 955-2280 | FAX: (949) 476-8081
E-MAIL: STOMASSIAN@TTILAW.COM
WEB: WWW.TTILAW.COM



Please note our new address effective March 1, 2020
2601 Main Street, Suite 620, Irvine, California 92614
Telephone and Facimile numbers will remain the same.

IRS CIRCULAR 230 DISCLOSURE: Pursuant to Internal Revenue Service Circular 230, only formal opinions satisfying specific requirements may be relied on for the purpose of avoiding certain penalties under the Internal Revenue Code. Any advice contained in this communication, including attachments, does not constitute a formal opinion satisfying such requirements. Accordingly, we must advise you that any such advice was not intended or written to be used, and cannot be used, by you or any other person as such an opinion for the purpose of (i) avoiding penalties imposed under the Internal Revenue Code or (ii) promoting, marketing or recommending to another party any matters addressed herein.

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distribution or copy of this message and/or attachments is strictly prohibited. If you have received this e-mail in error, please immediately notify us by telephone and permanently delete the original.

Canning, Kevin

From: Gilda Youdeem <gyoudeem@gmail.com>
Sent: Saturday, May 23, 2020 1:06 PM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: Racquet Club Environmental Study

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

I have been a resident of North Tustin for the last 26 years and live off of Browning Ave. which is already a thorough fare and relatively a busy street as residential streets go. For the County to say that there will be no environmental impact due to the high density development proposed is ***ludicrous!*** ***And in my opinion, an indication that someone has been well bribed by the developer to make that determination in favor of the development. Do they take us for idiots?***

Unfortunately, I believe that the County officials have been already bought and made up their mind about this project. Because, around the area ***where I live and walk everyday, I've been noticing the County or County contractor crews marking up the streets and doing surveying for the past few months...and every time you ask them what project they are doing this for, they are very evasive and do not give you a straight answer. As an example, why do you think that all-of-a-sudden the County decided to go through the expense of replacing the reservoir situated right behind the racquet club...perhaps to accommodate the project? I am not an engineer but any half intelligent person would know that the water pressure in this area will be impacted by this high density development! How about our sewer lines...are they designed to have this new load? What about the impact on our home values which thanks to some of the local realtors looking for quick sales and commission, are already stressed and never appreciated to the degree that the surrounding cities have?***

Shame on Supervisor Wagner if he allows this project to go through!

Canning, Kevin

From: Sandy Tweedt <sandytweedt@gmail.com>
Sent: Friday, May 29, 2020 2:40 PM
To: Canning, Kevin
Subject: PA180034 / VTTM 18119 – Ranch Hills Planned Development - Tustin Hills Racquet Club

Mr Canning,

I am a resident of North Tustin and live within a mile of the Tustin Hills Racquet Club. I am writing to inform you of our strong opposition to the proposed project. Our concerns include but are not limited to the following:

- This is an unprecedented zoning change in an area with minimum 20,000 square foot lot sizes.
- This proposal changes the density and will negatively impact home values.
- Traffic in the area has increased tremendously as the local schools have grown beyond their intended capacity. This new development will further exacerbate the problem.
- The nature of the proposed development will inevitably lead to more rentals in the area and therefore degrade the neighborhood.
- Tustin Hills Racquet Club offers a number of programs for youth in the area. Our daughter has participated in clinics and lessons for years. It is a safe place in our neighborhood for her to go and be active. The programs they have provide real value to the neighborhood.
- There is only one way in and out of the proposed development and the area. The road is narrow, steep and curvy with a blind spot at the entry point. The increased traffic will lead to more accidents and congestion. There are no sidewalks in the immediate neighborhood and pedestrians will be at greater risk. The traffic analysis in the proposal is flawed in that it assumes the tennis club is operating at full capacity every day. The club is rarely at full capacity and large events happen infrequently.

As residents of the area for over fifty years we hope that you take these concerns into consideration and will share them with the planning commission.

Thank you,

Erik and Sandra Tweedt
11986 Red Hill Avenue
North Tustin, CA 92705

Canning, Kevin

From: Julie Ann Ulcickas <4jau@cox.net>
Sent: Friday, June 5, 2020 3:54 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: I am OPPOSED TO ZONING CHANGES AT THRC!!!

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Julie Ann & Jim Ulcickas
North Tustin 92705

Canning, Kevin

From: Janet Valdivia <janetvaldivia@cox.net>
Sent: Wednesday, June 3, 2020 4:45 PM
To: Canning, Kevin
Subject: Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning

We are neighbors of the Racquet Club and have been members at the club at various times over the past 24 years that we have lived on Beverly Glen. All 3 of our children enjoyed attending summer camps at the club, and as a parent, it couldn't have been more rewarding. Our youngest son took swimming and tennis lessons at the club during elementary school, and his love of tennis developed. He played on Foothill High School's tennis team for 4 years with regular private coaching at the club. Our children are adults now, living away from home but hearing the children at the club while out on our daily walks brings back wonderful memories.

I can only imagine what a devastating loss it will be to the community. As residents, we were attracted to the area for the large lots, mature trees and gardens and proximity to the club was key in our decision to invest our hard earned monies.

Traffic has increased since we moved here in 1996, we definitely have to proceed with caution before entering the intersection of our street, Beverly Glen, Browning and Simon Ranch. As the neighborhood does not have sidewalks, we need to be alert when walking up Simon Ranch, especially in the late afternoon/early evening. Our early morning walks are the most pleasant but the thought of these being interrupted by construction traffic is saddening. Construction noise will affect us on Beverly Glen but no where near as much as the properties surrounding the club.

During the most recent wildfires in October 2017, it was literally impossible to exit our driveway due to traffic backed up all the way down Browning. It was even worse for our Simon Ranch neighbors who only had one way out. It is unfathomable to think what would have happened had the fire come over the hill.

As homeowners, we have worked very hard to be able to live in this wonderful neighborhood and maintain our property over the years, at great expense. We do not feel that a housing development of any sort belongs on the Racquet Club property. It will create an unnecessary increase in traffic, disruption in the serenity of our neighborhood, disruption of the views for which our neighborhood is well known and ultimately and most sadly, the loss in value of our homes.

Sincerely

Lino and Janet Valdivia

Canning, Kevin

From: Coach Henry <info@syntheticturfcoach.com>
Sent: Tuesday, June 2, 2020 11:48 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Rezoning of the tennis club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards

Henry & Anita van Antwerp
Orange residents

Canning, Kevin

From: Susan Vierregger <suevierregger@gmail.com>
Sent: Saturday, May 23, 2020 12:22 PM
To: Canning, Kevin
Subject: Environmental Impact Study is Necessary

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

We absolutely disagree with your MND. We believe an environmental impact study is necessary for the development of the Tustin Racquet Club.

Sincerely,
Henry E. and Susan H. Vierregger

Sent from my iPad

Canning, Kevin

From: An Vuong <anvuongddsmd@gmail.com>
Sent: Wednesday, June 3, 2020 12:29 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Tract 3883 homeowner opposition to Redevelopment of Tustin Hills Racquet Club
Attachments: Kevin Canning letter oppose Raquet Club Condo Plans.pdf

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi Kevin,

Attached is our letter opposing the plans to redevelop Tustin Hills Racquet Club property.

We reside at 2241 Pavillion Dr., Santa Ana, CA 92705 and will be directly negatively impacted by the proposed plans and we live in very close proximity to the Racquet Club.

Please read our letter and know that we strongly oppose this plan with the rest of our Tract 3883 Homeowners.

Best regards,
Dr. An Vuong & Dr. Jackie Nguyen
Homeowners

June 3, 2020

Dear Mr. Canning,

My family and I reside at 2241 Pavillion Drive, Santa Ana, CA 92705 and our backyard is in very close proximity to the Tustin Hills Racquet Club. We purchased our home in June of 2011 and spent over 2 years remodeling it to make it our dream home. We moved to North Tustin for its prestigious schools and for its quiet, peaceful, and incredibly beautiful neighborhoods. This safe and picturesque community would be the ideal place to raise our new and expanding family. We have two young children both attending Tustin Memorial Academy and we are dental professionals who enjoy the serenity of coming home to a quiet and peaceful neighborhood where we can walk around the neighborhood with our children safely and play in our large back yard in privacy and comfort. It is with absolute certainty that we strongly oppose the redevelopment plans of the Tustin Hills Racquet Club Property led by the investor group led by the David Beauchamp family and developer Peter Zehnder.

We can't fathom why a rezoning would be approved to build high density condominium residential housing on such a small plot of land where no such type of high density residential housing even exists within our immediate surrounding homes. What makes our neighborhood so special and prestigious is that our surrounding homes are very large and beautiful, each with its own unique character, look, and feel. The yards are very spacious to enjoy the outdoors while providing a quiet and relaxing space to find peace and tranquility. The incredible views that are neighborhood offers are also very lovely and add additional value to our homes.

The negative and unacceptable impact of high density residential condominium homes bring to our community are the increase in traffic, especially at the Browning and Simon Ranch 3-way stop, loss of views for neighboring homes, disruption on Simon Ranch, Southeast Skyline and Browning for up to 2.5 years during major construction, and increase in noise from new residents and new pets in the high density residential condominium homes.

Our children play in our yard and we can often hear the tennis coaches instructing their players at the Racquet Club. We know that with high density living, the noise pollution will be greatly increased and be amplified. There will be more pets in the condominiums and that will bring more barking and disturb our quiet community and disrupt our daily lives. The increase in traffic will make it unsafe for young children to ride their bikes and make it unsafe for many of our elderly homeowners to walk safely in our neighborhoods. The increase in traffic will also cause delays in our everyday life to get the kids to school on time and we would have to leave for work earlier to avoid the traffic. The increase in traffic will also pose a greater risk for any catastrophic event, such as fires, for our homeowners to evacuate in a safe and timely manner while allowing rescue vehicles and first responders in. This type of high density condominium residential homes that they intend to develop will surely negatively impact our community by losing all these special assets that our community currently enjoys and it will permanently alter the unique character of our neighborhood.

In closing, we want to stress that our community spirit is very strong and active here in North Tustin. We love being a part of this very special neighborhood and appreciate the beauty and peacefulness it brings into our lives. It is truly the gem of Orange County and one of the few communities where you can enjoy the luxury of living in large, upscale homes that offer spacious, private yards and are located in a great school district. We are surrounded by pleasant and friendly neighbors. It's a great community vibe and we treasure it dearly and have invested so much to be able to enjoy this special community. We would love to continue to enjoy it for many more years to come without seeing it lose its special charm and character.

Most sincerely,



An Vuong, DDS, MD
Jackie Nguyen, DDS
2241 Pavillion Dr., Santa Ana, CA 92705
Email: anvuongddsmd@gmail.com

Canning, Kevin

From: andywang. <andywang3@yahoo.com>
Sent: Wednesday, June 3, 2020 10:59 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Racquet Club Redevelopment

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin,

I am one of the homeowners whose property is directly impacted by the Racket Club (my backyard ends at their parking lot). I wanted to express my opposition to the proposed new development of the club. From a community standpoint, we are already very restricted with our narrow roads. We don't have many sidewalks (if any) but we have a lot of people who enjoy walking their dogs and riding bikes. Adding more homes (or condos) would only add to the congestion and make walking our streets a dangerous thing. The added noise would also be a huge negative impact. And, if there were to be an emergency, it would basically shut down our entire neighborhood.

Also, we purchased our home in order to live in an area with views and avoid the congestion of condos and high rise buildings. Since we are directly next to the club, a new building would definitely impede our current view and it would add so much noise that would come directly into our space.

This racket club has been there for so long and there's a reason why it was never re-zoned for residential. Adding more homes there is simply a sign of greed and does not take the community into any sort of consideration. We are participating in the groups that are opposing this and we hope that you will consider that no one in this community supports this development. It will bring zero benefits and only upset every one who currently lives here.

Thank you for your time.

andywang3@yahoo.com
(949)310-5283 (cell)
(877)472-7726 ext. 7934 (work toll-free)

Canning, Kevin

From: kirkwatilo@gmail.com
Sent: Thursday, June 4, 2020 4:21 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Ranch Hill Partners request for a mitigated negative declaration

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Good day Kevin. It should be pretty obvious to you that I take issue with a mitigated negative declaration for the project you are point person on for the County of Orange at the Tustin Racquet Club site. I live in tract 3883 and have a beneficial interest in preserving the covenant which runs with the land and will do whatever it takes to enforce that covenant on the new owner. Although this covenant is between two private parties, I believe case law will uphold the covenant and feel the County should not support the continuation of the project and at a staff level, stop the process at the Public Works level and not allow it to proceed to public hearings.

Sincerely,

Kirk Watilo
2331 Pavillion Drive
North Tustin CA 92705

P.S. I helped write the response you received from the Foothill Communities Association if you had not figured that out yet. Happy to talk at any time. 949-981-9205.

Canning, Kevin

From: Marci Maietta Weinberg <mcweinetta@yahoo.com>
Sent: Sunday, May 31, 2020 1:34 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Racquet Club re-development - JUST SAY NO

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

As a resident who lives near the Tustin Hills Racquet Club, I'm writing to express my grave concerns about the HIGH DENSITY redevelopment project being considered where the Racquet Club currently stands.

14 years ago, when our children were 5 and 3 years old, we moved from Lido Island to Tustin to get away from the traffic and congestion. Tustin was a haven with its tall trees, large properties, quiet nights and slower pace of life. We immediately settled into a calmer existence that afforded us more quality time with friends, family and neighbors. We joined the racquet club where our young children learned to swim and we met many local neighbors. As our children grew, they took tennis lessons at the club and just last night, our 19 year old son played a match with a friend there. Friends, family and acquaintances alike, regularly remark "we never knew this area was here. It's so special because of the large trees, open space and quiet".

The essence of why we moved to Tustin: open space, quiet and a slower pace, will be destroyed by this high density development. Moreover, it could spark a domino effect for other similar projects, which would result in a complete loss of the unique nature of this area. One development like this is one too many.

Removing the club and building homes that triple the density of this area will negatively effect the great sense of community the club and its open spaces provides, the traffic, emergency evacuation access and the beautiful views we enjoy while walking through the hills. Specifically, traffic on Simon Ranch, Browning, Southeast Skyline and Beverly Glen will increase. "The Curves", a section of Southeast Skyline, is already a dangerous place to drive. Add a 100 plus cars to that and we're in trouble.

We are here because of the wonderfully unique nature of this area. There are few places like this left in Orange County. If we allow this development, it will be the beginning of the end of this beautiful, quiet, neighborly existence we all moved here to enjoy.

Please DO NOT let this type of high density project change this special place.

Thank you for your time and consideration.

Marci Maietta Weinberg
12042 Theta Road
Santa Ana, CA 92705

Canning, Kevin

From: William Weinberg <bill@williamweinberg.com>
Sent: Sunday, May 24, 2020 3:23 PM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

I wanted to respond to the news of the release of the MND for the Raquet Club.

I grew up on Simon Ranch Road in the 1960's and now live two blocks away. I regularly walk the area and know it intimately. I belonged to the tennis club when it had 4 tennis courts, a swim team and three pools, a social club and a restaurant.

In the intervening years, tennis took root and sadly, the social and swimming aspects fell away. Nine more tennis courts were added and the former head tennis coach bought the club. Since then, he did almost nothing to improve the club, enhance its use and, consequently, membership fell to the point where it was sold to a developer with no roots here.

Thirty seven homes will devastate the feel and use of the community. The density of homes is roughly *three times* that of the surrounding neighborhood. People have lived in this area, moved away, come back and built (or rebuilt) existing homes and never have they changed the characteristics of the area because they understand it's appeal. Lemon Heights is a graceful and quiet testament to restraint in a world consumed by the idea of "more". Placing 37 homes in a six acre site will dramatically increase traffic all day long, seven days a week and remove a potentially valuable open space for physical exercise from the community.

Finally, I want to point out that the prior owner of the club did nothing to engage the community over the years and missed a giant opportunity in the process. This land should be redeveloped to engage the surround neighbors and reflect its true character, not merely serve as a profit center for a builder.

I am more than happy to talk about this with either of you should you wish.

Thank you,

Bill Weinberg
Theta Road.

Canning, Kevin

From: Tanya Weinheimer <tanya.lee.dubbs@gmail.com>
Sent: Monday, June 1, 2020 8:16 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Rezoning Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Tanya Weinheimer

Canning, Kevin

From: Patricia Wescombe <pattyjan@cox.net>
Sent: Friday, June 5, 2020 12:23 PM
To: Canning, Kevin
Cc: Kirkwatilo@gmail.com
Subject: Stop condo development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

I am writing as a concerned parent and grandparent of 13 grandchildren who live North Tustin. Please do not go forward with the development of the condos on the Tustin Racket Club. The high density of this project would be a detriment to all homeowners and families in the area.

I absolutely reject this project from going forward.

Patricia Wescombe
North Tustin resident for 35 years.

Thank you for helping to fight this.

Patricia j Wescombe.

Sent from my iPhone

Canning, Kevin

From: joyce.westerdahl@oracle.com
Sent: Friday, June 5, 2020 9:11 AM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Opposition to rezoning at Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

----- Forwarded Message -----

Subject: Opposition to rezoning at Tustin Hills Racquet Club and Request for EIR

Date: Sun, 31 May 2020 14:07:50 -0700

From: Ann Leahy Piper

To: britts6@aol.com

CC: teresamittman@cox.net, reenekantomer26@gmail.com, BDERAMO@socal.rr.com, lyann@advantageman.com, cct1997@ca.rr.com, hanlie.alberts@sbcglobal.net, vickyhare3@gmail.com, Joyce.Westerdahl@oracle.com, sdiaz@prologis.com, lmc1218@cox.net, tennisbum1441@yahoo.com, elizabeth@eemrick.com, acilani@gmail.com, gillimex2@gmail.com, dabiancaorange@gmail.com, atamayosmith@yahoo.com, georgina214@gmail.com, ahern30@yahoo.com, 2jensouter@gmail.com, Salonsage@sbcglobal.net, lisalee05@cox.net, asilee@aol.com, lisastein@aol.com, handash@aol.com, leeann@aquaticbalance.com, exjmx@gmail.com, Amanda@downeyplumbing.com, stasiavuono@gmail.com, C-rankin@att.net, sok@gamezonwheelz.com, abfilbert@mac.com, dlingde@gmail.com, Suzannebernardy@aol.com, SChiavatti@aol.com, lynnsmith05@gmail.com, joharnack@gmail.com, kristinschechter@hotmail.com, julie.hellmers@eslpwr.com, joanieeidenmuller1946@gmail.com, jillvp@hotmail.com, alankarenp@gmail.com, debdeljunco@gmail.com, hayley@thedobbinsfamily.net, mirwin911@hotmail.com, mkhuarte@cox.net, tanya.lee.dubbs@gmail.com, Kelly Huarte

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density

housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Joyce Westerdahl

Canning, Kevin

From: Maryanne Whitcomb <mjwoyster@msn.com>
Sent: Thursday, June 4, 2020 5:33 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Cc: Kelly Huarte; annlpper@gmail.com
Subject: Fw: Opposition to rezoning at Tustin Hills Racquet Club and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

We are opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, we are opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as **coyotes, hawks, owls, bats and even wild parrots**. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of

the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Maryanne Whitcomb mjwoyster@msn.com and Gerald L. Whitcomb
glw@pendevserv.com

A Personal Post Script:

Though we do not reside in Orange County, our daughter and son-in-law, Mark and Kelly Huarte, do, and have, for all of their 22 years of married life. Two of their three children played many hundreds of hours at the Tustin Hills Racket Club in their younger years. Eleven year old Matteo is currently highly ranked in the State of California, and recent Mater Dei High graduate, Jake, is slated to attend the West Point Military Academy in early July, where he will be playing on the WP Tennis Team. Tustin Hills served as an enjoyable, safe, and sound launching pad for their tennis experiences today - as a pre-teen and as a young adult.

We've no doubt that Matteo and Jake are just two of countless others that, if asked, would state that the Tustin Hills Racket Club was an extremely important part of their experience, while growing up in the Orange County community.

Thank you.

Mr. and Mrs. Gerald Whitcomb, Sun Valley, Idaho

Canning, Kevin

From: Ken Whittaker <1234kw1234@gmail.com>
Sent: Sunday, May 24, 2020 11:19 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: AGAINST condominium development on Tustin Hills Racquet Club property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Attention:

Mr. Kevin Canning
OCPW
Development Services

re:

PROJECT: Title: Ranch Hills Community; File No: PA 18-0034.

I am **against** condominium development on Tustin Hills Racquet Club property. This will negatively affect traffic, create problems with evacuation in the event of a fire, and result in the loss of this special community asset which will permanently alter the unique character of the neighborhood.

Sincerely,

Kenneth M. Whittaker, MD
11588 Plantero Dr.

North Tustin, CA. 92705

Canning, Kevin

From: Paul Williams <pwilliams49@hotmail.com>
Sent: Tuesday, June 2, 2020 12:07 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Save the Tustin Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (?THRC?) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

INCLUDE NAME

Canning, Kevin

From: kelly.williams@cox.net
Sent: Thursday, June 4, 2020 6:35 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Ranch Hills Partners, LP's Project and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

My family and I live on Racquet Hill and our home is across from the access walkway to THRC since 2004 . We purchased our home on Racquet Hill, because of the larger lot size and quiet neighborhood. We also preferred that this neighborhood was already built-out as it was significantly “developed” when the Racquet Hill streets were completed in 1976. A main consideration in our purchase was that our home was in close proximity to the THRC as the club provides open space, recreational opportunities and a sense of community. Our family is a member of the THRC and enjoys all that it offers both to its members and the local community. My husband plays in the tennis league several times a week. Losing the THRC would eliminate an integral open air/ community recreation area, which is sparse in the North Tustin community. Our use of the facility includes tennis, the pool and banquet facilities for school functions, meetings and weddings. THRC also serves these same functions for the community at large including tennis matches, tennis camps for children, family pool memberships, weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras/Quinceneros, school fundraisers and other functions, funerals and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community. Building high density housing behind our home would result in years of construction and noise and greatly reduce the enjoyment of our home as well as the short and long term property value of our home.

The Developer, Ranch Hills Partners, LP's (the “Developer”) partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer’s project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several

recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disingenuously claims he is building these condominiums to address a claimed need for housing for “active adults of 55 years and older” in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anecdotal needs for this type of housing in this area. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND) is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

- Increased Traffic
 - The Developer’s Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developers assumptions are in inaccurate and flawed for several reasons:
 - The tennis courts are rarely fully occupied.
 - The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
 - The banquet facility is not used ever days. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
 - Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

- The Developer’s artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:
 - Traffic volumes for the current club use is much lower than claimed by the Developer.
 - The residents of the proposed 37 condominiums will have at least 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
 - The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.
 - We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development’s residents will be required to park outside the Development on neighboring streets will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.
 - THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.
- The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.
- There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.
-
- Cumulative Negative Impacts:
 - The MND inaccurately states there would be “less than a significant impact” caused by cumulative construction projects in the North Tustin area. The MND is clearly out

of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than “spring of 2017” as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in “spring of 2017” illustrates the many flaws and inaccurate conclusions made in the current MND.

- The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.
- The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.
- High Density Housing Will Eliminate North Tustin’s Only Open Space And Limit Recreational Uses:

- North Tustin not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.
- Additionally the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic throughout the surrounding area rather than concentrating walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.
- The new development will also decrease the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will not have houses and roofs to look at rather than the more open space provided by the current use.
- Impact on Wildlife:
 - We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was built over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.
- Increased Strain on Local Resources and Safety Concerns:

- Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter's Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the adjacent neighborhood and North Tustin at large by allowing for spot rezoning for high density housing and increase traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values, but if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer's rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer's plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Respectfully submitted,

Kelly Williams
2211 Racquet Hill
North Tustin

Canning, Kevin

From: Sarah V Williams <alstonandsarah@mac.com>
Sent: Monday, June 1, 2020 9:39 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Sarah Williams

Canning, Kevin

From: swolfe34me@gmail.com
Sent: Monday, June 1, 2020 6:11 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Proposed Ranch Hills Community development

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Mr. Canning,

As a resident located in the neighborhood near the proposed Ranch Hills Community development I am writing to you to voice my strong opposition to this project.

The current use of the subject property (The Tustin Hills Racquet Club) has added immense value to the neighborhood and provided recreational opportunities to the community, something that is becoming increasingly rare. Not only does the proposed project grossly impact the aesthetic value of the area, it also will bring many negative impacts to the surrounding area, change the overall land use, and decrease the safety of the area residents.

Traffic will certainly be impacted in a negative way both in the short-term and long-term. Obviously a project of this size will require a significant construction effort which will translate to heavy equipment, daily truck traffic, increased wear and tear on the streets, and excessive added noise pollution. Construction would last for several years and significantly degrade the peace of the community. Once complete, this type of higher density housing would add an irreversible long-term increase in traffic at all hours of the day and night. The current neighborhood is zoned at a much lower density which provides for the quiet living environment. Additionally, such an increase in inhabitants living at the new location would provide a severe safety risk in the event of an emergency or mandatory evacuation. This safety issue is already a concern which would be amplified significantly by the higher density zoning.

Neighbors would also be negatively impacted by the change in views due to the proposed project. Residents chose to live in this neighborhood for the appealing aesthetic views, peace and quiet, and long time community relationships. The new proposed development does not fit this type of area and would forever change the established environment.

In the Negative Mitigated Declaration dated May 2020, there are countless additional negative impacts of the project. These include: Air quality, Biological Resources, Cultural/Scientific Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, Tribal Cultural Resources, Utilities and Service Systems, and Mandatory Findings of Significance. Furthermore, the proposed mitigation of these negative impacts fall far short for the amount of impact sustained.

In closing, I would like to share the immense loss this proposed development would incur on the existing special community asset. Our family has been an owner in this neighborhood since its inception (over 50 years), and we do not want to see the community be permanently altered by this ill advised and planned development. It is with great interest and strong conviction that I ask for this project to be rejected and dissolved.

Sincerely,

Steven and Sheri Wolfe
Neighborhood resident/owner

Canning, Kevin

From: Jeffrey R Yelland <jyellandcpa@gmail.com>
Sent: Tuesday, June 2, 2020 11:12 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Opposition to Zoning changes

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Kevin Canning: kevin.canning@ocpw.ocgov.com
and cc:
Kirk Watilo - kirkwatilo@gmail.com

Dear Mr. Canning,

My family & I have lived in this area of Orange County for over 50 years! I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful

consideration of the significant impacts on the community and its environment.
A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Jeff Yelland,
Certified Public Accountant

Canning, Kevin

From: George Youdeem <george@youdeem.com>
Sent: Monday, May 25, 2020 10:02 PM
To: Canning, Kevin
Subject: Racquet club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi,

I am a professional engineer who has lived in very close proximity to the club, on Browning, for the past 26 years. In my opinion, there are lots of environmental effects on our properties and our neighborhood, which can be categorized as followed. These are my opinion and must be checked and verified.

1. Our sewer system,
 - a. One might think the main pipelines have been sized for a low-density track, and adding high density will put additional load on these lines and might chock the system.
2. The power lines
 - . Same as the sewer the additional housing will affect the existing wire lines that might affect the lines and causes fires
3. The water line and water reservoir
 - . The county has already started the revision of our water reservoir and marked up the streets to tear them to bring water to the project. Are we going to experience low water pressure?
4. The Gas lines
 - . I don't think the gas lines have been designed for additional load imposed based on additional high-density houses.
5. Our street asphalt design
 - . The asphalt and road are designed based on the traffic capacity, who is going to check for that?
6. So, does this mean we could rezone our properties and build the same number of houses per acre with the same density that they are going to build?!!!!!!!
7. We have a lot of species of creatures living along with us in our neighborhood, such as wild coyotes, mountain lions, rabbits, scrolls, snakes. We need to see what other kinds of endangered species live in the racquet club property.
8. We have a lot of species of creatures living along with us in our neighborhood, such as wild coyotes, mountain lions, rabbits, scrolls, snakes. We need to see what other kinds of endangered species live in the racquet club property.

Refer to the picture above.

There are roughly 100 homes in the immediate vicinity of this project entering Salt air, and going around.

Adding 37 houses is roughly adding 50% more demand to existing utility services and street design.

It appears some fishy business is going on, who is getting paid off here... I want to know.

Please tell me how could I help.

George,



GEORGE YOUDEEM

HAFA ,SFR, BPO & PE

Real Estate and Building Consultant

DRE Lic. # 01205348

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Irvine, CA 92604

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Canning, Kevin

From: Wally Young <wyoung@pacbell.net>
Sent: Wednesday, June 3, 2020 12:10 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com; Andrea Young; Andrea Young
Subject: Re: Opposition to Rezoning of Tustin Hills Racquet Club and Request for Environmental Impact Report

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to ANY zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A

complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Wally & Andrea Young

Cowan Heights Residents

Canning, Kevin

From: Peter Youssef <peternadim@gmail.com>
Sent: Thursday, June 4, 2020 1:38 PM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Opposition to Ranch Hills Partners, LP's Project and Request for EIR

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

Please be advised I am vehemently opposed to **ANY** zoning changes at the Tustin Hills Racquet Club ("THRC") property. This zoning has been in place since the THRC was built in 1958 and changing the zoning would be catastrophic to the North Tustin community.

My family and I live on Simon Ranch Road and our home is located three lots away from THRC. We purchased this home in North Tustin in 2013 because of the larger lot size, quiet neighborhood and because the area was already built out and had been significantly "developed". We also purchased the home relying on the close proximity to the THRC because it provides open space, recreational opportunities and a sense of community. My family and I have been members of the Club since we moved in as I am an Avid Tennis player and my children have also started to take lessons with Tim Pawsat, the club's pro. If the zoning is changed this would require members to play for other teams in Anaheim, Yorba Linda or Irvine (as closest). Our use of the facility includes tennis, the pool and banquet facilities for school functions, meetings and weddings. THRC also serves these same functions for the community at large including tennis matches, tennis camps for children, family pool memberships, weddings, Bar Mitzvahs / Bat Mitzvahs, Quinceaneras/Quinceneros, school fundraisers and other functions, funerals and community gatherings. These events allow residents of North Tustin and surrounding cities, including Tustin, Santa Ana, Orange and Irvine to become friends, neighbors and a community. Building high density housing upstream from our home would result in years of construction and noise and greatly reduce the enjoyment of our home as well as the short and long term property value of our home. Additionally, it would create increased traffic on Simon Ranch road and create significant safety issues for the residents, many of which have young children.

Additionally as a physician, I fear the public health implications of building high density housing in our community as with the current COVID pandemic, and potential for future pandemics, increased population density has resulted in higher per capita cases due to the increased exposure. From a public relations standpoint this would be a nightmare for the developer and county if the media caught wind that high density housing was being placed in our community.

The Developer, Ranch Hills Partners, LP's (the "Developer") partners, principals and employees are not citizens of North Tustin and do not have a vested interest in our community except to make a profit. The Developer's project seeks to build high density housing of 37 condominium units on small 5,000 sq. ft. lots, which is inconstant with the contiguous surrounding residential houses, which consist of half acre lots (minimum). The construction (anticipated for over 2 years) and the high density housing will negatively impact our home and the entire area by eliminating several recreational uses and any open space in the area (which is already lacking), it will increase traffic and place a strain on resources for emergency management.

The Developer disengeniously claims he is building these condominiums to address a claimed need for housing for "active adults of 55 years and older" in the North Tustin area. This claimed justification for the change in zoning is a complete fabrication and is not supported by any studies or even anactodal needs for this type of housing in this area. Moreover, it does not justify changing the zoning that has been in place for generations and which homeowners, such as ourselves, relied upon when we purchased our home on Racquet Hill. Ironically, the proposed development consists of two story houses which are difficult for older adults to live in.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes here and the current proposed changes are inconsistent with the surrounding neighborhoods. However, the Developer should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. The current CEQA Initial Study Proposed Mitigated Negative Declaration (MND)is inaccurate and flawed. An Environmental Impact Report will show the following significant impacts of the proposed high density housing:

Increased Traffic:

The Developer's Proposed MND contains inaccurate data concerning current traffic and noise at the THRC. The Developer counts traffic into the THRC based on full capacity of the 11 and half tennis courts and banquet room facilities. The Developer assumes that all of the tennis courts are fully occupied for the entire time the Club is opened during the day. The Developer also assumes that the banquet facility is used everyday. This is simply not the case. There are cars coming into the parking lot at select times of the day but not continuously all day and all night, especially since THRC closes and its gate is closed and locked each evening. The Developer claims his Ranch Hill project will actually reduce the number of Average Daily Trips (ADT) into the Club to 349 ADTs, but this is based upon his inaccurate assumption that THRC generates 554 ADTs. The Developers assumptions are in inaccurate and flawed for several reasons:

(1) The tennis courts are rarely fully occupied.

- (2) The tennis courts are certainly not fully occupied throughout the day. Most of the day there is little to no activity at THRC.
- (3) The banquet facility is not used ever days. There are limited numbers of events at the banquet facility during the month and those are usually limited to weekend use.
- (4) Many users of THRC are local community members who walk and ride bicycles to the THRC and do not drive to it.

The Developer's artificial inflation of the ADTs generated by the current club use is laughable and easily dispelled by simply visiting the club during the day or by reviewing its records regarding the number of bookings it has had for its banquet facility. Given the gross exaggeration of the traffic assumptions used by the Developer regarding the current club uses calls into question the claimed ADTs that will be generated by the new proposed use of high density housing. As an adjacent property owner I know the current ADTs are not as high as the Developer claims and we are highly doubtful the ADTs will be reduced by the proposed high density housing. We believe the proposed new high density housing will increase traffic in the area for the following reasons:

- (1) Traffic volumes for the current club use is much lower than claimed by the Developer.
- (2) The residents of the proposed 37 condominiums will have at least 37 to 148 cars, assuming occupancy of 1 to 4 residents per household. (Note: the proposed units are 2 to 3 bedrooms with bonus rooms and home offices planned).
- (3) The development is planning for the condominium units to have 2 car garages, allow for 2 cars to be parked in the driveways and also for on street parking.
- (4) We are concerned that the high density project on its own will be unable to provide enough parking for all residents and their guests. Therefore, the Development's residents will be required to park outside the Development on neighboring streets will affect the aesthetics of the surrounding neighborhoods. This is currently not an issue because the Club has its own parking lot.
- (5) THRC closes at night and the parking lot gate is closed. The proposed development will be open 24 hours a day and will have vehicles coming and going at all hours.

The construction and high density housing also raise safety concerns for the children and adults in the area that ride bikes, walk and play. The streets surrounding the THRC do not have sidewalks. The increased traffic on these windy roads raise major safety concerns for all residents.

There are significant questions regarding the Developers traffic assumptions and the actual impact to the community. The Developer should be required to perform a traffic study and determine the actual ADTs generated by the current club use, so the severity of the new planned new use can be determined.

Cumulative Negative Impacts:

The MND inaccurately states there would be “less than a significant impact” caused by cumulative construction projects in the North Tustin area. The MND is clearly out of date and inaccurate. Currently, there is a significant construction project adjacent to the THRC at the Simon Ranch Reservoir and Booster Pump Station. This project just started in March of 2020, rather than “spring of 2017” as stated in the MND. The Simon Ranch Reservoir Booster Pump Station project is significant and occupies several properties immediately adjacent to THRC on Valhalla Drive and Outlook Lane, but also includes construction on Simon Ranch, Racquet Hill, Vista Mar and Via Rancho. The fact that the MND states the Simon Ranch Reservoir Project is supposed to start in “spring of 2017” illustrates the many flaws and inaccurate conclusions made in the current MND.

The Simon Ranch Reservoir and Booster Pump Station project generates significant and increased amount of noise, pollution and dust from trucks, vehicles and construction equipment and activities. The Simon Ranch Reservoir project is expected to last for another year and half through at least December 2021. As you, know this Simon Ranch Reservoir project is next to the THRC. Therefore, if the Ranch Hill Developer is granted the requested zoning change and its development project is commenced as proposed, there would be two major construction projects within approximately 30 yards of each other. Depending upon when the Ranch Hill development starts, this potentially subjects the surrounding area to 4 years of significant construction activity. This will have a major impact on noise, dust, pollution, and emissions of greenhouse gases, the full impact of which has not been the subject of a complete and thorough Environmental Impact study.

The Reservoir project has already significantly impacted the residents quiet enjoyment of their properties, we cannot imagine what will happen if the Ranch Hill Project is allowed to proceed. It will result in the inability to enjoy our homes and yards because of noise, dust and increased exhaust/emissions from equipment and vehicles. It also will impact our abilities to work from home because of loud construction equipment, demolition, use of “rock crushers” and construction of 37 condominium units in three phases over at least 2 years. Our business requires us to have a quiet and peaceful work environment in order to perform our work and conduct conference calls with colleagues and clients. These needs have been further highlighted by the fact that we have increased our work from home activities due to the current pandemic and we have had to endure the Simon Ranch Reservoir construction, which has just begun. We understand the need to maintain the established neighborhood and its infrastructure, but we should not be subjected to years and years of construction for two large construction projects, especially when the Ranch Hill Project is not consistent with the neighborhood and has not been required to undergo a complete Environmental Impact Study pursuant to CEQA. One neighborhood should not be required to endure this.

High Density Housing Will Eliminate North Tustin’s Only Open Space And Limit Recreational Uses:

North Tustin does not have any community parks or other recreational facilities. The THRC is the only open space/recreational facility in the area and it provides for a myriad of recreational uses which increases the overall physical and mental wellbeing of the community. The proposed Development will eliminate this important recreational center, which includes uses such as tennis, pickle ball, swimming, lawn activities, exercise gym and banquet facilities for events. Although the club is private, it is still accessible with different types of tennis memberships, summer pool memberships, kids camps, swimming lessons and social events which do not require membership. Moreover, membership at the club is open to any member of the public who would like to join.

Additional the proposed Development will limit pedestrian access between neighborhoods because it will eliminate the pedestrian access between Racquet Hill and Simon Ranch. This will cut one portion of the neighborhood off from the other and require people to drive to between the two areas. It will also eliminate very popular walking routes which currently allow the residents to walk a loop and spread pedestrian traffic through out the surrounding area rather than concentrating walkers on streets by creating a situation where you must walk in and out of the same street because there will no longer be a connecting path between the Simon Ranch side of THRC and the Racquet Hill side. The Development will eliminate a popular walking path which provides access for residents to walk and bike through this area of North Tustin.

The new development will also decrease the views and open green spaces which is wonderful for all residents and visitors who come to this area. For the homes immediately adjacent, we will not have houses and roofs to look at rather than the more open space provided by the current use.

Impact on Wildlife:

We do not believe the MND adequately addresses the true impact on the wildlife that the proposed change in use and construction would have. Although the THRC property is “developed,” it was build over 60 years ago and has remained substantially the same ever since. THRC provides a habitat for wildlife, including coyotes, hawks, owls, bats and even wild parrots which nest in its trees and use the THRC as hunting grounds and as a wildlife corridor. Just as THRC and its adjacent walking path is used by people, it is also used by wildlife to access the surrounding areas. This access and habitats will be eliminated by the new Development and we believe a more significant impact on local wildlife that should be the subject of a formal Environmental Impact Study.

Increased Strain on Local Resources and Safety Concerns:

Both during construction and after construction, this project will have a massive strain on the North Tustin area. There will be an increased noise (both during construction and thereafter), lights, green house gasses and water. Additionally, it will impact emergency management including Orange County Sheriff and Orange County Fire. It will eliminate an area that can be utilized by first responders as a staging area and/or relief center in time of emergency. It will also

increase congestion when evacuation of the area is necessary, such as was required during the wildfires that reached Peter's Canyon. Moreover, the increase traffic and vehicular traffic at all hours will create safety hazards for children and adult who play and walk in the surrounding streets which have no sidewalks.

The property should not be rezoned and redeveloped. This will destroy a valuable community asset, it will change the special nature of the the adjacent neighborhood and North Tustin at large by allowing for spot rezoning for high density housing and increase traffic both because of the addition of 37 housing units, but also because people will have to drive outside of North Tustin for the services currently provided by the THRC (e.g. community events, swimming, tennis, etc.). The rezoning application should be denied outright because of the significant impact on the surrounding homeowners and their property values, but if it is still being considered by the County, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. Thoughtful consideration of the Developer's rezoning request cannot be done without a complete and accurate Environmental Impact study and report.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost. The impact of the Developer's plan to build 37 condominiums is significant and must be thoroughly studied and considered before the Orange County Supervisors make any decisions to rezone the property.

Respectfully submitted,

Peter Youssef, MD
Sherry Youssef, MD
11871 Simon Ranch Road

Canning, Kevin

From: Behjat Zanjani <bzanjani@iemcm.com>
Sent: Sunday, May 24, 2020 12:36 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Petition Opposing the Redevelopment of Tustin Hills Racquet Club Property

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Good Afternoon Kevin, My name is Behjat Zanjani and I have leaved at 2091 Salt Air Dr., Santa Ana, CA for the past 17 years. We felt in love with the small custom home community at this neighborhood. We have been disturbed with the news of potential redevelopment of Tustin Hills Racquet Club property. I am writing this email to voice my strong objection to this potential redevelopment. Our neighborhood has only one ingress and egress rout in the event of a catastrophic event. This new redevelopment will extensively increase traffic in our neighborhood and further impact our ingress and egress route. The construction will also negatively impact the air quality during construction period. This neighborhood currently includes custom homes that add character to our area. Adding cookie-cutter homes will negatively impact the character and value of our homes.

I respectfully request voting against this new development that by no means blend in our unique community.

Regards,
Behjat Zanjani

Canning, Kevin

From: Anita Zantos <anita.zantos@gmail.com>
Sent: Saturday, May 23, 2020 11:00 AM
To: Canning, Kevin
Subject: Development in North Tustin

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Please require an Environmental report on the proposed condo complex that would replace the tennis club in North Tustin.

We feel strongly that this would place undesired negative repercussions to the surrounding neighbors and neighborhood. There is no good reason to allow a developer to change long standing zoning requirements for short term profits, then leave residents to deal with long term effects.

Do not turn a deaf ear to the current residents' communications in favor of a single developer.

Thank you

Anita
Sent from my iPhone

Canning, Kevin

From: Lindsay Aschtiani <laschtiani@gmail.com>
Sent: Friday, June 5, 2020 4:32 PM
To: Canning, Kevin
Subject: THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi Mr. Canning,

We are strongly against the developer's plans!! This will greatly increase the already overcrowded streets like Browning, La Colina, SE Skyline and Red Hill. As a long time resident of Red Hill Ridge (multiple generations) we would be very disappointed to see these development plans come to fruition. Please do what you can to stop this!

Lindsay

Canning, Kevin

From: Mike Bartle <mike@mbcoatings.com>
Sent: Friday, June 5, 2020 4:57 PM
To: Canning, Kevin
Subject: Response to the Racquet Club Rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Hi Kevin,

We're a long time local family who just recently moved into 12140 Skyline. I wanted to send a quick email sharing my feelings about the racquet club project.

We moved from another busier area of Tustin. Our main purpose for the move was the general quiet peacefulness that this area provides. We very much enjoy the small town almost rural feel here. We love seeing the large homes and rich landscaping. We take walks frequently that actually cuts through the Tennis Club property. As you know open space is hard to come by in OC these days. Our area is **a very special niche**. We lived in Irvine for a brief period when we were younger and very much disliked the dense population and heavy activity of that area.

We have 2 kids that regularly walk the dog, bicycle & walk to their friends houses along skyline between Browning & Redhill. We're already concerned about the amount of traffic there minimal as it may be. I feel the addition of homes is going to dramatically increase traffic through this already too narrow corridor.

The areas around here were not built for high density housing and the changing of zoning only sets a dangerous precedent for other predatory developers to use to further degrade our community.

Finally our kids are currently enrolled in Tennis lessons at the racquet club. It's definitely a luxury to have a place like this in the neighborhood and is something we have always valued in our community. We have attended many events there from school functions to fundraisers and would very much miss it.

I think the bottom line for me is this community has been established in a certain manner, we as members of this community value it as such and no one should not be allowed to change it for the sake of greed.

Thank you for your attention to this matter,

**Best Regards,
Mike**



Michael V. Bartle | President | CSLB#: 965623
MB Coatings, Inc.
571 N. Poplar Suite G
Orange, CA 92868
O: 714.941.8880 | C: 714.625.2118
E: Mike@mbcoatings.com

Canning, Kevin

From: Judy <judyb123@cox.net>
Sent: Friday, June 5, 2020 4:36 PM
To: Canning, Kevin
Subject: Tustin Racquet Club Rezoning

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

We do NOT want the Tustin Racquet Club parcel to be rezoned for high density residents. There are numerous safety, traffic and environmental concerns.

If there was a fire or major need for residents to get in or out there is little access. There is little access for those who live here now. There is only one way in and one way out.

It is a lovely area to walk. If you build for 2 1/2 years and then residents with all the services they require you will irreparably change this community.

If you lived here you would not want this to move forward. That is the test!!!!

Judith Brostoff

Sent from my iPad

Canning, Kevin

From: hayley thedobbinsfamily.net <hayley@thedobbinsfamily.net>
Sent: Monday, June 8, 2020 10:45 AM
To: Canning, Kevin; kirkwatilo@gmail.com
Subject: Letter opposing rezoning at THRC

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

I sent this Friday from my phone but it did not go through. I hope it can still be included.

Thanks

Hayley Dobbins

Dear Mr. Canning,

I am writing to express my strong opposition to the proposed zoning changes at the Tustin Hills Racquet Club ("THRC") property.

This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. The dynamic of the neighborhood will be drastically changed, decreasing property values and increasing traffic. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners.

However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Mike and Hayley Dobbins

Canning, Kevin

From: Jennifer Esser <jennifer@camelotwest.com>
Sent: Friday, June 5, 2020 4:52 PM
To: Canning, Kevin
Subject: Re: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

The hard copy letter I tried to deliver included this: (I added some of the same comment from my voice message):

the Red Hill Ridge location note

The Tustin Hills Racquet Club has
George Argyros was one of the
fun and great cocktail parties and
relationships were made toward
Argyros owns plenty of real estate

We have several prospects who
We have those ready and willing
entire community. These prospects

Thank you for responding. Appreciate it.

Jennifer

--

Jennifer Esser Principal/Broker At Camelot West Commercial Real Estate



Camelot West Commercial
The Allan Building
[14081 Yorba St. Ste 111](#)
[Tustin, CA 92780](#)

t. [714-731-7000](tel:714-731-7000)
e. jennifer@camelotwest.com
w. camelotwest.com

CA Bureau License No: 00833875

On Jun 5, 2020, at 4:16 PM, Canning, Kevin wrote:

This appears to be a second sending of that email you submitted on June 4.

If I am wrong and there is something different in this message, please inform me.

Kevin Canning | Contract Planner | OC Development Services / Planning

601 North Ross Street | Santa Ana, California 92701-4048

714.667.8847 | kevin.canning@ocpw.ocgov.com

Visit us online for permitting applications/project status at <https://myoceservices.ocgov.com/> or general questions and assistance call 714 667-8888

NOTICE: THE COUNTY SERVICE CENTER ON THE FIRST FLOOR WILL BE TEMPORARILY CLOSED TO THE PUBLIC UNTIL FURTHER NOTICE. Online services remain accessible 24/7.

ADDITIONALLY, DEVELOPMENT SERVICES/PLANNING STAFF WILL BE WORKING ON A ROTATING SCHEDULE IN OFFICES AND ALSO REMOTELY. RESPONSE TIMES MAY BE AFFECTED. YOUR PATIENCE IS APPRECIATED.

From: Jennifer Esser

Sent: Friday, June 5, 2020 4:07 PM

To: Canning, Kevin

Cc: kirkwatilo@gmail.com

Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

See attachment: I stopped by your office but could not deliver due to the shut down.

Dear Mr. Canning,

We are deeply put off by the previous owner of Tustin Hills Racquet club sale to the developer who intends to completely ignore the surrounding landscape of structures and diminish most of the reason people buy in Red Hill Ridge. The entire community has one ingress egress. It consists entirely of half acre parcels with various hillsides and views that we all individually maintain. There is extreme pride of ownership and respect for the neighbors views and privacy. This sale to this intended outcome would deviate completely from this and actually risk the very things inherent to Red Hill Ridge of North Tustin. We love change and progress Mr. Canning. I'm in Commercial Real Estate. I'm big on development and value add projects. But this is NOT a fit nor does it meet the proper criterion in so many ways I would be exhausted to write them all. This would devastate the safety, privacy, traffic, and be a total eyesore in the Red Hill Ridge location noted for half acre lots, Custom homes, and peace and quiet.

Please honor the oath of office and respect the local community of Red Hill Ridge and your supporters.

We highly value your position and know you are there for good reason. I would like to invite you to meet here at the site this weekend.

714-809-4793

Jennifer Esser and family

--

Jennifer Esser Principal/Broker At Camelot West Commercial Real Estate

Camelot West Commercial

The Allan Building

[14081 Yorba St. Ste 111](#)

[Tustin, CA 92780](#)

t. [714-731-7000](tel:714-731-7000)

e. jennifer@camelotwest.com

w. camelotwest.com

CA Bureau License No: 00833875

Canning, Kevin

From: Susan Huhndorf <handash@aol.com>
Sent: Monday, June 8, 2020 2:02 PM
To: Canning, Kevin
Subject: Zoning changes

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and greenhouse gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Susan Huhndorf
714-838-1718

Canning, Kevin

From: Kate Jensen <katejensen2325@gmail.com>
Sent: Monday, June 8, 2020 2:51 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: THRC Development Opposition Letter

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To whom it may concern,

My name is Kate Jensen, and I am a fellow member, tennis player and nearby resident to the Tustin Hills Racquet Club. It has come to my attention that some people want to tear it down and turn the club into condos. They want to tear down eleven beautiful tennis courts that countless matches and lessons have been played on. They want to tear down a swimming pool that tons of kids have been taught how to swim and families without pools have used. They want to tear down a clubhouse, ballroom and field where dozens of weddings and parties are held each year. I can't speak for everyone, but I know for a fact that there are kids and adults just like myself that would call the club their second home. I have been playing tennis at THRC for almost four years now, and along the way I have met amazing players and coaches there that have made me the player I am today. The Tustin Hills Racquet club has also played a huge part in my passion for tennis. There are so many courts there that many kids in the tennis program have been able to learn on. In USTA team tennis, the teams that come to play at THRC enjoy it. In my opinion, it is by far one of the nicest places I have competed. As you can see, the racquet club means so much to myself and so many others, and it would be a tragedy to tear it down.

Along that note, turning THRC into condos is not only horrible for the members and many tennis careers, but it also has a bad effect on our entire neighborhood. While the club is quite large, thirty-seven condos in its place is hard to imagine. The traffic that we will have! There is only one entrance/exit, so that will make the crowding that much worse. I don't know about you, but I don't want to live in this beautiful neighborhood if we will have to go through years of construction to only have to deal with traffic and noise coming from down the street. The tennis club is so unique to our area that I have never seen anything like it. I believe that replacing the club with condos will be a major deal breaker to living in this neighborhood.

I can think of countless reasons to not tear down the tennis club and only one reason why anyone would ever do this- money. As they say, "money is the root of all problems". But I can say with absolute certainty that it will not and never be worth it to tear down the incredible and unique tennis club and turn it into condos. Like I said, this place is so important to my neighbors, fellow members, tennis players and me. I seriously hope you reconsider this decision.

Sincerely,
Kate Jensen

Canning, Kevin

From: Deborah Kennard <ddkennard@sbcglobal.net>
Sent: Friday, June 5, 2020 7:05 PM
To: Canning, Kevin
Subject: NO to changing the zoning laws

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

I completely support the opposition to changing the zoning laws to allow housing to go where the current Tustin Hills Racquet Club stand. THRC is a gift to our community in what it offers and the green space we all enjoy. People bought very expensive homes in that area and did not in their wildest dreams think that their homes would now be surrounded by cookie cutter house. It would be extremely detrimental in the following areas:

- Traffic: Describe the impact a project of this nature will have on traffic and pedestrian safety on our neighborhood streets. Many of our neighborhood streets are narrow, windy, have no sidewalks or minimal streetlights. Also, residents living on or near "feeder" streets for commuters traveling from the freeways into the foothills (i.e. La Colina, Browning, Ranchwood, SE Skyline, Red Hill) will be greatly impacted by increased commuter traffic. Given the number of walkers, bikers, children playing, etc., more traffic will certainly create safety issues on our already busy streets.
- Zoning: Allowing a highly incompatible zone-change within an infill community will negatively impact the home values of the surrounding community. If the zone change to multi-family R2 (5,000) is approved, the development will be 4 times the density of the surrounding community. This is unprecedented in North Tustin. See the North Tustin zoning map further below for reference.
- Loss of views for neighboring Racquet Club homes and the negative financial impact of having likely paid a premium for such a location when purchasing homes.
- Traffic disruption on Simon Ranch Road, SE Skyline, and Browning Avenue for up to 2.5 years during major construction. Any rezoning of infill neighborhoods sets a dangerous precedence for all unincorporated areas and opens the door to more unwanted redevelopment and forever altering the unique character of North Tustin.

Thank you for listening to my concerns.

Deborah Kennard

Canning, Kevin

From: Melinda <mmkem@aol.com>
Sent: Friday, June 5, 2020 6:21 PM
To: Canning, Kevin
Subject: Tustin Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To the Orange County Planning Commissioners and Board of Supervisors,

As residents of Tustin, I am writing to express opposition to the proposed Ranch Hills Community development project.

North Tustin is a uniquely special community with a distinct blend of rural and suburban character. We moved to this community 31 years ago because of its small-town feel. Our home is located about 1 1/2 miles from the project site. Our general neighborhood will be affected and impacted in the following ways:

Traffic:

Although the MND traffic study suggests a lower traffic count as a result of this development, we expect the actual impacts to be significantly different. Traffic generated by the Tustin Racquet Club is minimal with no real peak times. Traffic generated by households proposed by this project will likely result in peak traffic times for work and school related traffic. Red Hill Elementary is the current elementary school assigned to the homes in this area and is not within walking distance of the project site. School age children will need to be driven to and from the school. Traffic on Skyline will be severely impacted not only by morning and evening commuter traffic but especially during school drop off and pick up times. In addition, the residential streets adjacent to the proposed development do not have sidewalks or street lights. Pedestrians frequently walk and exercise their dogs along those streets. Increased traffic will be dangerous to area residents who enjoy these peaceful and safe neighborhood strolls.

Density/Property Values:

The proposed project of 37 units on less than 6 acres conflicts with the character of the adjacent residential area and is not consistent with existing zoning. Existing zoning in this area is for single family homes on estates of 20,000 sq ft or more. The proposed project homesites appear to be 5,000 sq ft or less and are inappropriate for this site. We were drawn to Tustin due to the large lots and commonly available single level homes. The density of this project is not consistent with North Tustin, and is more appropriate for newer planned developments in Tustin and Irvine. While the MND suggests these homes would provide an option for residents who wish to stay in the area, the project lacks the character that many are drawn to when they seek out North Tustin. In addition, the claim that the downstairs master and office configuration would appeal to those desiring single level living, does not make sense, as much of the area is currently single level homes already. The proposed Ranch Hills Community is not consistent with what people seek when they buy in North Tustin. In addition, it will reduce the property values of adjacent homes due to the density, traffic and inconsistency of neighborhood aesthetics brought about by this project.

Recreational Impacts:

The large lot sizes of North Tustin homes provide for private areas for neighborhood children to play in their own yards. Area parks are not relied upon for recreational use since most properties are large enough for children to play in their own yards, and many feature outdoor living spaces perfect for social gatherings. Children's birthday parties and other social gatherings are often hosted in resident's homes and backyards. The proposed project does not allow recreational space for residents of that development to enjoy. Areas where projects this dense are most appropriate are those with neighborhood parks within walking distance. Area parks that could be used by this development are more than 2 miles away, requiring access by car. Meeting the recreational needs of the proposed development will be a challenge in an area where parks for children to play or where social gatherings can be held are not close by and will create additional traffic impacts not accounted for in the MND.

Lastly, the Tustin Racquet Club provides a recreational amenity that will be impossible to replace. The tennis courts, pools and banquet facilities have co-existed in this residential neighborhood since 1958 and have become a cherished community asset. The impact of the loss of the Tustin Racquet Club will be felt by countless Tustin residents who desire to recreate and gather within their own community.

In conclusion, we urge the Orange County Planning Commission and Board of Supervisors not to approve the proposed Ranch Hills Community Project. It is not consistent with the density and character of North Tustin and will be a significant detriment to our neighborhood.

Sincerely,
Melinda Manahan
12612 Kenwood Ln.
Tustin, CA 92780

Canning, Kevin

From: Anne McDowell <gzanne2001@yahoo.com>
Sent: Friday, June 5, 2020 4:39 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: Tustin Hills Racquet Club

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

To: Mr. Canning:

My family and I are residents of North Tustin, having moved to the area over 7 years ago while our son was a baby. We chose to live in North Tustin for the space and uniqueness of the properties. It is rare in Orange County (I grew up in Irvine) to find neighborhoods where unique and personal style has been accommodated – even promoted.

Nearly three years ago, we moved from a neighborhood near Foothill High School to Salt Air Drive. We chose Salt Air because the lots are spacious, as well as for the good schools. The Tustin Hills Racquet Club was also a draw offering a pool and tennis (camps) nearby. We have used the pool and frequently walk through the THRC as part of a walk through our neighborhood.

We believe that rezoning the club to allow for high density housing would be a mistake and would significantly impact the surrounding areas in a negative way. Our primary concerns are traffic: both during the construction phase and afterwards; the loss of the use of the THRC in the community; and the change to the feel of the neighborhood – which may also impact property values.

It would be very sad to see a long-standing part of the community destroyed to create more cookie-cutter Orange County homes, rather than preserving what makes this community unique and special.

We ask that the request to rezone the THRC be denied.

Anne McDowell

2131 Salt Air Drive

Canning, Kevin

From: Lilly Mettler <lillysings@cox.net>
Sent: Friday, June 5, 2020 4:56 PM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com
Subject: ZONING CHANGE AT TUSTIN HILLS RACQUET CLUB

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,

Lilly Mettler

Irvine, California

Canning, Kevin

From: sebrina okeefe <tkts4u@cox.net>
Sent: Sunday, June 7, 2020 6:58 PM
To: Canning, Kevin
Subject: kirkwatilo@gmail.com

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

I am opposed to **ANY** zoning changes at the Tustin Hills Racquet Club (“THRC”) property. This zoning has been in place for decades and changing the zoning would be catastrophic to the North Tustin community.

First and foremost, I am opposed to any change in the zoning because the surrounding community has relied on the current zoning when purchasing their homes and the current proposed changes are inconsistent with the surrounding neighborhoods. Moreover, the Developer, Ranch Hills Partners, LP, should be required to conduct an Environment Impact Report prior to the Orange County Supervisors considering its request to change the zoning. An Environmental Impact Report will show significant impacts of the proposed high density housing. If this project is built it will cause increased traffic (both during construction and after), noise, light and green house gas emissions. It will also interfere in the wildlife currently found in the area such as coyotes, hawks, owls, bats and even wild parrots. It will also cause an increase strain on local emergency services. Further, it will eliminate the only open space in North Tustin, California.

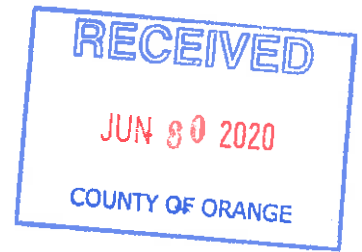
The rezoning application should be denied outright as it sets a dangerous precedent for other spot rezoning in the County of Orange and because of the significant impact on the surrounding homeowners. However, if it is still being considered by the County of Orange, it should not be allowed without thoughtful consideration of the significant impacts on the community and its environment. A complete and accurate Environmental Impact study and report is required.

This important community asset has been in use for over 60 years and cannot be replaced once it is lost.

Best regards,
Sebrina O’Keefe
Lemon Heights Resident

May 31, 2020

OC Public Works, Development Services/Planning
601 North Ross Street
Santa Ana, CA 92701
Attn: Kevin Canning



Project: Ranch Hills Community File No. 18-0034

Dear Kevin,

Since 1995, my wife and I have lived at 11882 Outlook Lane which overlooks the parking lot and tennis club. Our community has 104 homes all located on half acre lots. This community is safe and peaceful. The Tustin Hills Racquet Club has been a vital part of the community and lends to the active character of our neighborhood. When we originally bought into the neighborhood, it was disclosed that a Covenant was in place which identified the club's usage as an open/recreational space. It was a part of why we bought into the neighborhood.

This project calls for jamming 37 high density, low valued condos into a small parcel with limited ingress/egress. If this re-zoning is approved, it will significantly impact the community's environment, our personal health & safety, and permanently alter the neighborhood's character. Also, re-zoning for high density, low value condos will affect our home values and our ability to re-sell our homes.

The site has only one way in/out. This entryway is very narrow and barely allows for two small vehicles to pass at the same time. Caution is always needed. Further, the site is land-locked by existing homes, so there is no way to provide additional escape routes. If there were to be an emergency and first responder vehicles were needed, it would be a challenge at best.


The entryway is at a blindspot in the street and there are no sidewalks or street lights. Many residents walk their pets, and children are in the area on bikes or scooters. Daily introducing more cars than usual to this area is treacherous and unsafe.

The world has dramatically changed since this re-zoning effort began. We are living through a pandemic and will have a “new normal” in the post-pandemic reality. Jamming high density condos into a well-established neighborhood that respects social distancing and healthy choices is irresponsible and greed driven.

Finally, we cannot stress how “out of sync” this project is with the rest of the neighborhood. High density, low value condos placed in our neighborhood will clearly impact our home values. Ask yourself, how many people would want to live in a secluded, peaceful, low density community which is next to a high density condo complex. Not many.

We strongly urge you to not support this re-zoning request for condominiums.

Sincerely,


Earl Beauvais


Suzanne Beauvais

Canning, Kevin

From: Brian Garfield <brian.garfield5@gmail.com>
Sent: Monday, June 15, 2020 11:47 AM
To: Canning, Kevin
Cc: kirkwatilo@gmail.com

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Dear Mr. Canning,

As a resident and homeowner in North Tustin, I am extremely disappointed to hear that the Tustin Hills Racquet Club is at risk of closing. The club has been a staple of the neighborhood for so long and is truly an asset of the community. One of the main reasons my family and I moved to this neighborhood was because of the unique character of the area. Tustin Hills Racquet Club gives so much to the residents of this community, it would be an absolute shame if it were gone.

On top of losing a community asset, the increased traffic, disruption and congestion to the area would have a lasting negative impact. I ask that the County of Orange keep the Tustin Hills Racquet Club property as a recreational facility permanently.

If there are any questions or concerns, I can be reached at the contact information below.

Kind regards,
Brian Garfield

1822 Beverly Glen Drive
Santa Ana, CA 92705

408-887-4006

Fwd: Red Hill Ridge

Susan Adams <susanadams412@yahoo.com>

Sat 6/13/2020 6:53 PM

To: Shannon, Kevin <Kevin.Shannon@ocpw.ocgov.com>;

Attention: This email originated from outside the County of Orange. Use caution when opening attachments or links.

Sent from my iPhone

Begin forwarded message:

From: Susan Adams <susanadams412@yahoo.com>
Date: June 13, 2020 at 6:52:06 PM PDT
To: kevin.canning@ocpw.ocgov.com
Subject: Fwd: Red Hill Ridge

Sent from my iPhone

Begin forwarded message:

From: Susan Adams <susanadams412@yahoo.com>
Date: June 13, 2020 at 6:49:54 PM PDT
To: kirkwatilo@gmail.com
Subject: Red Hill Ridge

We have a lot of seniors living up here and on any given day, my husband included, could need to call 911 for an emergency transport to a hospital. These huge trucks are blocking our roads and we can't get by them. When a real emergency happens up here and someone doesn't make it to the hospital on time, that would be a horrific situation. Do you really wish to make our neighborhood so hard to get out of and take this kind of chance?

Sent from my iPhone

Appendix C

Air Quality and Greenhouse Gas Emissions Calculations

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Ranch Hills Planned Development
Orange County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	80.51	1000sqft	1.85	80,512.00	0
Recreational Swimming Pool	1.10	1000sqft	0.03	1,100.00	0
Condo/Townhouse	34.00	Dwelling Unit	2.13	85,000.00	97
Single Family Housing	3.00	Dwelling Unit	0.97	7,500.00	9

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - .
- Construction Phase - ..
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment - .
- Off-road Equipment -

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- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Demolition - .
- Grading - .
- Architectural Coating - .
- Vehicle Trips - .
- Construction Off-road Equipment Mitigation -
- Waste Mitigation - .
- Off-road Equipment - .
- Off-road Equipment -
- Woodstoves - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	870.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	870.00	0.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00

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tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	230.00	156.00
tblConstructionPhase	NumDays	230.00	158.00
tblConstructionPhase	NumDays	230.00	158.00
tblConstructionPhase	NumDays	20.00	26.00
tblConstructionPhase	NumDays	8.00	79.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	5.00	26.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblLandUse	LandUseSquareFeet	80,510.00	80,512.00
tblLandUse	LandUseSquareFeet	34,000.00	85,000.00
tblLandUse	LandUseSquareFeet	5,400.00	7,500.00

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1038	1.0718	0.8058	1.6400e-003	0.3304	0.0491	0.3795	0.1439	0.0453	0.1892	0.0000	145.6113	145.6113	0.0413	1.6700e-003	147.1398
2023	0.3590	2.2215	2.5946	4.9900e-003	0.2184	0.1048	0.3232	0.0739	0.0983	0.1722	0.0000	440.4820	440.4820	0.0884	6.9000e-003	444.7486
2024	0.4034	1.7019	2.1916	4.2400e-003	0.0905	0.0748	0.1653	0.0243	0.0703	0.0946	0.0000	374.3413	374.3413	0.0706	6.2700e-003	377.9762
Maximum	0.4034	2.2215	2.5946	4.9900e-003	0.3304	0.1048	0.3795	0.1439	0.0983	0.1892	0.0000	440.4820	440.4820	0.0884	6.9000e-003	444.7486

Mitigated Construction

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1038	1.0718	0.8058	1.6400e-003	0.1352	0.0491	0.1842	0.0578	0.0453	0.1031	0.0000	145.6112	145.6112	0.0413	1.6700e-003	147.1397
2023	0.3590	2.2215	2.5946	4.9900e-003	0.1451	0.1048	0.2499	0.0449	0.0983	0.1432	0.0000	440.4816	440.4816	0.0884	6.9000e-003	444.7481
2024	0.4034	1.7019	2.1916	4.2400e-003	0.0905	0.0748	0.1653	0.0243	0.0703	0.0946	0.0000	374.3409	374.3409	0.0706	6.2700e-003	377.9759
Maximum	0.4034	2.2215	2.5946	4.9900e-003	0.1451	0.1048	0.2499	0.0578	0.0983	0.1432	0.0000	440.4816	440.4816	0.0884	6.9000e-003	444.7481

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	42.01	0.00	30.94	47.54	0.00	25.23	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2022	11-30-2022	0.8617	0.8617
2	12-1-2022	2-28-2023	0.6733	0.6733
3	3-1-2023	5-31-2023	0.6650	0.6650
4	6-1-2023	8-31-2023	0.6643	0.6643
5	9-1-2023	11-30-2023	0.6602	0.6602
6	12-1-2023	2-29-2024	0.6317	0.6317
7	3-1-2024	5-31-2024	0.6285	0.6285
8	6-1-2024	8-31-2024	0.6223	0.6223
9	9-1-2024	9-30-2024	0.2029	0.2029
		Highest	0.8617	0.8617

2.2 Overall Operational
Unmitigated Operational

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4922	0.0122	0.5043	2.5000e-004		0.0190	0.0190		0.0190	0.0190	1.4539	8.1776	9.6316	7.5000e-004	2.7000e-004	9.7298
Energy	3.4100e-003	0.0292	0.0124	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	67.0700	67.0700	3.4600e-003	9.6000e-004	67.4425
Mobile	0.1323	0.1506	1.3743	3.2100e-003	0.3550	2.2100e-003	0.3572	0.0948	2.0500e-003	0.0968	0.0000	301.4533	301.4533	0.0180	0.0124	305.6080
Waste						0.0000	0.0000		0.0000	0.0000	5.1966	0.0000	5.1966	0.3071	0.0000	12.8743
Water						0.0000	0.0000		0.0000	0.0000	0.7854	8.7901	9.5755	0.0814	1.9900e-003	12.2053
Total	0.6279	0.1920	1.8910	3.6500e-003	0.3550	0.0235	0.3785	0.0948	0.0234	0.1181	7.4360	385.4909	392.9269	0.4107	0.0157	407.8598

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4922	0.0122	0.5043	2.5000e-004		0.0190	0.0190		0.0190	0.0190	1.4539	8.1776	9.6316	7.5000e-004	2.7000e-004	9.7298
Energy	3.4100e-003	0.0292	0.0124	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	67.0700	67.0700	3.4600e-003	9.6000e-004	67.4425
Mobile	0.1323	0.1506	1.3743	3.2100e-003	0.3550	2.2100e-003	0.3572	0.0948	2.0500e-003	0.0968	0.0000	301.4533	301.4533	0.0180	0.0124	305.6080
Waste						0.0000	0.0000		0.0000	0.0000	2.5983	0.0000	2.5983	0.1536	0.0000	6.4371

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Water						0.0000	0.0000		0.0000	0.0000	0.7854	8.7901	9.5755	0.0814	1.9900e-003	12.2053
Total	0.6279	0.1920	1.8910	3.6500e-003	0.3550	0.0235	0.3785	0.0948	0.0234	0.1181	4.8377	385.4909	390.3286	0.2572	0.0157	401.4227

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.94	0.00	0.66	37.39	0.00	1.58

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2022	9/30/2022	6	26	
2	P1 Site Preparation	Site Preparation	10/1/2022	10/31/2022	6	26	
3	P1 Grading	Grading	11/1/2022	1/31/2023	6	79	
4	P1 Trenching	Trenching	2/1/2023	2/28/2023	6	24	
5	P1 Building Construction	Building Construction	3/1/2023	8/31/2023	6	158	
6	P1 Paving	Paving	9/1/2023	9/11/2023	6	9	
7	P1 Architectural Coating	Architectural Coating	9/12/2023	9/21/2023	6	9	
8	P2 Building Construction	Building Construction	9/22/2023	3/23/2024	6	158	
9	P2 Paving	Paving	3/24/2024	4/3/2024	6	9	
10	P2 Architectural Coating	Architectural Coating	4/4/2024	4/13/2024	6	9	
11	P3 Building Construction	Building Construction	4/14/2024	10/12/2024	6	156	
12	P3 Paving	Paving	10/14/2024	10/23/2024	6	9	
13	P3 Architectural Coating	Architectural Coating	10/24/2024	11/2/2024	6	9	

Acres of Grading (Site Preparation Phase): 13

Acres of Grading (Grading Phase): 79

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Acres of Paving: 1.85

Residential Indoor: 62,438; Residential Outdoor: 20,813; Non-Residential Indoor: 870; Non-Residential Outdoor: 290; Striped Parking Area: 1,610

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
P1 Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
P1 Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
P1 Grading	Excavators	1	8.00	158	0.38
P1 Grading	Graders	1	8.00	187	0.41
P1 Grading	Rubber Tired Dozers	1	8.00	247	0.40
P1 Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
P1 Trenching	Excavators	1	8.00	158	0.38
P1 Trenching	Trenchers	2	8.00	78	0.50
P1 Building Construction	Cranes	1	7.00	231	0.29
P1 Building Construction	Forklifts	3	8.00	89	0.20
P1 Building Construction	Generator Sets	1	8.00	84	0.74
P1 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P1 Building Construction	Welders	1	8.00	46	0.45
P1 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P1 Paving	Pavers	1	8.00	130	0.42
P1 Paving	Paving Equipment	2	6.00	132	0.36
P1 Paving	Rollers	2	6.00	80	0.38
P1 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P1 Architectural Coating	Air Compressors	1	6.00	78	0.48
P2 Building Construction	Cranes	1	7.00	231	0.29

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P2 Building Construction	Forklifts	3	8.00	89	0.20
P2 Building Construction	Generator Sets	1	8.00	84	0.74
P2 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P2 Building Construction	Welders	1	8.00	46	0.45
P2 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P2 Paving	Pavers	1	8.00	130	0.42
P2 Paving	Paving Equipment	2	6.00	132	0.36
P2 Paving	Rollers	2	6.00	80	0.38
P2 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P2 Architectural Coating	Air Compressors	1	6.00	78	0.48
P3 Building Construction	Cranes	1	7.00	231	0.29
P3 Building Construction	Forklifts	3	8.00	89	0.20
P3 Building Construction	Generator Sets	1	8.00	84	0.74
P3 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P3 Building Construction	Welders	1	8.00	46	0.45
P3 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P3 Paving	Pavers	1	8.00	130	0.42
P3 Paving	Paving Equipment	2	6.00	132	0.36
P3 Paving	Rollers	2	6.00	80	0.38
P3 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P3 Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	309.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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P1 Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0335	0.0000	0.0335	5.0700e-003	0.0000	5.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0343	0.3344	0.2677	5.0000e-004		0.0162	0.0162		0.0150	0.0150	0.0000	44.1873	44.1873	0.0124	0.0000	44.4976
Total	0.0343	0.3344	0.2677	5.0000e-004	0.0335	0.0162	0.0496	5.0700e-003	0.0150	0.0201	0.0000	44.1873	44.1873	0.0124	0.0000	44.4976

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.2000e-004	0.0253	6.8000e-003	9.0000e-005	2.6500e-003	1.8000e-004	2.8300e-003	7.3000e-004	1.7000e-004	9.0000e-004	0.0000	9.4771	9.4771	9.0000e-004	1.5200e-003	9.9520
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.4000e-004	6.1100e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6919	1.6919	4.0000e-005	4.0000e-005	1.7055
Total	1.2100e-003	0.0257	0.0129	1.1000e-004	4.7900e-003	1.9000e-004	4.9800e-003	1.3000e-003	1.8000e-004	1.4800e-003	0.0000	11.1690	11.1690	9.4000e-004	1.5600e-003	11.6575

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0131	0.0000	0.0131	1.9800e-003	0.0000	1.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0343	0.3344	0.2677	5.0000e-004		0.0162	0.0162		0.0150	0.0150	0.0000	44.1872	44.1872	0.0124	0.0000	44.4975
Total	0.0343	0.3344	0.2677	5.0000e-004	0.0131	0.0162	0.0292	1.9800e-003	0.0150	0.0170	0.0000	44.1872	44.1872	0.0124	0.0000	44.4975

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.2000e-004	0.0253	6.8000e-003	9.0000e-005	2.6500e-003	1.8000e-004	2.8300e-003	7.3000e-004	1.7000e-004	9.0000e-004	0.0000	9.4771	9.4771	9.0000e-004	1.5200e-003	9.9520
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.4000e-004	6.1100e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6919	1.6919	4.0000e-005	4.0000e-005	1.7055
Total	1.2100e-003	0.0257	0.0129	1.1000e-004	4.7900e-003	1.9000e-004	4.9800e-003	1.3000e-003	1.8000e-004	1.4800e-003	0.0000	11.1690	11.1690	9.4000e-004	1.5600e-003	11.6575

3.3 P1 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0852	0.0000	0.0852	0.0438	0.0000	0.0438	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1579	0.1048	1.9000e-004		7.7700e-003	7.7700e-003		7.1500e-003	7.1500e-003	0.0000	16.8588	16.8588	5.4500e-003	0.0000	16.9951
Total	0.0152	0.1579	0.1048	1.9000e-004	0.0852	7.7700e-003	0.0930	0.0438	7.1500e-003	0.0509	0.0000	16.8588	16.8588	5.4500e-003	0.0000	16.9951

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.4000e-004	3.2600e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9023	0.9023	2.0000e-005	2.0000e-005	0.9096
Total	3.1000e-004	2.4000e-004	3.2600e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9023	0.9023	2.0000e-005	2.0000e-005	0.9096

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0332	0.0000	0.0332	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1579	0.1048	1.9000e-004		7.7700e-003	7.7700e-003		7.1500e-003	7.1500e-003	0.0000	16.8588	16.8588	5.4500e-003	0.0000	16.9951
Total	0.0152	0.1579	0.1048	1.9000e-004	0.0332	7.7700e-003	0.0410	0.0171	7.1500e-003	0.0242	0.0000	16.8588	16.8588	5.4500e-003	0.0000	16.9951

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.4000e-004	3.2600e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9023	0.9023	2.0000e-005	2.0000e-005	0.9096
Total	3.1000e-004	2.4000e-004	3.2600e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9023	0.9023	2.0000e-005	2.0000e-005	0.9096

3.4 P1 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2015	0.0000	0.2015	0.0922	0.0000	0.0922	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0516	0.5527	0.4047	7.9000e-004		0.0249	0.0249		0.0229	0.0229	0.0000	69.0451	69.0451	0.0223	0.0000	69.6034
Total	0.0516	0.5527	0.4047	7.9000e-004	0.2015	0.0249	0.2264	0.0922	0.0229	0.1152	0.0000	69.0451	69.0451	0.0223	0.0000	69.6034

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-003	9.0000e-004	0.0125	4.0000e-005	4.3600e-003	2.0000e-005	4.3900e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	3.4488	3.4488	9.0000e-005	9.0000e-005	3.4766
Total	1.2000e-003	9.0000e-004	0.0125	4.0000e-005	4.3600e-003	2.0000e-005	4.3900e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	3.4488	3.4488	9.0000e-005	9.0000e-005	3.4766

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0786	0.0000	0.0786	0.0360	0.0000	0.0360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0516	0.5527	0.4047	7.9000e-004		0.0249	0.0249		0.0229	0.0229	0.0000	69.0451	69.0451	0.0223	0.0000	69.6033
Total	0.0516	0.5527	0.4047	7.9000e-004	0.0786	0.0249	0.1035	0.0360	0.0229	0.0589	0.0000	69.0451	69.0451	0.0223	0.0000	69.6033

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-003	9.0000e-004	0.0125	4.0000e-005	4.3600e-003	2.0000e-005	4.3900e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	3.4488	3.4488	9.0000e-005	9.0000e-005	3.4766
Total	1.2000e-003	9.0000e-004	0.0125	4.0000e-005	4.3600e-003	2.0000e-005	4.3900e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	3.4488	3.4488	9.0000e-005	9.0000e-005	3.4766

3.4 P1 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1202	0.0000	0.1202	0.0476	0.0000	0.0476	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2332	0.1918	3.9000e-004		0.0101	0.0101		9.2700e-003	9.2700e-003	0.0000	33.8788	33.8788	0.0110	0.0000	34.1527
Total	0.0222	0.2332	0.1918	3.9000e-004	0.1202	0.0101	0.1303	0.0476	9.2700e-003	0.0568	0.0000	33.8788	33.8788	0.0110	0.0000	34.1527

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.9000e-004	5.6900e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6480	1.6480	4.0000e-005	4.0000e-005	1.6607
Total	5.5000e-004	3.9000e-004	5.6900e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6480	1.6480	4.0000e-005	4.0000e-005	1.6607

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0469	0.0000	0.0469	0.0186	0.0000	0.0186	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2332	0.1918	3.9000e-004		0.0101	0.0101		9.2700e-003	9.2700e-003	0.0000	33.8788	33.8788	0.0110	0.0000	34.1527
Total	0.0222	0.2332	0.1918	3.9000e-004	0.0469	0.0101	0.0569	0.0186	9.2700e-003	0.0278	0.0000	33.8788	33.8788	0.0110	0.0000	34.1527

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.9000e-004	5.6900e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6480	1.6480	4.0000e-005	4.0000e-005	1.6607
Total	5.5000e-004	3.9000e-004	5.6900e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6480	1.6480	4.0000e-005	4.0000e-005	1.6607

3.5 P1 Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0106	0.0962	0.1013	1.4000e-004		6.2900e-003	6.2900e-003		5.7900e-003	5.7900e-003	0.0000	12.5682	12.5682	4.0600e-003	0.0000	12.6698
Total	0.0106	0.0962	0.1013	1.4000e-004		6.2900e-003	6.2900e-003		5.7900e-003	5.7900e-003	0.0000	12.5682	12.5682	4.0600e-003	0.0000	12.6698

Unmitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.9000e-004	2.8000e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8113	0.8113	2.0000e-005	2.0000e-005	0.8176
Total	2.7000e-004	1.9000e-004	2.8000e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8113	0.8113	2.0000e-005	2.0000e-005	0.8176

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0106	0.0962	0.1013	1.4000e-004		6.2900e-003	6.2900e-003		5.7900e-003	5.7900e-003	0.0000	12.5682	12.5682	4.0600e-003	0.0000	12.6698
Total	0.0106	0.0962	0.1013	1.4000e-004		6.2900e-003	6.2900e-003		5.7900e-003	5.7900e-003	0.0000	12.5682	12.5682	4.0600e-003	0.0000	12.6698

Mitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.9000e-004	2.8000e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8113	0.8113	2.0000e-005	2.0000e-005	0.8176
Total	2.7000e-004	1.9000e-004	2.8000e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8113	0.8113	2.0000e-005	2.0000e-005	0.8176

3.6 P1 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1243	1.1364	1.2833	2.1300e-003		0.0553	0.0553		0.0520	0.0520	0.0000	183.1258	183.1258	0.0436	0.0000	184.2148
Total	0.1243	1.1364	1.2833	2.1300e-003		0.0553	0.0553		0.0520	0.0520	0.0000	183.1258	183.1258	0.0436	0.0000	184.2148

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3300e-003	0.0493	0.0198	2.4000e-004	8.4600e-003	2.4000e-004	8.7000e-003	2.4400e-003	2.3000e-004	2.6700e-003	0.0000	24.0711	24.0711	1.4300e-003	3.4600e-003	25.1369
Worker	0.0134	9.5700e-003	0.1383	4.3000e-004	0.0520	2.7000e-004	0.0523	0.0138	2.5000e-004	0.0141	0.0000	40.0598	40.0598	9.2000e-004	9.6000e-004	40.3676
Total	0.0147	0.0589	0.1581	6.7000e-004	0.0605	5.1000e-004	0.0610	0.0163	4.8000e-004	0.0167	0.0000	64.1309	64.1309	2.3500e-003	4.4200e-003	65.5045

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1243	1.1364	1.2833	2.1300e-003		0.0553	0.0553		0.0520	0.0520	0.0000	183.1255	183.1255	0.0436	0.0000	184.2146
Total	0.1243	1.1364	1.2833	2.1300e-003		0.0553	0.0553		0.0520	0.0520	0.0000	183.1255	183.1255	0.0436	0.0000	184.2146

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Ranch Hills Planned Development - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3300e-003	0.0493	0.0198	2.4000e-004	8.4600e-003	2.4000e-004	8.7000e-003	2.4400e-003	2.3000e-004	2.6700e-003	0.0000	24.0711	24.0711	1.4300e-003	3.4600e-003	25.1369
Worker	0.0134	9.5700e-003	0.1383	4.3000e-004	0.0520	2.7000e-004	0.0523	0.0138	2.5000e-004	0.0141	0.0000	40.0598	40.0598	9.2000e-004	9.6000e-004	40.3676
Total	0.0147	0.0589	0.1581	6.7000e-004	0.0605	5.1000e-004	0.0610	0.0163	4.8000e-004	0.0167	0.0000	64.1309	64.1309	2.3500e-003	4.4200e-003	65.5045

3.7 P1 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.1300e-003	0.0396	0.0549	9.0000e-005		1.9600e-003	1.9600e-003		1.8100e-003	1.8100e-003	0.0000	7.3704	7.3704	2.3200e-003	0.0000	7.4283
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.5500e-003	0.0396	0.0549	9.0000e-005		1.9600e-003	1.9600e-003		1.8100e-003	1.8100e-003	0.0000	7.3704	7.3704	2.3200e-003	0.0000	7.4283

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.8000e-004	2.6300e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7606	0.7606	2.0000e-005	2.0000e-005	0.7665
Total	2.5000e-004	1.8000e-004	2.6300e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7606	0.7606	2.0000e-005	2.0000e-005	0.7665

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.1300e-003	0.0396	0.0549	9.0000e-005		1.9600e-003	1.9600e-003		1.8100e-003	1.8100e-003	0.0000	7.3704	7.3704	2.3200e-003	0.0000	7.4283
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.5500e-003	0.0396	0.0549	9.0000e-005		1.9600e-003	1.9600e-003		1.8100e-003	1.8100e-003	0.0000	7.3704	7.3704	2.3200e-003	0.0000	7.4283

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.8000e-004	2.6300e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7606	0.7606	2.0000e-005	2.0000e-005	0.7665
Total	2.5000e-004	1.8000e-004	2.6300e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7606	0.7606	2.0000e-005	2.0000e-005	0.7665

3.8 P1 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1029					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	0.1038	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.1000e-004	1.5800e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4564	0.4564	1.0000e-005	1.0000e-005	0.4599
Total	1.5000e-004	1.1000e-004	1.5800e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4564	0.4564	1.0000e-005	1.0000e-005	0.4599

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1029					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	0.1038	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	7.2000e-004	0.0268	0.0108	1.3000e-004	4.6100e-003	1.3000e-004	4.7400e-003	1.3300e-003	1.3000e-004	1.4500e-003	0.0000	13.1020	13.1020	7.8000e-004	1.8800e-003	13.6821
Worker	7.2900e-003	5.2100e-003	0.0753	2.3000e-004	0.0283	1.5000e-004	0.0285	7.5200e-003	1.4000e-004	7.6600e-003	0.0000	21.8047	21.8047	5.0000e-004	5.2000e-004	21.9722
Total	8.0100e-003	0.0321	0.0860	3.6000e-004	0.0329	2.8000e-004	0.0332	8.8500e-003	2.7000e-004	9.1100e-003	0.0000	34.9067	34.9067	1.2800e-003	2.4000e-003	35.6543

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0676	0.6186	0.6985	1.1600e-003		0.0301	0.0301		0.0283	0.0283	0.0000	99.6759	99.6759	0.0237	0.0000	100.2687
Total	0.0676	0.6186	0.6985	1.1600e-003		0.0301	0.0301		0.0283	0.0283	0.0000	99.6759	99.6759	0.0237	0.0000	100.2687

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.2000e-004	0.0268	0.0108	1.3000e-004	4.6100e-003	1.3000e-004	4.7400e-003	1.3300e-003	1.3000e-004	1.4500e-003	0.0000	13.1020	13.1020	7.8000e-004	1.8800e-003	13.6821

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	7.2900e-003	5.2100e-003	0.0753	2.3000e-004	0.0283	1.5000e-004	0.0285	7.5200e-003	1.4000e-004	7.6600e-003	0.0000	21.8047	21.8047	5.0000e-004	5.2000e-004	21.9722
Total	8.0100e-003	0.0321	0.0860	3.6000e-004	0.0329	2.8000e-004	0.0332	8.8500e-003	2.7000e-004	9.1100e-003	0.0000	34.9067	34.9067	1.2800e-003	2.4000e-003	35.6543

3.9 P2 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0530	0.4840	0.5820	9.7000e-004		0.0221	0.0221		0.0208	0.0208	0.0000	83.4657	83.4657	0.0197	0.0000	83.9591
Total	0.0530	0.4840	0.5820	9.7000e-004		0.0221	0.0221		0.0208	0.0208	0.0000	83.4657	83.4657	0.0197	0.0000	83.9591

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-004	0.0224	8.9600e-003	1.1000e-004	3.8600e-003	1.2000e-004	3.9700e-003	1.1100e-003	1.1000e-004	1.2200e-003	0.0000	10.7991	10.7991	6.6000e-004	1.5600e-003	11.2796
Worker	5.7400e-003	3.9200e-003	0.0588	1.9000e-004	0.0237	1.2000e-004	0.0238	6.3000e-003	1.1000e-004	6.4100e-003	0.0000	17.8169	17.8169	3.8000e-004	4.1000e-004	17.9478

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	6.3400e-003	0.0263	0.0677	3.0000e-004	0.0276	2.4000e-004	0.0278	7.4100e-003	2.2000e-004	7.6300e-003	0.0000	28.6161	28.6161	1.0400e-003	1.9700e-003	29.2274
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0530	0.4840	0.5820	9.7000e-004		0.0221	0.0221		0.0208	0.0208	0.0000	83.4656	83.4656	0.0197	0.0000	83.9590
Total	0.0530	0.4840	0.5820	9.7000e-004		0.0221	0.0221		0.0208	0.0208	0.0000	83.4656	83.4656	0.0197	0.0000	83.9590

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-004	0.0224	8.9600e-003	1.1000e-004	3.8600e-003	1.2000e-004	3.9700e-003	1.1100e-003	1.1000e-004	1.2200e-003	0.0000	10.7991	10.7991	6.6000e-004	1.5600e-003	11.2796
Worker	5.7400e-003	3.9200e-003	0.0588	1.9000e-004	0.0237	1.2000e-004	0.0238	6.3000e-003	1.1000e-004	6.4100e-003	0.0000	17.8169	17.8169	3.8000e-004	4.1000e-004	17.9478
Total	6.3400e-003	0.0263	0.0677	3.0000e-004	0.0276	2.4000e-004	0.0278	7.4100e-003	2.2000e-004	7.6300e-003	0.0000	28.6161	28.6161	1.0400e-003	1.9700e-003	29.2274

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.10 P2 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9700e-003	0.0372	0.0550	9.0000e-005		1.7900e-003	1.7900e-003		1.6600e-003	1.6600e-003	0.0000	7.3711	7.3711	2.3200e-003	0.0000	7.4290
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.3900e-003	0.0372	0.0550	9.0000e-005		1.7900e-003	1.7900e-003		1.6600e-003	1.6600e-003	0.0000	7.3711	7.3711	2.3200e-003	0.0000	7.4290

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	2.4500e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7424	0.7424	2.0000e-005	2.0000e-005	0.7478
Total	2.4000e-004	1.6000e-004	2.4500e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7424	0.7424	2.0000e-005	2.0000e-005	0.7478

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9700e-003	0.0372	0.0550	9.0000e-005		1.7900e-003	1.7900e-003		1.6600e-003	1.6600e-003	0.0000	7.3711	7.3711	2.3200e-003	0.0000	7.4290
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.3900e-003	0.0372	0.0550	9.0000e-005		1.7900e-003	1.7900e-003		1.6600e-003	1.6600e-003	0.0000	7.3711	7.3711	2.3200e-003	0.0000	7.4290

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	2.4500e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7424	0.7424	2.0000e-005	2.0000e-005	0.7478
Total	2.4000e-004	1.6000e-004	2.4500e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7424	0.7424	2.0000e-005	2.0000e-005	0.7478

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.11 P2 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1002					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1000e-004	5.4800e-003	8.1500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	1.1490	1.1490	6.0000e-005	0.0000	1.1506
Total	0.1010	5.4800e-003	8.1500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	1.1490	1.1490	6.0000e-005	0.0000	1.1506

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4454	0.4454	1.0000e-005	1.0000e-005	0.4487
Total	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4454	0.4454	1.0000e-005	1.0000e-005	0.4487

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1002					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1000e-004	5.4800e-003	8.1500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	1.1490	1.1490	6.0000e-005	0.0000	1.1506
Total	0.1010	5.4800e-003	8.1500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	1.1490	1.1490	6.0000e-005	0.0000	1.1506

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4454	0.4454	1.0000e-005	1.0000e-005	0.4487
Total	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4454	0.4454	1.0000e-005	1.0000e-005	0.4487

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.12 P3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1148	1.0486	1.2610	2.1000e-003		0.0478	0.0478		0.0450	0.0450	0.0000	180.8423	180.8423	0.0428	0.0000	181.9114
Total	0.1148	1.0486	1.2610	2.1000e-003		0.0478	0.0478		0.0450	0.0450	0.0000	180.8423	180.8423	0.0428	0.0000	181.9114

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-003	0.0485	0.0194	2.3000e-004	8.3500e-003	2.5000e-004	8.6000e-003	2.4100e-003	2.4000e-004	2.6500e-003	0.0000	23.3981	23.3981	1.4300e-003	3.3700e-003	24.4392
Worker	0.0125	8.4900e-003	0.1274	4.1000e-004	0.0514	2.5000e-004	0.0516	0.0136	2.3000e-004	0.0139	0.0000	38.6033	38.6033	8.3000e-004	8.8000e-004	38.8868
Total	0.0138	0.0570	0.1468	6.4000e-004	0.0597	5.0000e-004	0.0602	0.0161	4.7000e-004	0.0165	0.0000	62.0014	62.0014	2.2600e-003	4.2500e-003	63.3260

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1148	1.0486	1.2610	2.1000e-003		0.0478	0.0478		0.0450	0.0450	0.0000	180.8421	180.8421	0.0428	0.0000	181.9112
Total	0.1148	1.0486	1.2610	2.1000e-003		0.0478	0.0478		0.0450	0.0450	0.0000	180.8421	180.8421	0.0428	0.0000	181.9112

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-003	0.0485	0.0194	2.3000e-004	8.3500e-003	2.5000e-004	8.6000e-003	2.4100e-003	2.4000e-004	2.6500e-003	0.0000	23.3981	23.3981	1.4300e-003	3.3700e-003	24.4392
Worker	0.0125	8.4900e-003	0.1274	4.1000e-004	0.0514	2.5000e-004	0.0516	0.0136	2.3000e-004	0.0139	0.0000	38.6033	38.6033	8.3000e-004	8.8000e-004	38.8868
Total	0.0138	0.0570	0.1468	6.4000e-004	0.0597	5.0000e-004	0.0602	0.0161	4.7000e-004	0.0165	0.0000	62.0014	62.0014	2.2600e-003	4.2500e-003	63.3260

3.13 P3 Paving - 2024

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9700e-003	0.0372	0.0550	9.0000e-005		1.7900e-003	1.7900e-003		1.6600e-003	1.6600e-003	0.0000	7.3711	7.3711	2.3200e-003	0.0000	7.4290
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.3900e-003	0.0372	0.0550	9.0000e-005		1.7900e-003	1.7900e-003		1.6600e-003	1.6600e-003	0.0000	7.3711	7.3711	2.3200e-003	0.0000	7.4290

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	2.4500e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7424	0.7424	2.0000e-005	2.0000e-005	0.7478
Total	2.4000e-004	1.6000e-004	2.4500e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7424	0.7424	2.0000e-005	2.0000e-005	0.7478

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9700e-003	0.0372	0.0550	9.0000e-005		1.7900e-003	1.7900e-003		1.6600e-003	1.6600e-003	0.0000	7.3711	7.3711	2.3200e-003	0.0000	7.4290
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.3900e-003	0.0372	0.0550	9.0000e-005		1.7900e-003	1.7900e-003		1.6600e-003	1.6600e-003	0.0000	7.3711	7.3711	2.3200e-003	0.0000	7.4290

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	2.4500e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7424	0.7424	2.0000e-005	2.0000e-005	0.7478
Total	2.4000e-004	1.6000e-004	2.4500e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7424	0.7424	2.0000e-005	2.0000e-005	0.7478

3.14 P3 Architectural Coating - 2024

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1002					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1000e-004	5.4800e-003	8.1500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	1.1490	1.1490	6.0000e-005	0.0000	1.1506
Total	0.1010	5.4800e-003	8.1500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	1.1490	1.1490	6.0000e-005	0.0000	1.1506

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4454	0.4454	1.0000e-005	1.0000e-005	0.4487
Total	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4454	0.4454	1.0000e-005	1.0000e-005	0.4487

Mitigated Construction On-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1002					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1000e-004	5.4800e-003	8.1500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	1.1490	1.1490	6.0000e-005	0.0000	1.1506
Total	0.1010	5.4800e-003	8.1500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	1.1490	1.1490	6.0000e-005	0.0000	1.1506

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4454	0.4454	1.0000e-005	1.0000e-005	0.4487
Total	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4454	0.4454	1.0000e-005	1.0000e-005	0.4487

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1323	0.1506	1.3743	3.2100e-003	0.3550	2.2100e-003	0.3572	0.0948	2.0500e-003	0.0968	0.0000	301.4533	301.4533	0.0180	0.0124	305.6080
Unmitigated	0.1323	0.1506	1.3743	3.2100e-003	0.3550	2.2100e-003	0.3572	0.0948	2.0500e-003	0.0968	0.0000	301.4533	301.4533	0.0180	0.0124	305.6080

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	248.88	276.76	213.52	846,809	846,809
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	28.32	28.62	25.65	95,617	95,617
Total	277.20	305.38	239.17	942,426	942,426

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.0038
Other Asphalt Surfaces	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.0038
Recreational Swimming Pool	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.0038
Single Family Housing	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.0038

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.2972	33.2972	2.8100e-003	3.4000e-004	33.4690
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.2972	33.2972	2.8100e-003	3.4000e-004	33.4690
NaturalGas Mitigated	3.4100e-003	0.0292	0.0124	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	33.7728	33.7728	6.5000e-004	6.2000e-004	33.9735
NaturalGas Unmitigated	3.4100e-003	0.0292	0.0124	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	33.7728	33.7728	6.5000e-004	6.2000e-004	33.9735

5.2 Energy by Land Use - NaturalGas

Unmitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	561185	3.0300e-003	0.0259	0.0110	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	29.9470	29.9470	5.7000e-004	5.5000e-004	30.1249
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	71693.3	3.9000e-004	3.3000e-003	1.4100e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.8258	3.8258	7.0000e-005	7.0000e-005	3.8486
Total		3.4200e-003	0.0292	0.0124	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	33.7728	33.7728	6.4000e-004	6.2000e-004	33.9735

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	561185	3.0300e-003	0.0259	0.0110	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	29.9470	29.9470	5.7000e-004	5.5000e-004	30.1249
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	71693.3	3.9000e-004	3.3000e-003	1.4100e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.8258	3.8258	7.0000e-005	7.0000e-005	3.8486
Total		3.4200e-003	0.0292	0.0124	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	33.7728	33.7728	6.4000e-004	6.2000e-004	33.9735

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	164299	29.1377	2.4600e-003	3.0000e-004	29.2880
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	23454.3	4.1595	3.5000e-004	4.0000e-005	4.1810
Total		33.2972	2.8100e-003	3.4000e-004	33.4690

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	164299	29.1377	2.4600e-003	3.0000e-004	29.2880
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

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Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	23454.3	4.1595	3.5000e-004	4.0000e-005	4.1810
Total		33.2972	2.8100e-003	3.4000e-004	33.4690

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4922	0.0122	0.5043	2.5000e-004		0.0190	0.0190		0.0190	0.0190	1.4539	8.1776	9.6316	7.5000e-004	2.7000e-004	9.7298
Unmitigated	0.4922	0.0122	0.5043	2.5000e-004		0.0190	0.0190		0.0190	0.0190	1.4539	8.1776	9.6316	7.5000e-004	2.7000e-004	9.7298

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

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Architectural Coating	0.0303					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3416					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1087	7.7500e-003	0.1219	2.3000e-004		0.0168	0.0168		0.0168	0.0168	1.4539	7.5523	9.0063	1.4000e-004	2.7000e-004	9.0894
Landscaping	0.0116	4.4000e-003	0.3825	2.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	0.6253	0.6253	6.0000e-004	0.0000	0.6404
Total	0.4922	0.0122	0.5043	2.5000e-004		0.0190	0.0190		0.0190	0.0190	1.4539	8.1776	9.6316	7.4000e-004	2.7000e-004	9.7298

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0303					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3416					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1087	7.7500e-003	0.1219	2.3000e-004		0.0168	0.0168		0.0168	0.0168	1.4539	7.5523	9.0063	1.4000e-004	2.7000e-004	9.0894
Landscaping	0.0116	4.4000e-003	0.3825	2.0000e-005		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	0.6253	0.6253	6.0000e-004	0.0000	0.6404
Total	0.4922	0.0122	0.5043	2.5000e-004		0.0190	0.0190		0.0190	0.0190	1.4539	8.1776	9.6316	7.4000e-004	2.7000e-004	9.7298

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.5755	0.0814	1.9900e-003	12.2053
Unmitigated	9.5755	0.0814	1.9900e-003	12.2053

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	2.21524 / 1.39656	8.5699	0.0729	1.7800e-003	10.9230
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0650575 / 0.000726	0.2494	2.1400e-003	5.0000e-005	0.3185
Single Family Housing	0.195462 / 0.123226	0.7562	6.4300e-003	1.6000e-004	0.9638
Total		9.5755	0.0814	1.9900e-003	12.2053

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	2.21524 / 1.39656	8.5699	0.0729	1.7800e-003	10.9230
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0650575 /	0.2494	2.1400e-003	5.0000e-005	0.3185
Single Family Housing	0.195462 / 0.123226	0.7562	6.4300e-003	1.6000e-004	0.9638
Total		9.5755	0.0814	1.9900e-003	12.2053

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.5983	0.1536	0.0000	6.4371

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated	5.1966	0.3071	0.0000	12.8743
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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	15.64	3.1748	0.1876	0.0000	7.8654
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	6.27	1.2728	0.0752	0.0000	3.1532
Single Family Housing	3.69	0.7490	0.0443	0.0000	1.8557
Total		5.1966	0.3071	0.0000	12.8743

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	7.82	1.5874	0.0938	0.0000	3.9327

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	3.135	0.6364	0.0376	0.0000	1.5766
Single Family Housing	1.845	0.3745	0.0221	0.0000	0.9279
Total		2.5983	0.1536	0.0000	6.4371

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation



369

369

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Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Ranch Hills Planned Development
Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	80.51	1000sqft	1.85	80,512.00	0
Recreational Swimming Pool	1.10	1000sqft	0.03	1,100.00	0
Condo/Townhouse	34.00	Dwelling Unit	2.13	85,000.00	97
Single Family Housing	3.00	Dwelling Unit	0.97	7,500.00	9

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - .
- Construction Phase - ..
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment - .
- Off-road Equipment -
- Off-road Equipment -

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Demolition - .
- Grading - .
- Architectural Coating - .
- Vehicle Trips - .
- Construction Off-road Equipment Mitigation -
- Waste Mitigation - .
- Off-road Equipment - .
- Off-road Equipment -
- Woodstoves - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	870.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	870.00	0.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	230.00	156.00
tblConstructionPhase	NumDays	230.00	158.00
tblConstructionPhase	NumDays	230.00	158.00
tblConstructionPhase	NumDays	20.00	26.00
tblConstructionPhase	NumDays	8.00	79.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	5.00	26.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblLandUse	LandUseSquareFeet	80,510.00	80,512.00
tblLandUse	LandUseSquareFeet	34,000.00	85,000.00
tblLandUse	LandUseSquareFeet	5,400.00	7,500.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblVehicleTrips	ST_TR	9.10	0.00

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.7324	27.6001	21.6075	0.0474	7.2503	1.2576	8.1920	3.4692	1.1695	4.3356	0.0000	4,698.9577	4,698.9577	1.1325	0.1320	4,766.6101
2023	23.0892	17.9629	18.3282	0.0357	7.2503	0.7758	8.0260	3.4692	0.7137	4.1829	0.0000	3,470.0602	3,470.0602	0.9322	0.0605	3,504.1048
2024	22.4788	14.1350	18.1244	0.0354	0.7794	0.6198	1.3991	0.2091	0.5830	0.7921	0.0000	3,451.4086	3,451.4086	0.6359	0.0592	3,484.9405
Maximum	23.0892	27.6001	21.6075	0.0474	7.2503	1.2576	8.1920	3.4692	1.1695	4.3356	0.0000	4,698.9577	4,698.9577	1.1325	0.1320	4,766.6101

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.7324	27.6001	21.6075	0.0474	2.9299	1.2576	3.8716	1.3801	1.1695	2.2465	0.0000	4,698.9577	4,698.9577	1.1325	0.1320	4,766.6101

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2023	23.0892	17.9629	18.3282	0.0357	2.9299	0.7758	3.7057	1.3801	0.7137	2.0938	0.0000	3,470.0602	3,470.0602	0.9322	0.0605	3,504.1048
2024	22.4788	14.1350	18.1244	0.0354	0.7794	0.6198	1.3991	0.2091	0.5830	0.7921	0.0000	3,451.4086	3,451.4086	0.6359	0.0592	3,484.9405
Maximum	23.0892	27.6001	21.6075	0.0474	2.9299	1.2576	3.8716	1.3801	1.1695	2.2465	0.0000	4,698.9577	4,698.9577	1.1325	0.1320	4,766.6101

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.55	0.00	49.05	58.46	0.00	44.88	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917
Energy	0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020
Mobile	0.8280	0.8413	8.4070	0.0201	2.1988	0.0134	2.2123	0.5861	0.0125	0.5986		2,082.1448	2,082.1448	0.1178	0.0796	2,108.8091
Total	11.6736	1.6560	21.2823	0.0397	2.1988	1.3903	3.5891	0.5861	1.3893	1.9754	128.2154	2,957.6489	3,085.8642	0.1398	0.1069	3,121.2028

Mitigated Operational

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917
Energy	0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020
Mobile	0.8280	0.8413	8.4070	0.0201	2.1988	0.0134	2.2123	0.5861	0.0125	0.5986		2,082.1448	2,082.1448	0.1178	0.0796	2,108.8091
Total	11.6736	1.6560	21.2823	0.0397	2.1988	1.3903	3.5891	0.5861	1.3893	1.9754	128.2154	2,957.6489	3,085.8642	0.1398	0.1069	3,121.2028

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2022	9/30/2022	6	26	
2	P1 Site Preparation	Site Preparation	10/1/2022	10/31/2022	6	26	
3	P1 Grading	Grading	11/1/2022	1/31/2023	6	79	
4	P1 Trenching	Trenching	2/1/2023	2/28/2023	6	24	
5	P1 Building Construction	Building Construction	3/1/2023	8/31/2023	6	158	
6	P1 Paving	Paving	9/1/2023	9/11/2023	6	9	
7	P1 Architectural Coating	Architectural Coating	9/12/2023	9/21/2023	6	9	
8	P2 Building Construction	Building Construction	9/22/2023	3/23/2024	6	158	
9	P2 Paving	Paving	3/24/2024	4/3/2024	6	9	
10	P2 Architectural Coating	Architectural Coating	4/4/2024	4/13/2024	6	9	
11	P3 Building Construction	Building Construction	4/14/2024	10/12/2024	6	156	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

12	P3 Paving	Paving	10/14/2024	10/23/2024	6	9
13	P3 Architectural Coating	Architectural Coating	10/24/2024	11/2/2024	6	9

Acres of Grading (Site Preparation Phase): 13

Acres of Grading (Grading Phase): 79

Acres of Paving: 1.85

Residential Indoor: 62,438; Residential Outdoor: 20,813; Non-Residential Indoor: 870; Non-Residential Outdoor: 290; Striped Parking Area: 1,610

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
P1 Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
P1 Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
P1 Grading	Excavators	1	8.00	158	0.38
P1 Grading	Graders	1	8.00	187	0.41
P1 Grading	Rubber Tired Dozers	1	8.00	247	0.40
P1 Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
P1 Trenching	Excavators	1	8.00	158	0.38
P1 Trenching	Trenchers	2	8.00	78	0.50
P1 Building Construction	Cranes	1	7.00	231	0.29
P1 Building Construction	Forklifts	3	8.00	89	0.20
P1 Building Construction	Generator Sets	1	8.00	84	0.74
P1 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P1 Building Construction	Welders	1	8.00	46	0.45
P1 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P1 Paving	Pavers	1	8.00	130	0.42
P1 Paving	Paving Equipment	2	6.00	132	0.36

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

P1 Paving	Rollers	2	6.00	80	0.38
P1 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P1 Architectural Coating	Air Compressors	1	6.00	78	0.48
P2 Building Construction	Cranes	1	7.00	231	0.29
P2 Building Construction	Forklifts	3	8.00	89	0.20
P2 Building Construction	Generator Sets	1	8.00	84	0.74
P2 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P2 Building Construction	Welders	1	8.00	46	0.45
P2 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P2 Paving	Pavers	1	8.00	130	0.42
P2 Paving	Paving Equipment	2	6.00	132	0.36
P2 Paving	Rollers	2	6.00	80	0.38
P2 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P2 Architectural Coating	Air Compressors	1	6.00	78	0.48
P3 Building Construction	Cranes	1	7.00	231	0.29
P3 Building Construction	Forklifts	3	8.00	89	0.20
P3 Building Construction	Generator Sets	1	8.00	84	0.74
P3 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P3 Building Construction	Welders	1	8.00	46	0.45
P3 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P3 Paving	Pavers	1	8.00	130	0.42
P3 Paving	Paving Equipment	2	6.00	132	0.36
P3 Paving	Rollers	2	6.00	80	0.38
P3 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P3 Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition	6	15.00	0.00	309.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5745	0.0000	2.5745	0.3898	0.0000	0.3898			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	2.6392	25.7194	20.5941	0.0388	2.5745	1.2427	3.8171	0.3898	1.1553	1.5451		3,746.7812	3,746.7812	1.0524		3,773.0920

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0481	1.8503	0.5198	7.0900e-003	0.2073	0.0140	0.2213	0.0568	0.0134	0.0702		803.5146	803.5146	0.0766	0.1287	843.7801
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0451	0.0303	0.4936	1.4600e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		148.6620	148.6620	3.4700e-003	3.3200e-003	149.7380
Total	0.0933	1.8807	1.0134	8.5500e-003	0.3749	0.0149	0.3898	0.1012	0.0142	0.1155		952.1765	952.1765	0.0801	0.1320	993.5181

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0040	0.0000	1.0040	0.1520	0.0000	0.1520			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	2.6392	25.7194	20.5941	0.0388	1.0040	1.2427	2.2467	0.1520	1.1553	1.3073	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0481	1.8503	0.5198	7.0900e-003	0.2073	0.0140	0.2213	0.0568	0.0134	0.0702		803.5146	803.5146	0.0766	0.1287	843.7801
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0451	0.0303	0.4936	1.4600e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		148.6620	148.6620	3.4700e-003	3.3200e-003	149.7380
Total	0.0933	1.8807	1.0134	8.5500e-003	0.3749	0.0149	0.3898	0.1012	0.0142	0.1155		952.1765	952.1765	0.0801	0.1320	993.5181

3.3 P1 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.1665	12.1449	8.0579	0.0148		0.5976	0.5976		0.5498	0.5498		1,429.5133	1,429.5133	0.4623		1,441.0716
Total	1.1665	12.1449	8.0579	0.0148	6.5523	0.5976	7.1499	3.3675	0.5498	3.9173		1,429.5133	1,429.5133	0.4623		1,441.0716

Unmitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603
Total	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.1665	12.1449	8.0579	0.0148		0.5976	0.5976		0.5498	0.5498	0.0000	1,429.5133	1,429.5133	0.4623		1,441.0716
Total	1.1665	12.1449	8.0579	0.0148	2.5554	0.5976	3.1530	1.3133	0.5498	1.8631	0.0000	1,429.5133	1,429.5133	0.4623		1,441.0716

Mitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603
Total	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603

3.4 P1 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	1.9486	20.8551	15.2727	0.0297	7.0826	0.9409	8.0234	3.4247	0.8656	4.2903		2,872.0464	2,872.0464	0.9289		2,895.2684

Unmitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0451	0.0303	0.4936	1.4600e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		148.6620	148.6620	3.4700e-003	3.3200e-003	149.7380
Total	0.0451	0.0303	0.4936	1.4600e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		148.6620	148.6620	3.4700e-003	3.3200e-003	149.7380

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	1.9486	20.8551	15.2727	0.0297	2.7622	0.9409	3.7031	1.3357	0.8656	2.2012	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684

Mitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0451	0.0303	0.4936	1.4600e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		148.6620	148.6620	3.4700e-003	3.3200e-003	149.7380
Total	0.0451	0.0303	0.4936	1.4600e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		148.6620	148.6620	3.4700e-003	3.3200e-003	149.7380

3.4 P1 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	1.7109	17.9359	14.7507	0.0297	7.0826	0.7749	7.8575	3.4247	0.7129	4.1377		2,872.6910	2,872.6910	0.9291		2,895.9182

Unmitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0423	0.0270	0.4593	1.4100e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		144.7966	144.7966	3.1400e-003	3.0900e-003	145.7958
Total	0.0423	0.0270	0.4593	1.4100e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		144.7966	144.7966	3.1400e-003	3.0900e-003	145.7958

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	1.7109	17.9359	14.7507	0.0297	2.7622	0.7749	3.5371	1.3357	0.7129	2.0486	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182

Mitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0423	0.0270	0.4593	1.4100e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		144.7966	144.7966	3.1400e-003	3.0900e-003	145.7958
Total	0.0423	0.0270	0.4593	1.4100e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		144.7966	144.7966	3.1400e-003	3.0900e-003	145.7958

3.5 P1 Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8820	8.0150	8.4419	0.0119		0.5244	0.5244		0.4825	0.4825		1,154.5054	1,154.5054	0.3734		1,163.8401
Total	0.8820	8.0150	8.4419	0.0119		0.5244	0.5244		0.4825	0.4825		1,154.5054	1,154.5054	0.3734		1,163.8401

Unmitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0225	0.0144	0.2450	7.5000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		77.2248	77.2248	1.6800e-003	1.6500e-003	77.7578
Total	0.0225	0.0144	0.2450	7.5000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		77.2248	77.2248	1.6800e-003	1.6500e-003	77.7578

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8820	8.0150	8.4419	0.0119		0.5244	0.5244		0.4825	0.4825	0.0000	1,154.5054	1,154.5054	0.3734		1,163.8401
Total	0.8820	8.0150	8.4419	0.0119		0.5244	0.5244		0.4825	0.4825	0.0000	1,154.5054	1,154.5054	0.3734		1,163.8401

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0225	0.0144	0.2450	7.5000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		77.2248	77.2248	1.6800e-003	1.6500e-003	77.7578
Total	0.0225	0.0144	0.2450	7.5000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		77.2248	77.2248	1.6800e-003	1.6500e-003	77.7578

3.6 P1 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0172	0.5958	0.2470	3.0600e-003	0.1087	3.0600e-003	0.1118	0.0313	2.9200e-003	0.0342		335.6640	335.6640	0.0200	0.0482	350.5156

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.1691	0.1082	1.8372	5.6600e-003	0.6707	3.4300e-003	0.6741	0.1779	3.1600e-003	0.1810		579.1863	579.1863	0.0126	0.0124	583.1832
Total	0.1862	0.7039	2.0842	8.7200e-003	0.7794	6.4900e-003	0.7859	0.2091	6.0800e-003	0.2152		914.8503	914.8503	0.0325	0.0605	933.6988

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0172	0.5958	0.2470	3.0600e-003	0.1087	3.0600e-003	0.1118	0.0313	2.9200e-003	0.0342		335.6640	335.6640	0.0200	0.0482	350.5156
Worker	0.1691	0.1082	1.8372	5.6600e-003	0.6707	3.4300e-003	0.6741	0.1779	3.1600e-003	0.1810		579.1863	579.1863	0.0126	0.0124	583.1832
Total	0.1862	0.7039	2.0842	8.7200e-003	0.7794	6.4900e-003	0.7859	0.2091	6.0800e-003	0.2152		914.8503	914.8503	0.0325	0.0605	933.6988

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 P1 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4566	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0564	0.0361	0.6124	1.8900e-003	0.2236	1.1400e-003	0.2247	0.0593	1.0500e-003	0.0603		193.0621	193.0621	4.1900e-003	4.1200e-003	194.3944
Total	0.0564	0.0361	0.6124	1.8900e-003	0.2236	1.1400e-003	0.2247	0.0593	1.0500e-003	0.0603		193.0621	193.0621	4.1900e-003	4.1200e-003	194.3944

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4566	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0564	0.0361	0.6124	1.8900e-003	0.2236	1.1400e-003	0.2247	0.0593	1.0500e-003	0.0603		193.0621	193.0621	4.1900e-003	4.1200e-003	194.3944
Total	0.0564	0.0361	0.6124	1.8900e-003	0.2236	1.1400e-003	0.2247	0.0593	1.0500e-003	0.0603		193.0621	193.0621	4.1900e-003	4.1200e-003	194.3944

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.8637					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	23.0553	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0338	0.0216	0.3674	1.1300e-003	0.1341	6.9000e-004	0.1348	0.0356	6.3000e-004	0.0362		115.8373	115.8373	2.5100e-003	2.4700e-003	116.6366
Total	0.0338	0.0216	0.3674	1.1300e-003	0.1341	6.9000e-004	0.1348	0.0356	6.3000e-004	0.0362		115.8373	115.8373	2.5100e-003	2.4700e-003	116.6366

Mitigated Construction On-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.8637					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	23.0553	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0338	0.0216	0.3674	1.1300e-003	0.1341	6.9000e-004	0.1348	0.0356	6.3000e-004	0.0362		115.8373	115.8373	2.5100e-003	2.4700e-003	116.6366
Total	0.0338	0.0216	0.3674	1.1300e-003	0.1341	6.9000e-004	0.1348	0.0356	6.3000e-004	0.0362		115.8373	115.8373	2.5100e-003	2.4700e-003	116.6366

3.9 P2 Building Construction - 2023

Unmitigated Construction On-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0172	0.5958	0.2470	3.0600e-003	0.1087	3.0600e-003	0.1118	0.0313	2.9200e-003	0.0342		335.6640	335.6640	0.0200	0.0482	350.5156
Worker	0.1691	0.1082	1.8372	5.6600e-003	0.6707	3.4300e-003	0.6741	0.1779	3.1600e-003	0.1810		579.1863	579.1863	0.0126	0.0124	583.1832
Total	0.1862	0.7039	2.0842	8.7200e-003	0.7794	6.4900e-003	0.7859	0.2091	6.0800e-003	0.2152		914.8503	914.8503	0.0325	0.0605	933.6988

Mitigated Construction On-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0172	0.5958	0.2470	3.0600e-003	0.1087	3.0600e-003	0.1118	0.0313	2.9200e-003	0.0342		335.6640	335.6640	0.0200	0.0482	350.5156
Worker	0.1691	0.1082	1.8372	5.6600e-003	0.6707	3.4300e-003	0.6741	0.1779	3.1600e-003	0.1810		579.1863	579.1863	0.0126	0.0124	583.1832
Total	0.1862	0.7039	2.0842	8.7200e-003	0.7794	6.4900e-003	0.7859	0.2091	6.0800e-003	0.2152		914.8503	914.8503	0.0325	0.0605	933.6988

3.9 P2 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0169	0.5940	0.2452	3.0000e-003	0.1087	3.2000e-003	0.1119	0.0313	3.0600e-003	0.0343		330.4568	330.4568	0.0202	0.0476	345.1510
Worker	0.1589	0.0972	1.7124	5.4800e-003	0.6707	3.2600e-003	0.6739	0.1779	3.0000e-003	0.1809		565.2529	565.2529	0.0114	0.0116	568.9819
Total	0.1758	0.6912	1.9576	8.4800e-003	0.7794	6.4600e-003	0.7858	0.2091	6.0600e-003	0.2152		895.7097	895.7097	0.0316	0.0592	914.1328

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0169	0.5940	0.2452	3.0000e-003	0.1087	3.2000e-003	0.1119	0.0313	3.0600e-003	0.0343		330.4568	330.4568	0.0202	0.0476	345.1510
Worker	0.1589	0.0972	1.7124	5.4800e-003	0.6707	3.2600e-003	0.6739	0.1779	3.0000e-003	0.1809		565.2529	565.2529	0.0114	0.0116	568.9819
Total	0.1758	0.6912	1.9576	8.4800e-003	0.7794	6.4600e-003	0.7858	0.2091	6.0600e-003	0.2152		895.7097	895.7097	0.0316	0.0592	914.1328

3.10 P2 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4199	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0530	0.0324	0.5708	1.8300e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		188.4176	188.4176	3.8000e-003	3.8500e-003	189.6606
Total	0.0530	0.0324	0.5708	1.8300e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		188.4176	188.4176	3.8000e-003	3.8500e-003	189.6606

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4199	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0530	0.0324	0.5708	1.8300e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		188.4176	188.4176	3.8000e-003	3.8500e-003	189.6606
Total	0.0530	0.0324	0.5708	1.8300e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		188.4176	188.4176	3.8000e-003	3.8500e-003	189.6606

3.11 P2 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.2663					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	22.4470	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Unmitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0318	0.0194	0.3425	1.1000e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		113.0506	113.0506	2.2800e-003	2.3100e-003	113.7964
Total	0.0318	0.0194	0.3425	1.1000e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		113.0506	113.0506	2.2800e-003	2.3100e-003	113.7964

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.2663					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	22.4470	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Mitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0318	0.0194	0.3425	1.1000e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		113.0506	113.0506	2.2800e-003	2.3100e-003	113.7964
Total	0.0318	0.0194	0.3425	1.1000e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		113.0506	113.0506	2.2800e-003	2.3100e-003	113.7964

3.12 P3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0169	0.5940	0.2452	3.0000e-003	0.1087	3.2000e-003	0.1119	0.0313	3.0600e-003	0.0343		330.4568	330.4568	0.0202	0.0476	345.1510
Worker	0.1589	0.0972	1.7124	5.4800e-003	0.6707	3.2600e-003	0.6739	0.1779	3.0000e-003	0.1809		565.2529	565.2529	0.0114	0.0116	568.9819
Total	0.1758	0.6912	1.9576	8.4800e-003	0.7794	6.4600e-003	0.7858	0.2091	6.0600e-003	0.2152		895.7097	895.7097	0.0316	0.0592	914.1328

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0169	0.5940	0.2452	3.0000e-003	0.1087	3.2000e-003	0.1119	0.0313	3.0600e-003	0.0343		330.4568	330.4568	0.0202	0.0476	345.1510
Worker	0.1589	0.0972	1.7124	5.4800e-003	0.6707	3.2600e-003	0.6739	0.1779	3.0000e-003	0.1809		565.2529	565.2529	0.0114	0.0116	568.9819
Total	0.1758	0.6912	1.9576	8.4800e-003	0.7794	6.4600e-003	0.7858	0.2091	6.0600e-003	0.2152		895.7097	895.7097	0.0316	0.0592	914.1328

3.13 P3 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4199	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0530	0.0324	0.5708	1.8300e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		188.4176	188.4176	3.8000e-003	3.8500e-003	189.6606
Total	0.0530	0.0324	0.5708	1.8300e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		188.4176	188.4176	3.8000e-003	3.8500e-003	189.6606

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4199	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.0530	0.0324	0.5708	1.8300e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		188.4176	188.4176	3.8000e-003	3.8500e-003	189.6606
Total	0.0530	0.0324	0.5708	1.8300e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		188.4176	188.4176	3.8000e-003	3.8500e-003	189.6606

3.14 P3 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.2663					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	22.4470	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0318	0.0194	0.3425	1.1000e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		113.0506	113.0506	2.2800e-003	2.3100e-003	113.7964

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	0.0318	0.0194	0.3425	1.1000e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		113.0506	113.0506	2.2800e-003	2.3100e-003	113.7964
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.2663					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	22.4470	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0318	0.0194	0.3425	1.1000e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		113.0506	113.0506	2.2800e-003	2.3100e-003	113.7964
Total	0.0318	0.0194	0.3425	1.1000e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		113.0506	113.0506	2.2800e-003	2.3100e-003	113.7964

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8280	0.8413	8.4070	0.0201	2.1988	0.0134	2.2123	0.5861	0.0125	0.5986		2,082.1448	2,082.1448	0.1178	0.0796	2,108.8091
Unmitigated	0.8280	0.8413	8.4070	0.0201	2.1988	0.0134	2.2123	0.5861	0.0125	0.5986		2,082.1448	2,082.1448	0.1178	0.0796	2,108.8091

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	248.88	276.76	213.52	846,809	846,809
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	28.32	28.62	25.65	95,617	95,617
Total	277.20	305.38	239.17	942,426	942,426

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.003869
Other Asphalt Surfaces	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.003869
Recreational Swimming Pool	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.003869
Single Family Housing	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.003869

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020
NaturalGas Unmitigated	0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020

5.2 Energy by Land Use - NaturalGas

Unmitigated

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1537.49	0.0166	0.1417	0.0603	9.0000e-004		0.0115	0.0115		0.0115	0.0115		180.8815	180.8815	3.4700e-003	3.3200e-003	181.9564
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	196.42	2.1200e-003	0.0181	7.7000e-003	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003		23.1082	23.1082	4.4000e-004	4.2000e-004	23.2455
Total		0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1.53749	0.0166	0.1417	0.0603	9.0000e-004		0.0115	0.0115		0.0115	0.0115		180.8815	180.8815	3.4700e-003	3.3200e-003	181.9564
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.19642	2.1200e-003	0.0181	7.7000e-003	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003		23.1082	23.1082	4.4000e-004	4.2000e-004	23.2455
Total		0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020

6.0 Area Detail

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917
Unmitigated	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8715					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	8.6967	0.6198	9.7477	0.0184		1.3470	1.3470		1.3470	1.3470	128.2154	666.0000	794.2154	0.0128	0.0235	801.5444
Landscaping	0.0925	0.0352	3.0596	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5143	5.5143	5.3200e-003		5.6473
Total	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8715					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	8.6967	0.6198	9.7477	0.0184		1.3470	1.3470		1.3470	1.3470	128.2154	666.0000	794.2154	0.0128	0.0235	801.5444
Landscaping	0.0925	0.0352	3.0596	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5143	5.5143	5.3200e-003		5.6473
Total	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Ranch Hills Planned Development - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Ranch Hills Planned Development
Orange County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	80.51	1000sqft	1.85	80,512.00	0
Recreational Swimming Pool	1.10	1000sqft	0.03	1,100.00	0
Condo/Townhouse	34.00	Dwelling Unit	2.13	85,000.00	97
Single Family Housing	3.00	Dwelling Unit	0.97	7,500.00	9

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - .
- Construction Phase - ..
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment - .
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition - .

Grading - .

Architectural Coating - .

Vehicle Trips - .

Construction Off-road Equipment Mitigation -

Waste Mitigation - .

Off-road Equipment - .

Off-road Equipment -

Woodstoves - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	290.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	870.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	870.00	0.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Parking	4,831.00	1,610.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	62,438.00	20,813.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00
tblArchitecturalCoating	ConstArea_Residential_Interior	187,313.00	62,438.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	230.00	156.00
tblConstructionPhase	NumDays	230.00	158.00
tblConstructionPhase	NumDays	230.00	158.00
tblConstructionPhase	NumDays	20.00	26.00
tblConstructionPhase	NumDays	8.00	79.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	18.00	9.00
tblConstructionPhase	NumDays	5.00	26.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
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tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblLandUse	LandUseSquareFeet	80,510.00	80,512.00
tblLandUse	LandUseSquareFeet	34,000.00	85,000.00
tblLandUse	LandUseSquareFeet	5,400.00	7,500.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.7353	27.6757	21.5808	0.0473	7.2503	1.2576	8.1920	3.4692	1.1695	4.3356	0.0000	4,692.0210	4,692.0210	1.1325	0.1323	4,759.7473
2023	23.0923	17.9655	18.2104	0.0354	7.2503	0.7758	8.0260	3.4692	0.7137	4.1829	0.0000	3,442.8614	3,442.8614	0.9323	0.0614	3,477.1803
2024	22.4819	14.1710	18.0167	0.0352	0.7794	0.6198	1.3992	0.2091	0.5830	0.7921	0.0000	3,424.9230	3,424.9230	0.6362	0.0600	3,458.7120
Maximum	23.0923	27.6757	21.5808	0.0473	7.2503	1.2576	8.1920	3.4692	1.1695	4.3356	0.0000	4,692.0210	4,692.0210	1.1325	0.1323	4,759.7473

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.7353	27.6757	21.5808	0.0473	2.9299	1.2576	3.8716	1.3801	1.1695	2.2465	0.0000	4,692.0210	4,692.0210	1.1325	0.1323	4,759.7473
2023	23.0923	17.9655	18.2104	0.0354	2.9299	0.7758	3.7057	1.3801	0.7137	2.0938	0.0000	3,442.8614	3,442.8614	0.9323	0.0614	3,477.1803

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2024	22.4819	14.1710	18.0167	0.0352	0.7794	0.6198	1.3992	0.2091	0.5830	0.7921	0.0000	3,424.9230	3,424.9230	0.6362	0.0600	3,458.7120
Maximum	23.0923	27.6757	21.5808	0.0473	2.9299	1.2576	3.8716	1.3801	1.1695	2.2465	0.0000	4,692.0210	4,692.0210	1.1325	0.1323	4,759.7473

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.55	0.00	49.05	58.46	0.00	44.88	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917
Energy	0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020
Mobile	0.8228	0.9035	8.3046	0.0193	2.1988	0.0134	2.2123	0.5861	0.0125	0.5986		2,002.5897	2,002.5897	0.1215	0.0829	2,030.3298
Total	11.6684	1.7182	21.1799	0.0389	2.1988	1.3903	3.5891	0.5861	1.3893	1.9754	128.2154	2,878.0938	3,006.3091	0.1435	0.1102	3,042.7234

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day										lb/day					
	Area	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235
Energy	0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020
Mobile	0.8228	0.9035	8.3046	0.0193	2.1988	0.0134	2.2123	0.5861	0.0125	0.5986		2,002.5897	2,002.5897	0.1215	0.0829	2,030.3298
Total	11.6684	1.7182	21.1799	0.0389	2.1988	1.3903	3.5891	0.5861	1.3893	1.9754	128.2154	2,878.0938	3,006.3091	0.1435	0.1102	3,042.7234

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2022	9/30/2022	6	26	
2	P1 Site Preparation	Site Preparation	10/1/2022	10/31/2022	6	26	
3	P1 Grading	Grading	11/1/2022	1/31/2023	6	79	
4	P1 Trenching	Trenching	2/1/2023	2/28/2023	6	24	
5	P1 Building Construction	Building Construction	3/1/2023	8/31/2023	6	158	
6	P1 Paving	Paving	9/1/2023	9/11/2023	6	9	
7	P1 Architectural Coating	Architectural Coating	9/12/2023	9/21/2023	6	9	
8	P2 Building Construction	Building Construction	9/22/2023	3/23/2024	6	158	
9	P2 Paving	Paving	3/24/2024	4/3/2024	6	9	
10	P2 Architectural Coating	Architectural Coating	4/4/2024	4/13/2024	6	9	
11	P3 Building Construction	Building Construction	4/14/2024	10/12/2024	6	156	
12	P3 Paving	Paving	10/14/2024	10/23/2024	6	9	

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

13	P3 Architectural Coating	Architectural Coating	10/24/2024	11/2/2024	6	9
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Acres of Grading (Site Preparation Phase): 13

Acres of Grading (Grading Phase): 79

Acres of Paving: 1.85

Residential Indoor: 62,438; Residential Outdoor: 20,813; Non-Residential Indoor: 870; Non-Residential Outdoor: 290; Striped Parking Area: 1,610

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
P1 Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
P1 Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
P1 Grading	Excavators	1	8.00	158	0.38
P1 Grading	Graders	1	8.00	187	0.41
P1 Grading	Rubber Tired Dozers	1	8.00	247	0.40
P1 Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
P1 Trenching	Excavators	1	8.00	158	0.38
P1 Trenching	Trenchers	2	8.00	78	0.50
P1 Building Construction	Cranes	1	7.00	231	0.29
P1 Building Construction	Forklifts	3	8.00	89	0.20
P1 Building Construction	Generator Sets	1	8.00	84	0.74
P1 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P1 Building Construction	Welders	1	8.00	46	0.45
P1 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P1 Paving	Pavers	1	8.00	130	0.42
P1 Paving	Paving Equipment	2	6.00	132	0.36
P1 Paving	Rollers	2	6.00	80	0.38

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

P1 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P1 Architectural Coating	Air Compressors	1	6.00	78	0.48
P2 Building Construction	Cranes	1	7.00	231	0.29
P2 Building Construction	Forklifts	3	8.00	89	0.20
P2 Building Construction	Generator Sets	1	8.00	84	0.74
P2 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P2 Building Construction	Welders	1	8.00	46	0.45
P2 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P2 Paving	Pavers	1	8.00	130	0.42
P2 Paving	Paving Equipment	2	6.00	132	0.36
P2 Paving	Rollers	2	6.00	80	0.38
P2 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P2 Architectural Coating	Air Compressors	1	6.00	78	0.48
P3 Building Construction	Cranes	1	7.00	231	0.29
P3 Building Construction	Forklifts	3	8.00	89	0.20
P3 Building Construction	Generator Sets	1	8.00	84	0.74
P3 Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
P3 Building Construction	Welders	1	8.00	46	0.45
P3 Paving	Cement and Mortar Mixers	2	6.00	9	0.56
P3 Paving	Pavers	1	8.00	130	0.42
P3 Paving	Paving Equipment	2	6.00	132	0.36
P3 Paving	Rollers	2	6.00	80	0.38
P3 Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
P3 Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	309.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

P1 Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P1 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P2 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Building Construction	9	60.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
P3 Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5745	0.0000	2.5745	0.3898	0.0000	0.3898			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	2.6392	25.7194	20.5941	0.0388	2.5745	1.2427	3.8171	0.3898	1.1553	1.5451		3,746.7812	3,746.7812	1.0524		3,773.0920

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0470	1.9230	0.5274	7.0900e-003	0.2073	0.0140	0.2213	0.0568	0.0134	0.0702		803.7055	803.7055	0.0765	0.1287	843.9794
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0333	0.4594	1.3900e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		141.5344	141.5344	3.5500e-003	3.5300e-003	142.6759
Total	0.0961	1.9563	0.9867	8.4800e-003	0.3749	0.0149	0.3899	0.1012	0.0143	0.1155		945.2398	945.2398	0.0801	0.1323	986.6552

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0040	0.0000	1.0040	0.1520	0.0000	0.1520			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	2.6392	25.7194	20.5941	0.0388	1.0040	1.2427	2.2467	0.1520	1.1553	1.3073	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0470	1.9230	0.5274	7.0900e-003	0.2073	0.0140	0.2213	0.0568	0.0134	0.0702		803.7055	803.7055	0.0765	0.1287	843.9794
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0333	0.4594	1.3900e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		141.5344	141.5344	3.5500e-003	3.5300e-003	142.6759
Total	0.0961	1.9563	0.9867	8.4800e-003	0.3749	0.0149	0.3899	0.1012	0.0143	0.1155		945.2398	945.2398	0.0801	0.1323	986.6552

3.3 P1 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.1665	12.1449	8.0579	0.0148		0.5976	0.5976		0.5498	0.5498		1,429.5133	1,429.5133	0.4623		1,441.0716
Total	1.1665	12.1449	8.0579	0.0148	6.5523	0.5976	7.1499	3.3675	0.5498	3.9173		1,429.5133	1,429.5133	0.4623		1,441.0716

Unmitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938
Total	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.1665	12.1449	8.0579	0.0148		0.5976	0.5976		0.5498	0.5498	0.0000	1,429.5133	1,429.5133	0.4623		1,441.0716
Total	1.1665	12.1449	8.0579	0.0148	2.5554	0.5976	3.1530	1.3133	0.5498	1.8631	0.0000	1,429.5133	1,429.5133	0.4623		1,441.0716

Mitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938
Total	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938

3.4 P1 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	1.9486	20.8551	15.2727	0.0297	7.0826	0.9409	8.0234	3.4247	0.8656	4.2903		2,872.0464	2,872.0464	0.9289		2,895.2684

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0333	0.4594	1.3900e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		141.5344	141.5344	3.5500e-003	3.5300e-003	142.6759
Total	0.0492	0.0333	0.4594	1.3900e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		141.5344	141.5344	3.5500e-003	3.5300e-003	142.6759

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	1.9486	20.8551	15.2727	0.0297	2.7622	0.9409	3.7031	1.3357	0.8656	2.2012	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0333	0.4594	1.3900e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		141.5344	141.5344	3.5500e-003	3.5300e-003	142.6759
Total	0.0492	0.0333	0.4594	1.3900e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		141.5344	141.5344	3.5500e-003	3.5300e-003	142.6759

3.4 P1 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	1.7109	17.9359	14.7507	0.0297	7.0826	0.7749	7.8575	3.4247	0.7129	4.1377		2,872.6910	2,872.6910	0.9291		2,895.9182

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0462	0.0297	0.4279	1.3500e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		137.8735	137.8735	3.2200e-003	3.2900e-003	138.9334
Total	0.0462	0.0297	0.4279	1.3500e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		137.8735	137.8735	3.2200e-003	3.2900e-003	138.9334

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	1.7109	17.9359	14.7507	0.0297	2.7622	0.7749	3.5371	1.3357	0.7129	2.0486	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.0462	0.0297	0.4279	1.3500e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		137.8735	137.8735	3.2200e-003	3.2900e-003	138.9334
Total	0.0462	0.0297	0.4279	1.3500e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		137.8735	137.8735	3.2200e-003	3.2900e-003	138.9334

3.5 P1 Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8820	8.0150	8.4419	0.0119		0.5244	0.5244		0.4825	0.4825		1,154.5054	1,154.5054	0.3734		1,163.8401
Total	0.8820	8.0150	8.4419	0.0119		0.5244	0.5244		0.4825	0.4825		1,154.5054	1,154.5054	0.3734		1,163.8401

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0246	0.0158	0.2282	7.2000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		73.5325	73.5325	1.7200e-003	1.7500e-003	74.0978
Total	0.0246	0.0158	0.2282	7.2000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		73.5325	73.5325	1.7200e-003	1.7500e-003	74.0978

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8820	8.0150	8.4419	0.0119		0.5244	0.5244		0.4825	0.4825	0.0000	1,154.5054	1,154.5054	0.3734		1,163.8401
Total	0.8820	8.0150	8.4419	0.0119		0.5244	0.5244		0.4825	0.4825	0.0000	1,154.5054	1,154.5054	0.3734		1,163.8401

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0246	0.0158	0.2282	7.2000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		73.5325	73.5325	1.7200e-003	1.7500e-003	74.0978
Total	0.0246	0.0158	0.2282	7.2000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		73.5325	73.5325	1.7200e-003	1.7500e-003	74.0978

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0166	0.6224	0.2549	3.0600e-003	0.1087	3.0800e-003	0.1118	0.0313	2.9400e-003	0.0342		336.1576	336.1576	0.0199	0.0483	351.0406
Worker	0.1848	0.1188	1.7115	5.3900e-003	0.6707	3.4300e-003	0.6741	0.1779	3.1600e-003	0.1810		551.4939	551.4939	0.0129	0.0132	555.7337
Total	0.2013	0.7411	1.9664	8.4500e-003	0.7794	6.5100e-003	0.7859	0.2091	6.1000e-003	0.2153		887.6515	887.6515	0.0328	0.0614	906.7743

Mitigated Construction On-Site

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0166	0.6224	0.2549	3.0600e-003	0.1087	3.0800e-003	0.1118	0.0313	2.9400e-003	0.0342		336.1576	336.1576	0.0199	0.0483	351.0406
Worker	0.1848	0.1188	1.7115	5.3900e-003	0.6707	3.4300e-003	0.6741	0.1779	3.1600e-003	0.1810		551.4939	551.4939	0.0129	0.0132	555.7337
Total	0.2013	0.7411	1.9664	8.4500e-003	0.7794	6.5100e-003	0.7859	0.2091	6.1000e-003	0.2153		887.6515	887.6515	0.0328	0.0614	906.7743

3.7 P1 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4566	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0616	0.0396	0.5705	1.8000e-003	0.2236	1.1400e-003	0.2247	0.0593	1.0500e-003	0.0603		183.8313	183.8313	4.2900e-003	4.3800e-003	185.2446
Total	0.0616	0.0396	0.5705	1.8000e-003	0.2236	1.1400e-003	0.2247	0.0593	1.0500e-003	0.0603		183.8313	183.8313	4.2900e-003	4.3800e-003	185.2446

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4566	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0616	0.0396	0.5705	1.8000e-003	0.2236	1.1400e-003	0.2247	0.0593	1.0500e-003	0.0603		183.8313	183.8313	4.2900e-003	4.3800e-003	185.2446
Total	0.0616	0.0396	0.5705	1.8000e-003	0.2236	1.1400e-003	0.2247	0.0593	1.0500e-003	0.0603		183.8313	183.8313	4.2900e-003	4.3800e-003	185.2446

3.8 P1 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.8637					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	23.0553	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0370	0.0238	0.3423	1.0800e-003	0.1341	6.9000e-004	0.1348	0.0356	6.3000e-004	0.0362		110.2988	110.2988	2.5800e-003	2.6300e-003	111.1467
Total	0.0370	0.0238	0.3423	1.0800e-003	0.1341	6.9000e-004	0.1348	0.0356	6.3000e-004	0.0362		110.2988	110.2988	2.5800e-003	2.6300e-003	111.1467

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.8637					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	23.0553	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0370	0.0238	0.3423	1.0800e-003	0.1341	6.9000e-004	0.1348	0.0356	6.3000e-004	0.0362		110.2988	110.2988	2.5800e-003	2.6300e-003	111.1467
Total	0.0370	0.0238	0.3423	1.0800e-003	0.1341	6.9000e-004	0.1348	0.0356	6.3000e-004	0.0362		110.2988	110.2988	2.5800e-003	2.6300e-003	111.1467

3.9 P2 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0166	0.6224	0.2549	3.0600e-003	0.1087	3.0800e-003	0.1118	0.0313	2.9400e-003	0.0342		336.1576	336.1576	0.0199	0.0483	351.0406
Worker	0.1848	0.1188	1.7115	5.3900e-003	0.6707	3.4300e-003	0.6741	0.1779	3.1600e-003	0.1810		551.4939	551.4939	0.0129	0.0132	555.7337
Total	0.2013	0.7411	1.9664	8.4500e-003	0.7794	6.5100e-003	0.7859	0.2091	6.1000e-003	0.2153		887.6515	887.6515	0.0328	0.0614	906.7743

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0166	0.6224	0.2549	3.0600e-003	0.1087	3.0800e-003	0.1118	0.0313	2.9400e-003	0.0342		336.1576	336.1576	0.0199	0.0483	351.0406
Worker	0.1848	0.1188	1.7115	5.3900e-003	0.6707	3.4300e-003	0.6741	0.1779	3.1600e-003	0.1810		551.4939	551.4939	0.0129	0.0132	555.7337
Total	0.2013	0.7411	1.9664	8.4500e-003	0.7794	6.5100e-003	0.7859	0.2091	6.1000e-003	0.2153		887.6515	887.6515	0.0328	0.0614	906.7743

3.9 P2 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0163	0.6206	0.2529	3.0100e-003	0.1087	3.2200e-003	0.1119	0.0313	3.0800e-003	0.0344		330.9549	330.9549	0.0201	0.0477	345.6796
Worker	0.1743	0.1067	1.5970	5.2200e-003	0.6707	3.2600e-003	0.6739	0.1779	3.0000e-003	0.1809		538.2693	538.2693	0.0117	0.0123	542.2247
Total	0.1906	0.7273	1.8499	8.2300e-003	0.7794	6.4800e-003	0.7858	0.2091	6.0800e-003	0.2152		869.2241	869.2241	0.0318	0.0600	887.9043

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0163	0.6206	0.2529	3.0100e-003	0.1087	3.2200e-003	0.1119	0.0313	3.0800e-003	0.0344		330.9549	330.9549	0.0201	0.0477	345.6796

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.1743	0.1067	1.5970	5.2200e-003	0.6707	3.2600e-003	0.6739	0.1779	3.0000e-003	0.1809		538.2693	538.2693	0.0117	0.0123	542.2247
Total	0.1906	0.7273	1.8499	8.2300e-003	0.7794	6.4800e-003	0.7858	0.2091	6.0800e-003	0.2152		869.2241	869.2241	0.0318	0.0600	887.9043

3.10 P2 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4199	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0581	0.0356	0.5323	1.7400e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		179.4231	179.4231	3.9000e-003	4.1000e-003	180.7416

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	0.0581	0.0356	0.5323	1.7400e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		179.4231	179.4231	3.9000e-003	4.1000e-003	180.7416
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4199	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0581	0.0356	0.5323	1.7400e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		179.4231	179.4231	3.9000e-003	4.1000e-003	180.7416
Total	0.0581	0.0356	0.5323	1.7400e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		179.4231	179.4231	3.9000e-003	4.1000e-003	180.7416

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.11 P2 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.2663					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	22.4470	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0349	0.0213	0.3194	1.0400e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		107.6539	107.6539	2.3400e-003	2.4600e-003	108.4449
Total	0.0349	0.0213	0.3194	1.0400e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		107.6539	107.6539	2.3400e-003	2.4600e-003	108.4449

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.2663					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	22.4470	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0349	0.0213	0.3194	1.0400e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		107.6539	107.6539	2.3400e-003	2.4600e-003	108.4449
Total	0.0349	0.0213	0.3194	1.0400e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		107.6539	107.6539	2.3400e-003	2.4600e-003	108.4449

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0163	0.6206	0.2529	3.0100e-003	0.1087	3.2200e-003	0.1119	0.0313	3.0800e-003	0.0344		330.9549	330.9549	0.0201	0.0477	345.6796
Worker	0.1743	0.1067	1.5970	5.2200e-003	0.6707	3.2600e-003	0.6739	0.1779	3.0000e-003	0.1809		538.2693	538.2693	0.0117	0.0123	542.2247
Total	0.1906	0.7273	1.8499	8.2300e-003	0.7794	6.4800e-003	0.7858	0.2091	6.0800e-003	0.2152		869.2241	869.2241	0.0318	0.0600	887.9043

Mitigated Construction On-Site

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0163	0.6206	0.2529	3.0100e-003	0.1087	3.2200e-003	0.1119	0.0313	3.0800e-003	0.0344		330.9549	330.9549	0.0201	0.0477	345.6796
Worker	0.1743	0.1067	1.5970	5.2200e-003	0.6707	3.2600e-003	0.6739	0.1779	3.0000e-003	0.1809		538.2693	538.2693	0.0117	0.0123	542.2247
Total	0.1906	0.7273	1.8499	8.2300e-003	0.7794	6.4800e-003	0.7858	0.2091	6.0800e-003	0.2152		869.2241	869.2241	0.0318	0.0600	887.9043

3.13 P3 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4199	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0581	0.0356	0.5323	1.7400e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		179.4231	179.4231	3.9000e-003	4.1000e-003	180.7416
Total	0.0581	0.0356	0.5323	1.7400e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		179.4231	179.4231	3.9000e-003	4.1000e-003	180.7416

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	0.5386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4199	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0581	0.0356	0.5323	1.7400e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		179.4231	179.4231	3.9000e-003	4.1000e-003	180.7416
Total	0.0581	0.0356	0.5323	1.7400e-003	0.2236	1.0900e-003	0.2246	0.0593	1.0000e-003	0.0603		179.4231	179.4231	3.9000e-003	4.1000e-003	180.7416

3.14 P3 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.2663					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	22.4470	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0349	0.0213	0.3194	1.0400e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		107.6539	107.6539	2.3400e-003	2.4600e-003	108.4449
Total	0.0349	0.0213	0.3194	1.0400e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		107.6539	107.6539	2.3400e-003	2.4600e-003	108.4449

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.2663					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	22.4470	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0349	0.0213	0.3194	1.0400e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		107.6539	107.6539	2.3400e-003	2.4600e-003	108.4449
Total	0.0349	0.0213	0.3194	1.0400e-003	0.1341	6.5000e-004	0.1348	0.0356	6.0000e-004	0.0362		107.6539	107.6539	2.3400e-003	2.4600e-003	108.4449

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8228	0.9035	8.3046	0.0193	2.1988	0.0134	2.2123	0.5861	0.0125	0.5986		2,002.5897	2,002.5897	0.1215	0.0829	2,030.3298
Unmitigated	0.8228	0.9035	8.3046	0.0193	2.1988	0.0134	2.2123	0.5861	0.0125	0.5986		2,002.5897	2,002.5897	0.1215	0.0829	2,030.3298

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	248.88	276.76	213.52	846,809	846,809
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	28.32	28.62	25.65	95,617	95,617
Total	277.20	305.38	239.17	942,426	942,426

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.003869
Other Asphalt Surfaces	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.003869
Recreational Swimming Pool	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.003869
Single Family Housing	0.546200	0.059546	0.185910	0.127866	0.024295	0.006605	0.014499	0.004906	0.000657	0.000381	0.024552	0.000713	0.003869

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020
NaturalGas Unmitigated	0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1537.49	0.0166	0.1417	0.0603	9.0000e-004		0.0115	0.0115		0.0115	0.0115		180.8815	180.8815	3.4700e-003	3.3200e-003	181.9564
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	196.42	2.1200e-003	0.0181	7.7000e-003	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003		23.1082	23.1082	4.4000e-004	4.2000e-004	23.2455
Total		0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020

Mitigated

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1.53749	0.0166	0.1417	0.0603	9.0000e-004		0.0115	0.0115		0.0115	0.0115		180.8815	180.8815	3.4700e-003	3.3200e-003	181.9564
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.19642	2.1200e-003	0.0181	7.7000e-003	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003		23.1082	23.1082	4.4000e-004	4.2000e-004	23.2455
Total		0.0187	0.1598	0.0680	1.0200e-003		0.0129	0.0129		0.0129	0.0129		203.9898	203.9898	3.9100e-003	3.7400e-003	205.2020

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917
Unmitigated	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8715					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	8.6967	0.6198	9.7477	0.0184		1.3470	1.3470		1.3470	1.3470	128.2154	666.0000	794.2154	0.0128	0.0235	801.5444
Landscaping	0.0925	0.0352	3.0596	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5143	5.5143	5.3200e-003		5.6473
Total	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8715					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	8.6967	0.6198	9.7477	0.0184		1.3470	1.3470		1.3470	1.3470	128.2154	666.0000	794.2154	0.0128	0.0235	801.5444
Landscaping	0.0925	0.0352	3.0596	1.6000e-004		0.0169	0.0169		0.0169	0.0169		5.5143	5.5143	5.3200e-003		5.6473

Ranch Hills Planned Development - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	10.8269	0.6550	12.8072	0.0186		1.3639	1.3639		1.3639	1.3639	128.2154	671.5143	799.7297	0.0181	0.0235	807.1917
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7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Appendix D

Historical Resources Assessment



Historical Resource Assessment of the Tustin Hills Racquet Club, Orange County, California

Submitted to:

Psomas
3 Hutton Center Drive, Suite 200
Santa Ana, CA 92807

Technical Report 19-368

October 30, 2019

HISTORICAL RESOURCE ASSESSMENT OF THE TUSTIN HILLS RACQUET CLUB, ORANGE COUNTY, CALIFORNIA

Prepared by:
Justin Castells, M.A.

Prepared for:
Psomas

Technical Report No. 19-368

PaleoWest Archaeology
3990 Old Town Avenue, Suite C101
San Diego, California 92110
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October 30, 2019

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MANAGEMENT SUMMARY

The Applicant proposes to demolish the existing Tustin Hills Racquet Club to allow construction of 37 single family attached townhome units in 17 buildings and 3 single family detached homes, with related site improvements for transportation and outdoor recreation (Project). PaleoWest was contracted by Psomas to complete a Historical Resource Assessment Report of the Tustin Hills Racquet Club located at 11782 Simon Ranch Road, Santa Ana, CA 92705 (Tustin Hills Racquet Club) in compliance with the California Environmental Quality Act (CEQA). The County of Orange is the Lead Agency for the purposes of the CEQA.

This report summarizes the methods and results of the historical resource investigation of the Tustin Hills Racquet Club. This investigation included background research and survey and evaluation of the approximately 5.88-acre property. The purpose of the investigation was to determine the potential for the Project to impact historical resources under CEQA.

The South Central Coastal Information Center (SCCIC) search included a review of all recorded sites and cultural resources reports on file for the specified area. The results from the information center indicated that five cultural resources investigations were previously conducted within the 0.25-mile search radius (herein study area). Of the five previous investigations, the SCCIC indicated that four of the studies overlapped with the current Project area. The SCCIC search identified no prehistoric or historic archaeological sites located within the study area or within the Project area. No previously recorded historical built environment resources are within the Project area or the study area. The Tustin Hills Racquet Club was constructed in 1958 and is, therefore, a historic-period property.

An intensive pedestrian survey of the Project area was conducted by PaleoWest on October 24, 2019. During the field survey, the exteriors of the subject buildings within the Project area were analyzed, photographed, and recorded. 903-917 East 25th Street was evaluated for historic significance by applying the criteria of the California Register of Historical Resources (CRHR). PaleoWest recommends that the Tustin Hills Racquet Club is not eligible for inclusion in the CRHR. Therefore, the Tustin Hills Racquet Club is not considered a historical resource for the purposes of CEQA.

1.0 INTRODUCTION

The Applicant proposes to demolish the existing Tustin Hills Racquet Club to allow construction of 37 single family attached townhome units in 17 buildings and 3 single family detached homes, with related site improvements for transportation and outdoor recreation (Project). PaleoWest was contracted by Psomas to complete a Historical Resource Assessment Report for the Tustin Hills Racquet Club located at 11782 Simon Ranch Road, Orange County, California (Tustin Hills Racquet Club) in compliance with the California Environmental Quality Act (CEQA). The County of Orange is the Lead Agency for the purposes of the CEQA.

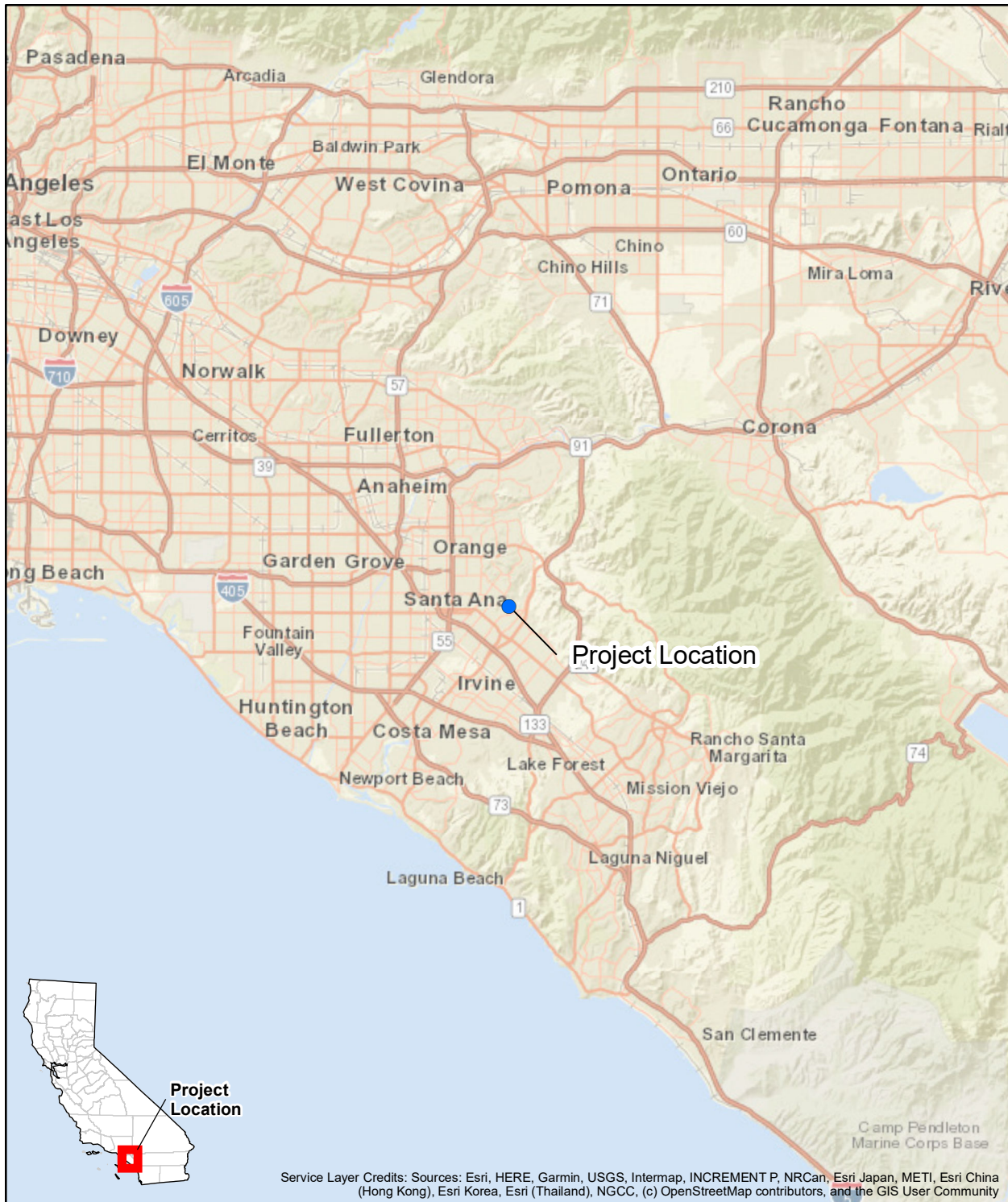
1.1 PROJECT LOCATION AND DESCRIPTION

Tustin Hills Racquet Club is located on approximately 5.88 acres in Orange County, California (Figure 1-1). The Project area is situated within the Orange, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle (Figure 1-2). The Project area includes a one-story ranch-style clubhouse, 11 full tennis courts and one half-court, a swimming pool, hardscape, and landscaped vegetation (Figure 1-3). The elevation of the Project area is approximately 260 feet above mean sea level (amsl).

The Project includes the demolition of all existing Tustin Hills Racquet Club facilities.

Report Organization

This report documents the results of a historical resource investigation conducted for the proposed Project. Chapter 1 has introduced the Project location and description. Chapter 2 states the regulatory context that should be considered for the Project. The results of the cultural resource literature and records search conducted at the South Central Coastal Information Center (SCCIC) is presented in Chapter 3. Chapter 4 synthesizes the historical context of the Project area and surrounding region. The field methods employed during this investigation and findings are outlined in Chapter 5 with conclusions provided in Chapter 6. This is followed by bibliographic references. The Department of Parks and Recreation (DPR) 523 Series forms for the Tustin Hills Racquet Club are located in Appendix A and the results of the SCCIC records search are included in confidential Appendix B.



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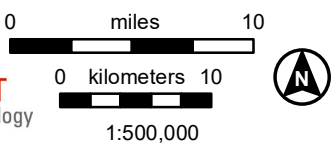
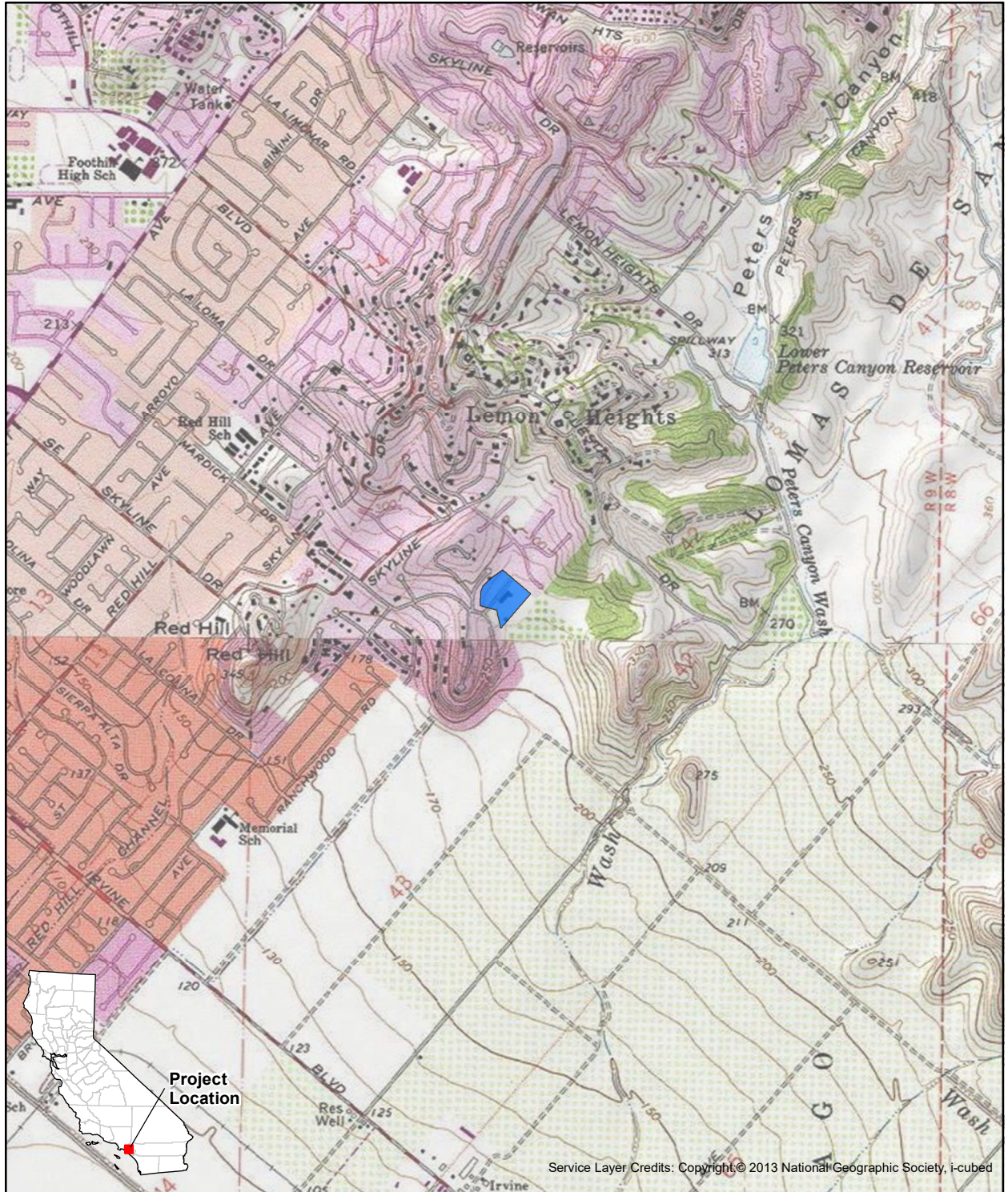


Figure 1-1
Project Vicinity Map
USGS 7.5' Quadrangle:
Orange, CA (1977)
NAD 83 UTM Zone 11

 Project Area



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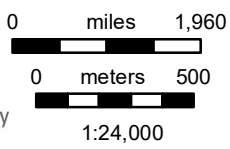


Figure 1-2
Project Location Map
USGS 7.5' Quadrangle:
Orange, CA (1977)
NAD 83 UTM Zone 11

 Project Area

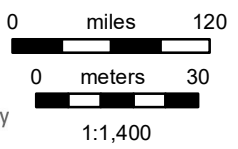


Figure 1-3
USGS 7.5' Quadrangle:
Orange, CA (1977)
NAD 83 UTM Zone 11

 Project Area

2.0 REGULATORY CONTEXT

2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The proposed Project is subject to compliance with CEQA, as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the project's impact on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). The first step in the process is to identify cultural resources that may be impacted by the project and then determine whether the resources are “historically significant” resources.

CEQA defines historically significant resources as “resources listed or eligible for listing in the California Register of Historical Resources (CRHR)” (Public Resources Code Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets any of the following criteria for listing on the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Public Resources Code Section 5024.1).

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant impact on important cultural resources, deemed “historically significant,” then project alternatives and mitigation measures must be considered. Additionally, any proposed project that may affect historically significant cultural resources must be submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the responsible agency and prior to construction.

3.0 RESEARCH METHODS

A literature review and records search were conducted at the SCCIC at California State University, Fullerton on October 24, 2019. This inventory effort included the Project area and a 0.25-mile radius around the Project area, collectively termed the Project study area. The objective of this records search was to identify prehistoric or historical cultural resources that have been recorded within the study area during prior cultural resource investigations.

3.1 RECORDS SEARCH

The SCCIC search included a review of all recorded sites and cultural resources reports on file for the specified area. The results from the information center indicated that five cultural resources investigations were previously conducted within the 0.25-mile search radius. Of the five previous investigations, the SCCIC indicated that four of the studies overlapped with the current Project area.

The SCCIC search identified no prehistoric or historic archaeological sites located within the study area or within the Project area. No previously recorded historical built environment resources are within the Project area or the study area. A copy of the records search results in is included in confidential Appendix B.

3.2 ADDITIONAL SOURCES

In addition to the records search, general contextual and site-specific research was conducted for the subject property and the surrounding area. Additional sources consulted include the National Register of Historic Places, the Office of Historic Preservation Directory of Properties in the Historic Property Data File, Orange County Assessor, historic newspaper databases, historic Sanborn Fire Insurance Maps, and the Los Angeles Public Library databases. There are no listed historic properties, historical resources, or historic landmarks recorded within the Project area.

Historical maps consulted include the Orange (1964, 1972, 1974, and 1981) 7.5-minute USGS quadrangles. The Tustin Hills racquet Club first appears on the 1964 map and on all subsequent maps.

4.0 HISTORICAL OVERVIEW

This section of the report summarizes information regarding the historic context of the Project area. Overarching historic themes were identified to establish a historic context within which to evaluate historic-period properties within the Project area. These themes include the history of Tustin, tennis in California, and the Tustin Hills Racquet Club.

4.1 TUSTIN

Spanish explorers with the expedition led by Don Gaspar de Portola first entered what is now Orange County in 1769, however; the first permanent European settlement in the region was not established until 1776 with the founding of Mission San Juan Capistrano. In 1809 the Spanish Government granted Rancho Santiago de Santa Ana, which includes present day Tustin, Santa Ana, Orange, Olive, El Modena, Costa Mesa, and parts of Newport, to Jose Antonio Yorba (Lovret 2011). In 1868 Columbus Tustin and his partner Nelson O. Stafford each invested \$2,500 to buy 1,359 acres of the Santiago de Santa Ana Land Grant. The partners split the land with Tustin taking approximately 840 acres and later purchasing an additional 159 acres from Stafford. In 1870 Tustin moved his family from Petaluma, where he and Stafford owned a carriage-making business, to the land he purchased (Ball et. al. 2011). Tustin filled the original plat map for Tustin City in 1870-1871 and his sister Barbara was the first person to purchase land from him. In order to attract settlers to his venture, Tustin began giving free lots to anyone who would build on them and by 1874 the community began to take shape with many permanent residences and businesses. The community continued to grow until 1877 when the Southern Pacific Railway bypassed Tustin for Santa Ana as the terminus of the newly expanded rail line from Anaheim (Lovret 2011).

During the 20th century, Tustin remained largely rural with an economy supported by citrus orchards. Development was slow until the 1920s when Tustin experience a period of modest residential growth. Tustin built its own high school in 1922. By 1927, the population topped 900 and the citizens voted to incorporate as a city. The new City Council elected Byron Crawford the first mayor. With the start of World War II, three military bases (Santa Ana Army Air Base, the El Toro Marine Corps Air Station, and the Navy's Lighter-Than-Air Base) were constructed in and near Tustin resulting in a dramatic increase in residential and commercial development to help support military operations. Tustin grew at a rapid pace in the post-War years due to the housing boom of the 1950s. A devastating citrus disease decimated orange groves in the mid-1950s, forcing landowners to sell to developers who transformed the groves into large housing tracts (Tustin Area Historical Society 2019).

4.2 TENNIS IN CALIFORNIA

The origins of tennis can be traced to handball games developed 12th century France. By the 16th century the game had evolved from hitting a ball with a bare hand or glove to the use rackets. It was also during the 16th century that the game began to increasingly be played indoors and regularized rules were developed. The game spread throughout Europe and by the 1860s more standardized rules were developed and outside courts became more common. Major Walter Clopton Wingfield of England created a standardized set of rules in 1873 or 1874 on which modern tennis is based (Kimball 2017).

The origins of tennis in the United States is largely contested, but credit often goes to one of three individuals who reportedly set up games in 1874. Mary Outerbridge who reportedly brought a tennis net back from Bermuda that she set up in Staten Island, New York, James White reportedly set up a game on the lawn of William Appleton in Nahant, Massachusetts as did Martha Summerhayes who reportedly set up a game at Camp Apache in the Arizona Territory (Kimball 2017).

The first tennis match billed as a “national championship” in the United States was held on Staten island in 1880. A year later, in 1881, the United States Tennis Association was formed (Kimball 2017).

The first tennis club to be founded in California, and the oldest west of the Mississippi River, is the California Tennis Club in San Francisco in 1884 (California Tennis Club 2019). In 1895, the Ojai Valley Tennis Club was established in Ojai, California making it among the earliest clubs dedicated to tennis in Southern California (Ojai Valley inn 2019). Many other tennis clubs were established in Southern California throughout the Twentieth Century including the Los Angeles Tennis Club in 1920 (Los Angeles Tennis Club 2019). By the mid-twentieth century many affluent communities in Southern California boasted private tennis clubs.

4.3 TUSTIN HILLS RACQUET CLUB

The Tustin Hills Racquet Club was established in 1958 and is considered the first private tennis club to be established in Orange County (Tustin Hills Racquet Club 2019). In 1976 the club was purchased by Charles and Janis Pate from the previous owners, Rolf Engen and Warren Finely. Among the notable tennis players who have played at the club were former Tustin mayor and Wimbledon contender, and college and pro players including Tracy Willis, Carlos Bustos, Bill Behrensd, and Terry Marcoline (Leach 1999). Over the years the club has hosted countless weddings, events, and tennis tournaments.

A review of historic aerials shows that between 1946 and 1952 the surrounding area was redeveloped from citrus orchards to residential tracts. The construction of the Tustin Hills Racquet Club coincided with this residential development. Aerials from 1963 show the clubhouse building, at least four tennis courts, two of which correspond with extant tennis courts, and the clubhouse. By 1966 there are at least six tennis courts visible, four of which that correspond with extant tennis courts and an additional two tennis courts that correspond with extant tennis courts are visible in the 1972 aerial. Between 1972 and 1980 the property was configured as it is today with 11 tennis courts, a pool with associated facilities, and a pergola on the southwest elevation of the clubhouse (NETR 2019).

5.0 FIELD INVESTIGATION

5.1 FIELD METHODS

A pedestrian survey of the Project area was conducted by PaleoWest on October 24, 2019. During the field survey, the exteriors of the buildings within the Project area were analyzed, photographed, and recorded. Any building or structure determined to have been built prior to 1974 or to be potentially eligible for the CRHR were formally evaluated on DPR 523 series forms. The resulting forms are included as Appendix A.

5.2 TUSTIN HILLS RACQUET CLUB

Tustin Hills Racquet Club is comprised of a one-story ranch-style clubhouse constructed in 1958, a pool constructed between 1972 and 1980, tennis courts constructed between 1958 and 1980, hardscape and landscaped vegetation. The club house has an irregular plan with a low-pitched cross hipped asphalt shingle roof. The building had board-and-batten and stucco siding. The northwest elevation is the primary façade and roughly has a U-shape. The primary entrance is located off center on the elevation where the elevation recesses. The roofline extends over the entry to form a small cover. The entry door is wood and is flanked by two fixed windows. The portion of the building features board-and-batten siding with decorative cobble siding on the bottom third of the section. The cobble siding extends onto the bottom 5th of north portion of the south portion of the elevation. North of the entry door are fixed multi-light windows and decorative cobble and board-and-batten siding. The north portion of the elevation is clad in stucco and features an entrance door with a panel window. The entry door is flanked by one fixed window to the north and two fixed windows to the south. Two rectangular multi-light fixed windows are located on the south portion of this section of the elevation. The south portion of the elevation features stucco siding. The south portion of the elevation features fixed multi-light windows, vents, and utility doors. The south and north elevation features stucco siding. The south portion of the southeast elevation features two sets of double doors with glass panels. Each set of doors is flanked on either side by fixed windows. The enter portion of the elevation features a hipped patio that extends out under the roofline and is supported by wood poles. Glass doors and windows are located on the portions of the elevation beneath the patio cover. The north portion of the elevation has board-and-batten siding, entrance doors, windows and a pergola.



Figure 5-1 Clubhouse, southeast elevation, facing north



Figure 5-2 Clubhouse, northwest elevation, facing north



Figure 5-3 Clubhouse, northwest elevation, facing south



Figure 5-4 Clubhouse, northwest elevation, facing south



Figure 5-5 Representative view of tennis courts, facing southeast



Figure 5-6 Swimming Pool, facing west

5.2.1 California Register of Historical Resources Evaluation

The following presents an assessment of the historical significance of the Tustin Hills Racquet Club by applying the procedure and criteria for the CRHR. The purpose of this assessment is to evaluate the eligibility of the resource for listing on the CRHR.

CRHR Criterion 1: The Tustin Hills Racquet Club does not meet CRHR Criterion 1 for association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. The racquet club was constructed in 1958 during a period that corresponds with the residential growth of the north Tustin area. While the earliest private tennis club to be constructed in orange County, the inclusion of private and public recreational facilities was a common development as large housing tracts, particularly those in affluent areas, we designed and built. While the club is the earliest in Orange County, it is not the earliest within the state of California or within southern California. Research has yielded no information to suggest that the development of the tennis club fundamentally affected the history of recreation in the area. And while its presence made the immediate surrounding area more attractive to potential homeowners, there is no indication that the tennis club was crucial to the development of Orange County. Therefore, the Tustin Hills Racquet Club is not eligible for the CRHR under Criterion 1.

CRHR Criterion 2: The Tustin Hills Racquet Club does not meet CRHR Criterion 2 for any direct associations with the productive lives of persons important in local, state, or national history. While many players have utilized the club over its history, including professional players, research has yielded no information to suggest that any having achieved a level of historical significance or that any persons that have achieved historical significance did so based on their specific associated with this property. Therefore, the Tustin Hills Racquet Club is not eligible for the CRHR under Criterion 2.

CRHR Criterion 3: The Tustin Hills Racquet Club does not to meet CRHR Criterion 3 for embodying the distinctive characteristics of a type, period, and method of construction, or as the work of an important creative individual, or as having high artistic value. The ranch style clubhouse was constructed in 1958. It is a common and unremarkable example of this style and property type. It is one of countless buildings and many clubhouses constructed in this style during the mid-twentieth century. Research has yielded information to suggest that the layout of the property represents a departure from standard practices in the development of private tennis clubs. The architect and builder were not identified, however; it is unlikely that the clubhouse and the rest of the property are the work of a master. Therefore, the Tustin Hills Racquet Club is not eligible for the CRHR under Criterion 3.

CRHR Criterion 4: The Tustin Hills Racquet Club does not meet CRHR Criterion 4 since it is unlikely to yield information important to prehistory or history. This criterion is usually reserved to address archaeological resources, which were not addressed as part of this study. It is unlikely that this property has the potential to broaden our understanding of history. Therefore, Tustin Hills racquet Club is not eligible for the CRHR under Criterion 4.

6.0 CONCLUSIONS AND MANAGEMENT RECOMMENDATIONS

The Tustin Hills Racquet Club was evaluated for historical significance by applying the criteria of the CRHR using data gathered during the pedestrian survey and information acquired through historical research. PaleoWest recommends that the Tustin Hills Racquet Club is not eligible for the CRHR under any criteria. Therefore, the Tustin Hills Racquet Club is not considered a historical resource for the purposes of CEQA.

7.0 REFERENCES

- Ball, Guy and the Tustin Area Historical Society
2011 *Images of America: Tustin*. Arcadia Publishing: Charleston, S.C.
- California Tennis Club
2019 “History.” Accessed at: <https://www.calclubtennis.com/history>
- Kimball, Warren F.
2017 *The United States Tennis Association: Raising the Game*. University of Nebraska Press: Lincoln
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1999 “Racquet Club turns 40.” *The Tustin News*, August 12, 1999; pg. 1
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2019 “Ojai Tennis History.” Accessed at: <https://www.ojavalleyinn.com/recreation/ojai-california-recreation/ojai-california-tennis-resort/ojai-tennis-history>.
- Tustin Area Historical Society
2019 “Tustin History.” Accessed at: <http://www.tustinhistory.com/tustin-history.htm>
- Tustin Hills Racquet Club
2019 “About Tustin Hills Racquet Club.” Accessed at: <https://tustinhillsracquetclub.com/about/>.
- U.S. Geological Survey, Washington, D.C. (USGS)
1964 Orange, California (1:12,000) topographic quadrangle.
1972 Orange es, California (1:12,000) topographic quadrangle.
1974 Orange, California (1:12,000) topographic quadrangle.
1981 Orange, California (1:12,000) topographic quadrangle.



***Appendix A.
Tustin Hills Racquet Club DPR***

Other Listings
Review Code

Reviewer

Date

Page 1 of 11

*Resource Name or #: Tustin Hills Racquet Club

P1. Other Identifier: N/A

*P2. Location: Not for Publication Unrestricted

*a. County: Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Orange

Date: 1977 T S; R W; ¼ of ¼ of Sec ; SB

B.M.

c. Address: 11782 Simon Ranch Road

City: Santa Ana

Zip: 92705

d. UTM: Zone: 11N; 427614 mE/ 3734910 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

The property is located at Assessor Parcel Number (APN) 104-321-01

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Tustin Hills Racquet Club is comprised of a one-story ranch-style clubhouse constructed in 1958, a pool constructed between 1972 and 1980, tennis courts constructed between 1958 and 1980, hardscape and landscaped vegetation. The club house has an irregular plan with a low-pitched cross hipped asphalt shingle roof. The building had board-and-batten and stucco siding. The northwest elevation is the primary façade and roughly has a U-shape. The primary entrance is located off center on the elevation where the elevation recesses. The roofline extends over the entry to form a small cover. The entry door is wood and is flanked by two fixed windows. The portion of the building features board-and-batten siding with decorative cobble siding on the bottom third of the section. The cobble siding extends onto the bottom 5th of north portion of the south portion of the elevation. North of the entry door are fixed multi-light windows and decorative cobble and board-and-batten siding. The north portion of the elevation is clad in stucco and features an entrance door with a panel window. The entry door is flanked by one fixed window to the north and two fixed windows to the south. Two rectangular multi-light fixed windows are located on the south portion of this section of the elevation. The south portion of the elevation features stucco siding. The south portion of the elevation features fixed multi-light windows, vents, and utility doors. The south and north elevation features stucco siding. The south portion of the southeast elevation features two sets of double doors with glass panels. Each set of doors is flanked on either side by fixed windows. The enter portion of the elevation features a hipped patio that extends out under the roofline and is supported by wood poles. Glass doors and windows are located on the portions of the elevation beneath the patio cover. The north portion of the elevation has board-and-batten siding, entrance doors, windows and a pergola.

*P3b. Resource Attributes: (List attributes and codes) HP39. Other, racquet club

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



Racquet Club, Orange County, California. PaleoWest, 2019

P5b. Description of Photo: (View, date, accession #)
View of Clubhouse, southeast elevation, facing north, October 24, 2019

*P6. Date Constructed/Age and Sources:

Historic

Prehistoric Both

1958, Tustin Hills Racquet Club

*P7. Owner and Address:

Charles Pate

11782 Simon ranch Road

Santa Ana, CA 92705

*P8. Recorded by: (Name, affiliation, and address)

PaleoWest

3990 Old Town Avenue, Suite C101

San Diego, CA 92110

*P9. Date Recorded: October 2019

*P10. Survey Type: (Describe)

Intensive

*P11. Report Citation: (Cite survey report and other sources, or enter "none.")

Historical Resource Assessment of the Tustin Hills

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 11

*Resource Name or # (Assigned by recorder) Tustin Hills Racquet Club

*Recorded by: PaleoWest Archaeology

*Date: October 2019

B1. Historic Name: Tustin Hills Racquet Club

B2. Common Name: Tustin Hills Racquet Club

B3. Original Use: Farm/Racquet club

B4. Present Use: Racquet club

***B5. Architectural Style:** Ranch

***B6. Construction History:** (Construction date, alterations, and date of alterations)

Constructed 1958, pool constructed between 1972 and 1980 (NETR 2019), tennis courts constructed between 1958 and 1980 (NETR 2019)

***B7. Moved?** No Yes Unknown **Date:** N/A

Original Location: N/A

***B8. Related Features:** N/A

B9a. Architect: Unknown

b. Builder: Unknown

***B10. Significance: Theme:** N/A

Area: N/A

Period of Significance: N/A

Property Type: Recreational facility

Applicable Criteria: N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Spanish explorers with the expedition led by Don Gaspar de Portola first entered what is now Orange County in 1769, however; the first permanent European settlement in the region was not established until 1776 with the founding of Mission San Juan Capistrano. In 1809 the Spanish Government granted Rancho Santiago de Santa Ana, which includes present day Tustin, Santa Ana, Orange, Olive, El Modena, Costa Mesa, and parts of Newport, to Jose Antonio Yorba (Lovret 2011). In 1868 Columbus Tustin and his partner Nelson O. Stafford each invested \$2,500 to buy 1,359-acres of the Santiago de Santa Ana Land Grant. The partners split the land with Tustin taking approximately 840 acres and later purchasing an additional 159 acres from Stafford. In 1870 Tustin moved his family from Petaluma, where he and Stafford owned a carriage-making business, to the land he purchased (Ball et. al. 2011). Tustin filled the original plat map for Tustin City in 1970-1871 and his sister Barbara was the first person to purchase land from him. In order to attract settlers to his venture, Tustin began giving free lots to anyone who would build on them and by 1874 the community began to take shape with many permanent residences and businesses. The community continued to grow until 1877 when the Southern Pacific Railway bypassed Tustin for Santa Ana as the terminus of the newly expanded rail line from Anaheim (Lovret 2011).

During the 20th century, Tustin remained largely rural with an economy supported by citrus orchards. Development was slow until the 1920s when Tustin experience a period of modest residential growth. Tustin built its own high school in 1922. By 1927, the population topped 900 and the citizens voted to incorporate as a city. The new City Council elected Byron Crawford the first mayor. With the start of World War II, three military bases (Santa Ana Army Air Base, the El Toro Marine Corps Air Station, and the Navy's Lighter-Than-Air Base) were constructed in and near Tustin resulting in a dramatic increase in residential and commercial development to help support military operations. Tustin grew at a rapid pace in the post-War years due to the housing boom of the 1950s. A devastating citrus disease decimated orange groves in the mid-1950s, forcing landowners to sell to developers who transformed the groves into large housing tracts (Tustin Area Historical Society 2019).

(See Continuation Sheet)

B11. Additional Resource Attributes: (List attributes and codes) N/A

***B12. References:**

Refer to Continuation Sheet

B13. Remarks: N/A

***B14. Evaluator:** J. Castells, MA

Date of Evaluation: October 2019

(Sketch Map with north arrow required.)

Please see attached

CONTINUATION SHEET

Page 3 of 11

*Resource Name or # (Assigned by recorder) Tustin Hills Racquet Club

*Recorded by: PaleoWest Archaeology

*Date: October 2019 Continuation Update

*D6. Significance (Continued):

The origins of tennis can be traced to handball games developed 12th century France. By the 16th century the game had evolved from hitting a ball with a bare hand or glove to the use rackets. It was also during the 16th century that the game began to increasingly be played indoors and regularized rules were developed. The game spread throughout Europe and by the 1860s more standardized rules were developed and outside courts became more common. Major Walter Clopton Wingfield of England created a standardized set of rules in 1873 or 1874 on which modern tennis is based (Kimball 2017).

The origins of tennis in the United States is largely contested, but credit often goes to one of three individuals who reportedly set up games in 1874. Mary Outerbridge who reportedly brought a tennis net back from Bermuda that she set up in Staten Island, New York, James White reportedly set up a game on the lawn of William Appleton in Nahant, Massachusetts as did Martha Summerhayes who reportedly set up a game at Camp Apache in the Arizona Territory (Kimball 2017).

The first tennis match billed as a “national championship” in the United States was held on Staten island in 1880. A year later, in 1881, the United States Tennis Association was formed (Kimball 2017).

The first tennis club to be founded in California, and the oldest west of the Mississippi River, is the California Tennis Club in San Francisco in 1884 (California Tennis Club 2019). In 1895 the Ojai Valley Tennis Club was established in Ojai, California making it among the earliest clubs dedicated to tennis in Southern California (Ojai Valley inn 2019). Many other tennis clubs were established in Southern California throughout the Twentieth Century including the Los Angeles Tennis Club in 1920 (Los Angeles Tennis Club 2019). By the mid-twentieth century many affluent communities in Southern California boasted private tennis clubs.

The Tustin Hills Racquet Club was established in 1958 and is considered the first private tennis club to be established in Orange County (Tustin Hills Racquet Club 2019). In 1976 the club was purchased by Charles and Janis Pate from the previous owners, Rolf Engen and Warren Finely. Among the notable tennis players who have played at the club were former Tustin mayor and Wimbledon contender, and college and pro players including Tracy Willis, Carlos Bustos, Bill Behrensd, and Terry Marcoline (Leach 1999). Ove the years the club has hosted countless weddings, events, and tennis tournaments.

A review of historic aerials shows that between 1946 and 1952 the surrounding area was redeveloped from citrus orchards to residential tracts. The construction of the Tustin Hills Racquet Club coincided with this residential development. Aerials from 1963 show the clubhouse building, at least four tennis courts, two of which correspond with extant tennis courts, and the clubhouse. By 1966 there are at least 6 tennis courts visible, four of which that correspond with extant tennis courts and an additional two tennis courts that correspond with extant tennis courts are visible in the 1972 aerial. Between 1972 and 1980 the property was configured as it is today with 11 tennis courts, a pool with associated facilities, and a pergola on the southwest elevation of the clubhouse (NETR 2019).

CRHR Evaluation

The historical significance of the subject property was determined by applying the procedure and criteria forth by the California Register of Historical Resources (CRHR).

CRHR Criterion 1: The Tustin Hills Racquet Club does not meet CRHR Criterion 1 for association with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage. The racquet club was constructed in 1958 during a period that corresponds with the residential growth of the north Tustin area. While the earliest private tennis club to be constructed in orange County, the inclusion of private and public recreational facilities was a common development as large housing tracts, particularly those in affluent areas, we designed and built. While the club is the earliest in Orange County, it is not the earliest within the state of California or within southern California. Research has yielded no information to suggest that the development of the tennis club fundamentally affected the history of recreation in the area. And while its presence made the immediate surrounding area more attractive to potential homeowners, there is no indication that the tennis club was crucial to the development of Orange County. Therefore, the Tustin Hills Racquet Club is not eligible for the CRHR under Criterion 1.

(See Continuation Sheet)

***D6. Significance (Continued):**

CRHR Criterion 2: The Tustin Hills Racquet Club does not meet CRHR Criterion 2 for any direct associations with the productive lives of persons important in local, state, or national history. While many players have utilized the club over its history, including professional players, research has yielded no information to suggest that any having achieved a level of historical significance or that any persons that have achieved historical significance did so based on their specific associated with this property. Therefore, the Tustin Hills Racquet Club is not eligible for the CRHR under Criterion 2.

CRHR Criterion 3: The Tustin Hills Racquet Club does not to meet CRHR Criterion 3 for embodying the distinctive characteristics of a type, period, and method of construction, or as the work of an important creative individual, or as having high artistic value. The ranch style clubhouse was constructed in 1958. It is a common and unremarkable example of this style and property type. It is one of countless buildings and many clubhouses constructed in this style during the mid-twentieth century. Research has yielded information to suggest that the layout of the property represents a departure from standard practices in the development of private tennis clubs. The architect and builder were not identified, however; it is unlikely that the clubhouse and the rest of the property are the work of a master. Therefore, the Tustin Hills Racquet Club is not eligible for the CRHR under Criterion 3.

CRHR Criterion 4: The Tustin Hills Racquet Club does not meet CRHR Criterion 4 since it is unlikely to yield information important to prehistory or history. This criterion is usually reserved to address archaeological resources, which were not addressed as part of this study. It is unlikely that this property has the potential to broaden our understanding of history. Therefore, Tustin Hills racquet Club is not eligible for the CRHR under Criterion 4.

***B12. References (Continued):**

- Ball, Guy and the Tustin Area Historical Society
2011 *Images of America: Tustin*. Arcadia Publishing: Charleston, S.C.
- California Tennis Club
2019 "History." Accessed at: <https://www.calclubtennis.com/history>
- Kimball, Warren F.
2017 *The United States Tennis Association: Raising the Game*. University of Nebraska Press: Lincoln
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- Ojai Valley Inn
2019 "Ojai Tennis History." Accessed at: <https://www.ojavalleyinn.com/recreation/ojai-california-recreation/ojai-california-tennis-resort/ojai-tennis-history>.
- Tustin Area Historical Society
2019 "Tustin History." Accessed at: <http://www.tustinhistory.com/tustin-history.htm>
- Tustin Hills Racquet Club
2019 "About Tustin Hills Racquet Club." Accessed at: <https://tustinhillsracquetclub.com/about/>.



Clubhouse, northwest elevation, facing north



Clubhouse, northwest elevation, facing south



Clubhouse, northwest elevation, facing south



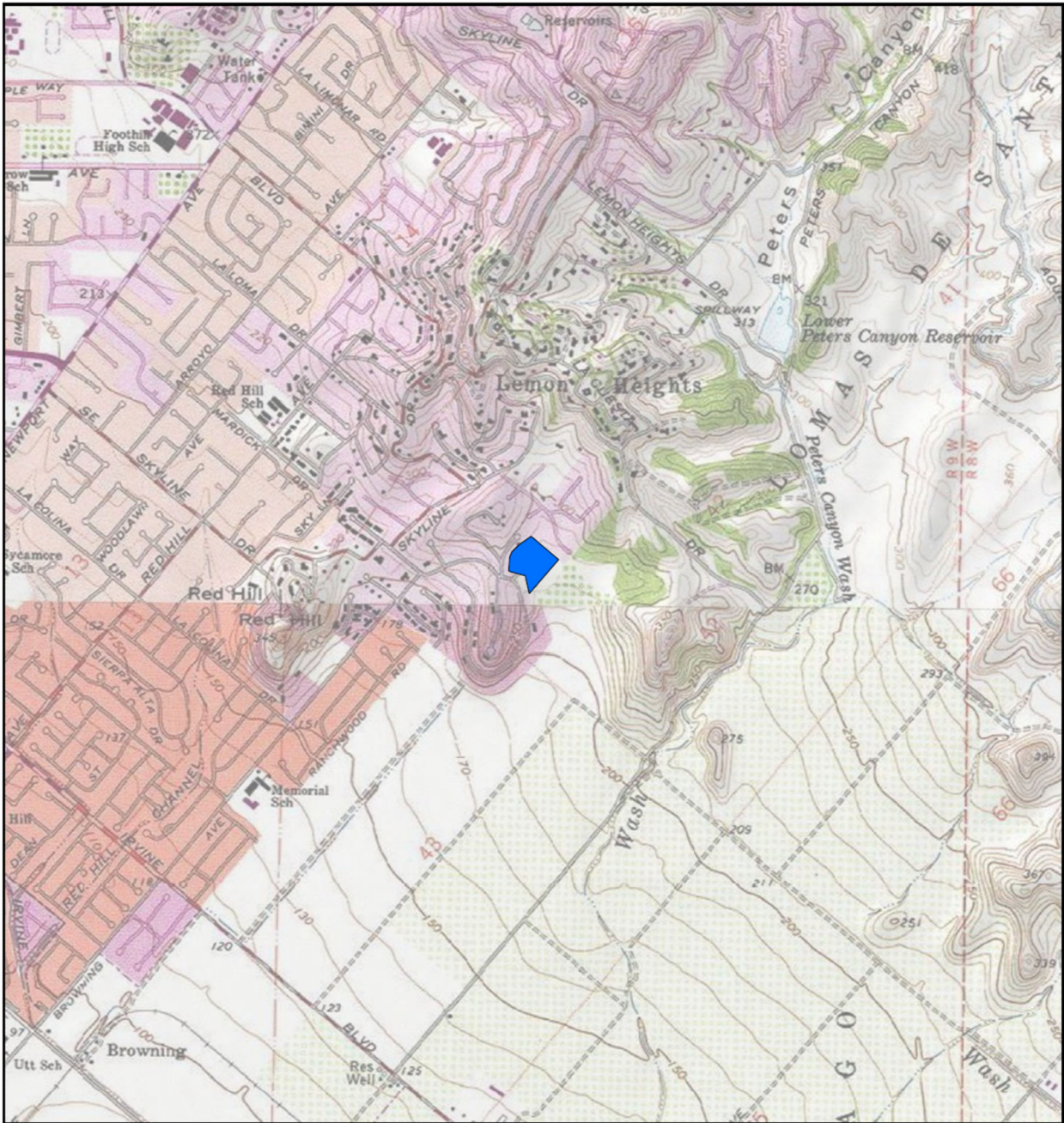
Representative view of tennis courts, facing southeast



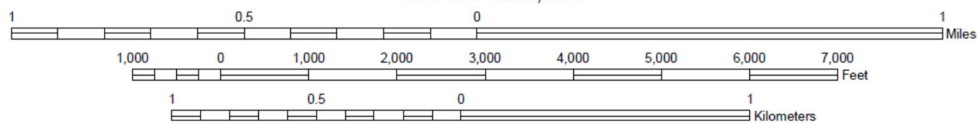
Swimming Pool, facing west

Map Name: Orange, CA 7.5' USGS Quad.

Date: 1977



SCALE 1:24,000



TRUE NORTH

*Drawn by: B.Speltz

*Scale: 1:2,400

*Date of map: October 2019





***Appendix B.
Records Search Results
(Confidential)***

Report List

19-429

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00225				VOIDED		
OR-00274		1978	Anonymous	Report of Archaeological Resources Survey Conducted for Laguna and Peter's Canyons	Archaeological Resource Management Corp.	30-000184, 30-000305, 30-000306, 30-000307, 30-000308, 30-000309, 30-000314, 30-000317, 30-000502, 30-000508, 30-000547, 30-000548, 30-000556, 30-000557, 30-000681, 30-000682, 30-000688, 30-000767, 30-000768, 30-000769
OR-00305		1979	Schroth, Adella	The History of Archaeological Research on Irvine Ranch Property: the Evolution of a Company Tradition	Archaeological Resource Management Corp.	30-000002, 30-000044, 30-000047, 30-000048, 30-000051, 30-000053, 30-000059, 30-000060, 30-000061, 30-000062, 30-000063, 30-000064, 30-000065, 30-000066, 30-000067, 30-000068, 30-000069, 30-000070, 30-000071, 30-000072, 30-000073, 30-000077, 30-000091, 30-000099, 30-000100, 30-000104, 30-000106, 30-000107, 30-000109, 30-000111
OR-00752		1984	Mason, Roger D.	Eastern Corridor Alignment Study, Orange County, California; Volume II: Prehistory and History	Scientific Resource Surveys, Inc.	30-000184, 30-000303, 30-000304, 30-000321, 30-000513, 30-000541, 30-000546, 30-000547, 30-000556, 30-000557, 30-000584, 30-000585, 30-000586, 30-000587, 30-000588, 30-000589, 30-000590, 30-000591, 30-000592, 30-000626, 30-000770, 30-000771, 30-000772, 30-000793, 30-000794, 30-000795, 30-000818, 30-000819, 30-000820, 30-000962, 30-001067, 30-001068, 30-001195, 30-001196, 30-001197, 30-001198, 30-001199, 30-001200, 30-001201
OR-02534		1976		Annual Report to The Irvine Company from Archaeological Research, Inc.	ARI	30-000051, 30-000064, 30-000099, 30-000100, 30-000106, 30-000119, 30-000130, 30-000184, 30-000196, 30-000197, 30-000484, 30-000518, 30-000575

OFFICE OF HISTORIC PRESERVATION * * * Directory of Properties in the Historic Property Data File for ORANGE County.				Page 74	04-05-12						
PROPERTY-NUMBER	PRIMARY-#	STREET ADDRESS	NAMES	CITY NAME	OWN	YR-C	OHP-PROG.	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
170468		YORKTOWN AVE	BUILDING 20	LOS ALAMITOS	F	1942	HIST. RES.	DOE-30-07-0003-0020	03/08/07	6Y	
							PROJ. REVW.	USA070129A	03/08/07	6Y	
							HIST. RES.	DOE-30-07-0003-0025	03/08/07	6Y	
179926		8162 HAZARD AVE		MIDWAY CITY	P	1952	PROJ. REVW.	HUD100902K	09/08/10	6Y	
101397	30-162536	14772 JEFFERSON ST		MIDWAY CITY	P	1923	PROJ. REVW.	HUD960226V	03/25/96	6Y	
187334		7801 MCFADDEN AVE		MIDWAY CITY	P	1959	PROJ. REVW.	FHWA110826B	10/20/11	6Y	
183883		14791 NEWLAND ST		MIDWAY CITY	P		PROJ. REVW.	HUD110721C	07/29/11	6Y	
095986	30-162485	CABOT RD	AGUAJE DEL CUATE	MISSION VIEJO	P		ST. PT. INT.	30-0031	06/01/95	7W	
124784		24011 MARGUERITE PARKWAY	REVIEW OF PBW FACILITY CM 373-01,	MISSION VIEJO	P		PROJ. REVW.	FCC000602F	06/15/00	6Y	
090893	30-162284		1953 NATIONAL BOY SCOUT JAMBOREE S	NEWPORT BEACH	U	1953	HIST. RES.	SPHI-ORA-009	10/14/77	7L	
037957	30-158591	611 E BALBOA BLVD	BANK OF BALBOA / BANK OF AMERICA	NEWPORT BEACH	P	1928	HIST. RES.	NPS-86001903-0000	07/24/86	1S	
							HIST. SURV.	2663-0007-0000	01/01/86	1S	
180694		4302 FORD RD		NEWPORT BEACH	P	1965	PROJ. REVW.	FCC100621N	12/14/10	6Y	
089402	30-162257	MAIN ST	FIRST WATER-TO-WATER FLIGHT SITE	NEWPORT BEACH	U		HIST. RES.	SHL-0775-0000	09/25/62	1CL	
037956	30-158590	105 MAIN ST	BALBOA INN	NEWPORT BEACH	P	1930	HIST. RES.	NPS-86000730-0000	04/11/86	1S	
							HIST. SURV.	2663-0006-0000	01/01/86	1S	
							TAX. CERT.	537.9-30-0016	08/16/85	2D3	
127237		323 MARINE AVE	BALBOA ISLAND FIRE HOUSE #4	NEWPORT BEACH	P	1931	HIST. RES.	CR	05/17/01	2CS	
							CAL. REG.	30-0053	02/15/01	3S	
089604	30-162261	SR 101	OLD LANDING SITE	NEWPORT BEACH	P		HIST. RES.	SHL-0198-0000	06/20/35	7L	
132140		1441 W BALBOA BLVD	OUR LADY MOUNT CARMEL	NEWPORT BEACH		1951	HIST. RES.	DOE-30-02-0002-0000	02/28/02	6Y	
179477		2431 W COAST SR	WILD GOOSE HISTORIC VESSEL / USS Y	NEWPORT BEACH	P	1943	PROJ. REVW.	FCC020214B	02/28/02	6Y	
089426	30-162258	W OCEAN FRONT	MCFADDEN WHARF	NEWPORT BEACH	M	1888	HIST. RES.	NPS-11000431-0000	07/19/11	1S	B
037951	30-158585	1242 W OCEAN FRONT	LOVELL BEACH HOUSE	NEWPORT BEACH	P	1926	NAT. REG.	30-0090	03/30/11	3S	B
037955	30-158589	2100 W OCEAN FRONT	B K STONE BUILDING, MCFADDEN BUILD	NEWPORT BEACH	P	1926	HIST. RES.	SHL-0794-0000	07/03/64	1CL	
							HIST. RES.	NPS-74000545-0000	02/05/74	1S	
							HIST. SURV.	2663-0005-0000		5S2	
037953	30-158587	SR 1	BRIDGE #55-21	(VIC) NEWPORT BEA	S	1931	HIST. SURV.	2663-0003-0000		7R	
037952	30-158586	SR 1	BRIDGE #55-01	(VIC) NEWPORT BEA	S	1923	HIST. SURV.	2663-0002-0000	01/01/99	7R	
171589		2197 LEMON HEIGHTS DR	EDSON HOUSE	NORTH TUSTIN	P	1933	CAL. REG.	30-0083	10/22/08	3S	C
							HIST. RES.	CR	11/07/08	1CS	C
037958	30-158592	16582 BIXBY AVE		OLIVE	P	1925	HIST. SURV.	2665-0001-0001		5D2	
038005	30-158639	BUENA VISTA AVE	OLIVE HEIGHTS #1	OLIVE	P	1890	HIST. SURV.	2665-0001-9999		5S2	
037959	30-158593	16581 BUENA VISTA AVE		OLIVE	P	1920	HIST. SURV.	2665-0001-0002		5D2	
037960	30-158594	16592 BUENA VISTA AVE		OLIVE	P	1922	HIST. SURV.	2665-0001-0003		5D2	
037961	30-158595	16641 BUENA VISTA AVE		OLIVE	P	1916	HIST. SURV.	2665-0001-0004		5D2	
037962	30-158596	16651 BUENA VISTA AVE		OLIVE	P	1936	HIST. SURV.	2665-0001-0005		5D2	
037963	30-158597	16665 BUENA VISTA AVE		OLIVE	P	1914	HIST. SURV.	2665-0001-0006		5D2	
037964	30-158598	16671 BUENA VISTA AVE		OLIVE	P	1922	HIST. SURV.	2665-0001-0007		5D2	
037965	30-158599	16761 BUENA VISTA AVE		OLIVE	U	1924	HIST. SURV.	2665-0001-0008		5D2	
037966	30-158600	16781 BUENA VISTA AVE		OLIVE	P	1931	HIST. SURV.	2665-0001-0009		5D2	
037967	30-158601	16801 BUENA VISTA AVE		OLIVE	P	1927	HIST. SURV.	2665-0001-0010		5D2	
038003	30-158637	209 LINCOLN AVE		OLIVE	P	1910	HIST. SURV.	2665-0001-0047		5D2	
038004	30-158638	16121 LINCOLN AVE		OLIVE	P	1908	HIST. SURV.	2665-0001-0048		5D2	
037968	30-158602	16581 MAIN ST		OLIVE	P	1917	HIST. SURV.	2665-0001-0011		5D2	
037969	30-158603	16601 MAIN ST		OLIVE	P	1909	HIST. SURV.	2665-0001-0012		5D2	
037970	30-158604	16651 MAIN ST		OLIVE	P	1913	HIST. SURV.	2665-0001-0013		5D2	

Appendix E

Energy Calculations

Energy Use Summary

Construction Phase (gallons/construction period)	Gasoline	Diesel
Construction Vehicles	19,404	20,703
Worker Trips	17,258	88
Vendor Trips	2,538	45
Haul Trucks	1	853
Total	39,200	21,689

Operations Phase (gallons/year)	Gasoline	Diesel	Natural Gas (kBTU/yr)	Electricity (kWh/yr)
Residential	29,132	4,289	632,878	187,753
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
All Land Uses	29,132	4,289	632,878	187,753

Operations Onroad Energy Use

Year 2024

Vehicle Types	MPG by Fuel Type			Population by Fuel Type			
	GAS	DSL	ELEC	GAS	DSL	ELEC	Total
LDA	32.5	51.2		6,721,891	65,702	176,700	6,787,593
LDT1	27.8	23.2		779,749	337	9,098	780,085
LDT2	26.3	37.5		2,324,382	16,867	35,655	2,341,248
LHDT1	10.8	22.2		174,005	131,545		305,550
LHDT2	9.4	20.0		30,199	52,581		82,780
MCY	36.2			313,846			313,846
MDV	21.3	28.8		1,599,677	38,790	21,547	1,638,467
MH	5.3	10.8		34,296	13,472		47,768
MHDT	5.2	11.3		25,804	127,715		153,519
HHDT	4.4	7.2		74	112,561		112,635
OBUS	5.2	8.8		5,954	4,446		10,401
SBUS	9.3	7.8		2,938	6,710		9,648
UBUS	5.3	5.7		963	10	16	974

Trips/Day	Trips/day	Trips/day	Trips/day	Total	VMT/day	VMT/day	VMT/day	Trip Length
Land Use	Weekday	Saturday	Sunday	Weekly	Weekday	Saturday	Sunday	
Residential	277.00	305.00	239.00	1929	2,338	2,575	2,018	8.44

Total	277	305	239					
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Fleet Mix	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	MCY	SBUS	MH	Total
Land Use	0.558976	0.043534	0.209821	0.113949	0.016111	0.005791	0.025447	0.016654	0.001713	0.001553	0.004896	0.00059	0.000966	100.0%
Residential	0	0.043534	0.209821	0.113949	0.016111	0.005791	0.025447	0.016654	0.001713	0.001553	0.004896	0.00059	0.000966	100.0%
0	0.558976	0.043534	0.209821	0.113949	0.016111	0.005791	0.025447	0.016654	0.001713	0.001553	0.004896	0.00059	0.000966	100.0%
0	0.558976	0.043534	0.209821	0.113949	0.016111	0.005791	0.025447	0.016654	0.001713	0.001553	0.004896	0.00059	0.000966	100.0%
0	0.558976	0.043534	0.209821	0.113949	0.016111	0.005791	0.025447	0.016654	0.001713	0.001553	0.004896	0.00059	0.000966	100.0%
0	0.558976	0.043534	0.209821	0.113949	0.016111	0.005791	0.025447	0.016654	0.001713	0.001553	0.004896	0.00059	0.000966	100.0%

Vehicle Trips	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total	Daily VMT
Weekday Trips	155	12	58	32	4	2	7	5	0	0	1	0	0	277	2,338.46
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Total	155	12	58	32	4	2	7	5	0	0	1	0	0	277	

Saturday Trips	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total	Daily VMT
Weekday Trips	170	13	64	35	5	2	8	5	1	0	0	0	0	305	2,574.84
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Total	170	13	64	35	5	2	8	5	1	0	1	0	0	305	

Sunday Trips	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total	Daily VMT
Weekday Trips	134	10	50	27	4	1	6	4	0	0	1	0	0	239	2,017.66
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Total	134	10	50	27	4	1	6	4	0	0	1	0	0	239	

Gallons of Fuel

Gasoline	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total
Residential	14,428	1,326	6,694	4,424	722	191	695	2	160	247	114	16	111	29,132
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14,428	1,326	6,694	4,424	722	191	695	2	160	247	114	16	111	29,132	29,132 Total Gallons

Diesel	LDA	LDT1	LDT2	MDV	OBUS	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total
Residential	90	1	34	79	265	155	1,580	1,947	70	2	0	45	21	4,289
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	1	34	79	265	155	1,580	1,947	70	2	0	45	21	4,289	4,289 Total Gallons

33,421 Total Gallons

25 Average MPC

Utilities

	Natural Gas Use	Electricity Use
Land Use	kBTU/yr	kWh/yr
Residential	632,878	187,753
	0	
	0	
	0	
	0	
	0	
Total	632,878	187,753

Offroad Construction Equipment Energy Use

PhaseName	OffRoadEquipmentType	OffRoadEquipmentUnitA	UsageHours	HorsePower	Load Factor	Horsepower Category	Num Days	Year	Fuel Consumption Rate (gal/hour)	Fuel Type	Total Fuel Consumption (gal/construction period)
Demolition	Concrete/Industrial Saws	1	8	81	0.73	100	26	2022	4.7	Gasoline	716
Demolition	Excavators	3	8	158	0.38	175	26	2022	2.9	Diesel	684
Demolition	Rubber Tired Dozers	2	8	247	0.4	300	26	2022	4.5	Diesel	755
P1 Site Preparation	Rubber Tired Dozers	1	8	247	0.4	300	26	2022	4.5	Diesel	378
P1 Site Preparation	Tractors/Loaders/Backhoes	2	8	97	0.37	100	26	2022	1.6	Diesel	245
P1 Grading	Excavators	1	8	158	0.38	175	79	2022	2.9	Diesel	693
P1 Grading	Graders	1	8	187	0.41	175	79	2022	3.2	Diesel	816
P1 Grading	Rubber Tired Dozers	1	8	247	0.4	300	79	2022	4.5	Diesel	1,147
P1 Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	100	79	2022	1.6	Diesel	1,116
P1 Trenching	Excavators	1	8	158	0.38	175	24	2022	2.9	Diesel	211
P1 Trenching	Trenchers	2	8	78	0.5	75	24	2022	1.8	Diesel	352
P1 Building Construction	Cranes	1	7	231	0.29	300	158	2022	3.3	Diesel	1,053
P1 Building Construction	Forklifts	3	8	89	0.2	100	158	2022	2.0	Diesel	1,519
P1 Building Construction	Generator Sets	1	8	84	0.74	100	158	2022	5.2	Gasoline	4,862
P1 Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	100	158	2022	1.6	Diesel	1,953
P1 Building Construction	Welders	1	8	46	0.45	50	158	2022	2.4	Gasoline	1,371
P1 Paving	Cement and Mortar Mixers	2	6	9	0.56	25	9	2022	0.4	Gasoline	23
P1 Paving	Pavers	1	8	130	0.42	100	9	2022	1.7	Diesel	53
P1 Paving	Paving Equipment	2	6	132	0.36	100	9	2022	1.6	Diesel	64
P1 Paving	Rollers	2	6	80	0.38	100	9	2022	1.7	Diesel	70
P1 Paving	Tractors/Loaders/Backhoes	1	8	97	0.37	100	9	2022	1.6	Diesel	42
P1 Architectural Coating	Air Compressors	1	6	78	0.48	100	9	2022	1.3	Diesel	34
P2 Building Construction	Cranes	1	7	231	0.29	300	158	2022	3.3	Diesel	1,053
P2 Building Construction	Forklifts	3	8	89	0.2	100	158	2022	2.0	Diesel	1,519
P2 Building Construction	Generator Sets	1	8	84	0.74	100	158	2022	5.2	Gasoline	4,862
P2 Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	100	158	2022	1.6	Diesel	1,953
P2 Building Construction	Welders	1	8	46	0.45	50	158	2022	2.4	Gasoline	1,371
P2 Paving	Cement and Mortar Mixers	2	6	9	0.56	25	9	2022	0.4	Gasoline	23
P2 Paving	Pavers	1	8	130	0.42	100	9	2022	1.7	Diesel	53
P2 Paving	Paving Equipment	2	6	132	0.36	100	9	2022	1.6	Diesel	64
P2 Paving	Rollers	2	6	80	0.38	100	9	2022	1.7	Diesel	70
P2 Paving	Tractors/Loaders/Backhoes	1	8	97	0.37	100	9	2022	1.6	Diesel	42
P2 Architectural Coating	Air Compressors	1	6	78	0.48	100	9	2022	1.3	Diesel	34
P3 Building Construction	Cranes	1	7	231	0.29	300	156	2022	3.3	Diesel	1,040
P3 Building Construction	Forklifts	3	8	89	0.2	100	156	2022	2.0	Diesel	1,500
P3 Building Construction	Generator Sets	1	8	84	0.74	100	156	2022	5.2	Gasoline	4,800
P3 Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	100	156	2022	1.6	Diesel	1,928
P3 Building Construction	Welders	1	8	46	0.45	50	156	2022	2.4	Gasoline	1,353
P3 Paving	Cement and Mortar Mixers	2	6	9	0.56	25	9	2022	0.4	Gasoline	23
P3 Paving	Pavers	1	8	130	0.42	100	9	2022	1.7	Diesel	53
P3 Paving	Paving Equipment	2	6	132	0.36	100	9	2022	1.6	Diesel	64
P3 Paving	Rollers	2	6	80	0.38	100	9	2022	1.7	Diesel	70
P3 Paving	Tractors/Loaders/Backhoes	1	8	97	0.37	100	9	2022	1.6	Diesel	42
P3 Architectural Coating	Air Compressors	1	6	78	0.48	100	9	2022	1.3	Diesel	34
									Total	Gasoline	19,404
									Total	Diesel	20,703

Appendix F

Geotechnical Investigation

GEOTECHNICAL INVESTIGATION

**PROPERTY TRANSACTION AND
PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA**



GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

**RANCH HILL PARTERS, LP
NEWPORT BEACH, CALIFORNIA**

**MAY 16, 2017
PROJECT NO. A9568-88-02**



Project No. A9568-88-02
May 16, 2017

Ranch Hill Partners, LP
124 Tustin Avenue, Suite 200
Newport Beach, California 92663

Attention: Mr. Peter Zehnder

Subject: GEOTECHNICAL INVESTIGATION
PROPERTY TRANSACTION AND
PROPOSED SINGLE-FAMILY RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

Dear Mr. Zehnder:

In accordance with your authorization, we have prepared this geotechnical investigation report for the pending property transaction and the proposed single-family residential tract development for the parcel designated as 11782 Simon Ranch Road within the City of Santa Ana, California. The accompanying report presents the findings of our study and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed provided the recommendations of this report are followed and implemented during design and construction.

Geocon West Inc. is the Geotechnical Consultant of Record and will be providing the necessary geotechnical consultation, plan review, design recommendations, inspections, and testing services for this project.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.



Arnold Gastelum
PE 81553



Jelisa Thomas Adams
GE 3092



Susan F. Kirkgard
CEG 1754

(EMAIL) Addressee

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LIMITATIONS AND UNIFORMITY OF CONDITIONS

LIST OF REFERENCES

MAPS, TABLES, AND ILLUSTRATIONS

- Figure 1, Vicinity Map
- Figure 2, Site Plan – Existing
- Figure 3, Regional Fault Map
- Figure 4, Regional Seismicity Map
- Figure 5, Fill Slope Detail
- Figures 6 and 7, Retaining Wall Drainage
- Figure 8, Percolation Test Data Sheet

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APPENDIX A

FIELD INVESTIGATION

Figures A1 through A5, Boring Logs

APPENDIX B

LABORATORY TESTING

Figures B1 and B2, Direct Shear Test Results

Figure B3, Consolidation Test Results

Figure B4, Grain Size Distribution

Figure B5, Lab Test Results

Figure B6, Corrosivity Test Results

GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for the pending property transaction and proposed single-family residential tract development for the parcel designated as 11782 Simon Ranch Road within the City of Santa Ana, California (see Vicinity Map, Figure 1). The purpose of the investigation was to evaluate subsurface soil and geologic conditions underlying the site and, based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on April 13, 2017, by excavating five 8-inch diameter borings to depths of approximately 18½ to 33½ feet below the existing ground surface utilizing a truck-mounted hollow-stem auger drilling machine. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 2). A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The subject site is located at 11782 Simon Ranch Road within the City of Santa Ana, in the County of Orange, California. The site is an irregularly-shaped parcel and is currently occupied by three pads that step down from northwest to southeast. Existing site improvements include a paved parking lot, single-story clubhouse, swimming pool, twelve tennis courts, and lawn/patio/hardscape areas. The site is bounded by single-family residences to the northeast, northwest, southeast, and southwest. Current topographic relief is gently southeasterly sloping, accommodating a total elevation change of roughly 48 vertical feet (Elevation 227 to Elevation 275 feet above mean sea level [MSL]). Changes in elevation between pads are accommodated by retaining walls and 2:1 (H:V) slopes. Surface water drainage at the site appears to be by sheet flow along the existing ground contours to the city streets. Vegetation onsite consists of grass and trees, which are located in the lawn and planter areas.

Based on the information provided by the Client, it is our understanding that the proposed development will consist of 37 dwelling units comprised of 17 duplex buildings and 3 single unit buildings with internal streets and an openspace lot. We anticipate construction will consist of two-story wood-framed structures with conventional spread footings and slab-on-grade floors. The proposed slopes around the perimeter of the site and between the individual pads will be up to 15 feet in height and will be constructed at a gradient of 2:1 (horizontal to vertical). Due to the preliminary nature of the project, formal plans depicting the proposed development are not available for inclusion in this report. The existing site conditions are depicted on the Site Plan – Existing (see Figure 2A).

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed residential buildings will be up to 75 kips, and wall loads will be up to 2 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located on a bedrock high along the eastern portion of the Coastal Plain of Orange County. The site is situated on the western flank of the foothills at the base of the Santa Ana Mountains north and west of Peters Canyon Wash. Published geologic maps indicate a northeasterly trending contact transects the site, separating early Miocene to late Eocene age bedrock on the northwest from alluvial deposits on the southeast. Based on a review of aerial photography the original grading of the site likely resulted in a wedge of artificial fill that thickens to the southeast overlying a former drainage channel.

4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by artificial fill and Holocene age alluvial deposits underlain by early Miocene to late Eocene age sedimentary bedrock of the undifferentiated Vaqueros and Sespe Formations (Morton, 1999). Detailed stratigraphic profiles of the materials encountered at the site are provided on the boring logs in Appendix A.

4.1 Artificial Fill

Artificial fill was encountered in our field explorations to a maximum depth of 8 feet below existing ground surface. The artificial fill generally consists of dark brown to dark yellowish brown sandy silt. The artificial fill is characterized as slightly moist and soft to firm. The fill is likely the result of past grading or construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Alluvium

Holocene age alluvium was encountered beneath the fill in borings B2, B3, and B5. The fill consists primarily of sandy silt, clayey silt, silty sand and silt with sand. The soil is primarily yellowish brown to dark yellowish brown, slightly moist and medium dense to dense or stiff to hard.

4.3 Undifferentiated Vaqueros and Sespe Formations

The artificial fill and alluvium is underlain by sedimentary bedrock of the early Miocene age to late Eocene age undifferentiated Vaqueros and Sespe Formations (Morton, 1999). The bedrock was encountered in the borings at depths ranging from 5 to 23 feet beneath the existing ground surface and generally consist of yellowish brown, olive brown, and gray interbedded sandstone and siltstone. The bedrock is slightly moist and soft to moderately hard, unfractured to intensely fractured, and fresh to moderately weathered.

5. GROUNDWATER

The site is elevated above the local alluviated groundwater basin and is underlain by sedimentary bedrock units that are not considered water-bearing. Review of the Seismic Hazard Zone Report for the Orange Quadrangle (California Division of Mines and Geology [CDMG], 2001) indicates there is no available historic or current groundwater data for the site or the immediately surrounding area.

At the time of our field investigation, no evidence of near surface water, such as seeps, springs, or phreatophytes were observed at the site. Groundwater was not encountered in our field explorations, drilled to a maximum depth of 33½ feet below the existing ground surface. Based on the lack of groundwater in our borings and depth of proposed construction, groundwater is neither expected to be encountered during construction or impact foundation excavations or grading operations. However, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the *Surface Drainage* section of this report (see Section 7.17).

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (Bryant and Hart, 2007). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years), but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2017) for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest surface trace of an active fault to the site is the Whittier Fault located approximately 10.5 miles to the northeast (Ziony and Jones, 1989). Other nearby active faults include the Elsinore Fault, the Newport-Inglewood Fault Zone, the Chino Fault, and the Central Avenue Fault located approximately 11.5 miles northeast, 12.0 miles southwest, 13.0 miles northeast, and 15.5 miles north-northeast of the site, respectively (Ziony and Jones, 1989). The active San Andreas Fault Zone is located approximately 39 miles northeast of the site.

The closest potentially active fault to the site is the Peralta Hills Fault located approximately 5.0 miles to the northwest (Ziony and Jones, 1989). Other nearby potentially active faults are the Pelican Hill Fault, the Norwalk Fault, and the Los Alamitos Fault located approximately 10.0 miles southwest, 13.5 miles northwest, and 17.5 miles northwest of the site, respectively (Ziony and Jones, 1989).

Several buried thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin (including the Orange County Coastal Plain) at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than 3.0 kilometers. The October 1, 1987 M_w 5.9 Whittier Narrows earthquake and the January 17, 1994 M_w 6.7 Northridge earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. These thrust faults and others in the greater Los Angeles area are not exposed at the surface and do not present a potential surface fault rupture hazard at the site; however, these deep thrust faults are considered active features capable of generating future earthquakes that could result in moderate to significant ground shaking at the site.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
San Jacinto-Hemet area	April 21, 1918	6.8	45	E
Near Redlands	July 23, 1923	6.3	35	ENE
Long Beach	March 10, 1933	6.4	14	SW
Tehachapi	July 21, 1952	7.5	58	NW
San Fernando	February 9, 1971	6.6	27	NW
Whittier Narrows	October 1, 1987	5.9	37	NNW
Sierra Madre	June 28, 1991	5.8	83	ENE
Landers	June 28, 1992	7.3	63	ENE
Big Bear	June 28, 1992	6.4	54	NW
Northridge	January 17, 1994	6.7	104	ENE
Hector Mine	October 16, 1999	7.1	45	E

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

The following table summarizes site-specific design criteria obtained from the 2016 California Building Code (CBC; Based on the 2015 International Building Code [IBC] and ASCE 7-10), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the computer program *U.S. Seismic Design Maps*, provided by the USGS. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.3.2 of the 2016 CBC and Table 20.3-1 of ASCE 7-10. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

2016 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2016 CBC Reference
Site Class	C	Section 1613.3.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.504g	Figure 1613.3.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.551g	Figure 1613.3.1(2)
Site Coefficient, F_A	1.0	Table 1613.3.3(1)
Site Coefficient, F_V	1.3	Table 1613.3.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.504g	Section 1613.3.3 (Eqn 16-37)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	0.716g	Section 1613.3.3 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.003g	Section 1613.3.4 (Eqn 16-39)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.477g	Section 1613.3.4 (Eqn 16-40)

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-10.

ASCE 7-10 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-10 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.537g	Figure 22-7
Site Coefficient, F_{PGA}	1.0	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.537g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2016 California Building Code and ASCE 7-10, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain “Life Safety” during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online BETA Unified Hazard Tool, 2008 Conterminous U.S. Dynamic edition. The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 6.56 magnitude event occurring at a hypocentral distance of 13.0 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 6.61 magnitude occurring at a hypocentral distance of 18.78 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the “Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California” and “Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California” requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Orange Quadrangle (1998) indicates that the site is not located in an area designated as “liquefiable.” In addition, the Orange County General Plan (2004) indicates that the site is not located within an area identified as having a potential for liquefaction. As previously discussed, consolidated early Miocene to late Eocene age sedimentary bedrock that is not prone to liquefaction underlies the site at depths ranging from 5 to 23 feet beneath the existing ground surface. Based on these considerations, it is our opinion that the potential for liquefaction and associated ground deformations beneath the site is very low.

6.5 Slope Stability

The topography at the site is sloping gently southeast accommodating a total elevation change of roughly 48 vertical feet from Elevation 275 MSL to Elevation 227 (above mean sea level [MSL]). Changes in elevations between pads are accommodated by retaining walls and 2:1 (H:V) graded slopes. According to the Orange County General Plan (2004), the site is not within an area identified as having a potential for slope instability. Additionally, the site is not within an area identified as having a potential for seismic slope instability (CDMG, 1998). There are no known landslides near the site, nor is the site in the path of any known or potential landslides. Therefore, the potential for slope stability hazards to adversely affect the proposed development is considered low.

Based on published geologic maps, the geologic structure of the bedrock in the area is oriented favorably with respect to the existing on-site slopes. However, the orientation of the bedrock will require further assessment during the future design phases of the project and prior to grading.

6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. Based on a review of the Orange County General Plan (2004), the site is not located within a potential inundation area for an earthquake-induced dam failure. The probability of earthquake-induced flooding is considered very low.

6.7 Tsunamis, Seiches, and Flooding

The site is not located within a coastal area. Therefore, tsunamis, seismic sea waves, are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding resulting from a seismically-induced seiche is considered unlikely.

The site is within an area of minimal flooding (Zone X) as defined by the Federal Emergency Management Agency (FEMA, 2017).

6.8 Oil Fields & Methane Potential

Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Oil and Gas Well Location Map W1-6, the site is not located within the limits of an oilfield and oil or gas wells are not located in the immediate site vicinity. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map and undocumented wells could be encountered during construction. Any wells encountered during construction will need to be properly abandoned in accordance with the current requirements of the DOGGR.

Since the site is not located within the boundaries of a known oil field, the potential for the presence of methane or other volatile gases at the site is considered low. However, should it be determined that a methane study is required for the proposed development it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

- 7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed development provided the recommendations presented herein are followed and implemented during design and construction.
- 7.1.2 Up to 8 feet of existing artificial fill was encountered during the site investigation. The existing fill encountered is believed to be the result of past grading and construction activities at the site. Deeper fill may exist in other areas of the site that were not directly explored. Future demolition of the existing structures which occupy the site will likely disturb the upper few feet of soil. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the Grading section of this report are followed (see Section 7.4). If bedrock is to be utilized as engineered fill, it may be blocky and may have to be crushed, moisture conditioned, and blended prior to utilization.
- 7.1.3 Based on these considerations, at a minimum it is recommended that the upper 5 feet of existing earth materials within the building footprint areas be excavated and properly compacted for foundation and slab support. Deeper excavations should be conducted as needed to remove any encountered fill or soft soils as necessary at the direction of the Geotechnical Engineer (a representative of Geocon). Removals of 8 feet or more should be expected, especially over the former drainage channel in the southeastern portion of the site. The excavation should extend laterally a minimum distance of 3 feet beyond the building footprint areas, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. Proposed building foundations should be underlain by a minimum of 3 feet of newly placed engineered fill. The limits of existing fill and/or soft soil removal will be verified by the Geocon representative during site grading activities. Recommendations for earthwork are provided in the *Grading* section of this report (see Section 7.4).
- 7.1.4 Subsequent to the recommended grading, the proposed residential buildings may be supported on conventional shallow spread foundation systems deriving support in newly placed engineered fill.
- 7.1.5 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon). Prior to placing any fill, the upper 12 inches of the excavation bottom must be scarified, moistened, and proof-rolled with heavy equipment in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.).

- 7.1.6 It is anticipated that stable excavations for the recommended grading associated with the proposed residential buildings can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.15).
- 7.1.7 Foundations for small outlying structures, such as block walls less than 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed residential buildings, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the competent undisturbed alluvial soils found at or below a depth of 30 inches, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. Based on the variable subsurface conditions across the site, alternative miscellaneous foundation recommendations may be required and can be provided as the project progresses under separate cover. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.
- 7.1.8 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft alluvial soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of subgrade soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.12).
- 7.1.9 Based on the results of percolation testing performed at the site, a stormwater infiltration system is considered feasible for this project. Recommendations for infiltration are provided in the *Stormwater Infiltration* section of this report (see Section 7.16).
- 7.1.10 Additional site exploration and laboratory testing should be considered to study the eastern portion of the property, which is currently occupied by tennis courts. The additional site exploration can be conducted as a second phase of geotechnical investigation or immediately following site demolition. Until additional site exploration is conducted, the recommendations provided herein should be considered preliminary with respect to the western portion of the site.

7.1.11 Once the design and foundation loading configuration for the proposed residential buildings proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be re-evaluated by this office.

7.1.12 Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate to heavy effort using conventional excavation equipment. Some caving should be anticipated in unshored excavations, especially where granular soils are encountered.

7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of existing adjacent improvements.

7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping or shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.15).

7.2.4 The upper 5 feet of existing site soils encountered during this investigation are considered to have a “medium” expansive potential (EI = 66); and are classified as “expansive” based on the 2016 California Building Code (CBC) Section 1803.5.3. Recommendations presented herein assume that the building foundations and slabs will derive support in these materials.

7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered “corrosive” with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B6) and should be considered for design of underground structures.

- 7.3.2 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B6) and indicate that the on-site materials possess “not applicable” sulfate exposure to concrete structures as defined by 2016 CBC Section 1904 and ACI 318-11 Sections 4.2 and 4.3.
- 7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

- 7.4.1 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill and alluvial soil encountered during exploration is suitable for re-use as engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris are removed. If bedrock is to be utilized as engineered fill, it may be blocky and may have to be crushed, moisture conditioned, and blended prior to utilization.
- 7.4.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and building official in attendance. Special soil handling requirements can be discussed at that time.
- 7.4.3 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).
- 7.4.4 As a minimum, it is recommended that the upper 5 feet of existing earth materials within the proposed building footprint areas be excavated and properly compacted for foundation and slab support. Deeper excavations should be conducted as necessary to remove deeper artificial fill or soft alluvial soil at the direction of the Geotechnical Engineer (a representative of Geocon). Removals of 8 feet or more should be expected in the southern portion of the site. The excavation should extend laterally a minimum distance of 3 feet beyond the building footprint area, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. Proposed building foundations should be underlain by a minimum of 3 feet

of newly placed engineered fill. The limits of existing fill and/or soft alluvial soils removal will be verified by the Geocon representative during site grading activities.

- 7.4.5 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon). Prior to placing any fill, the upper 12 inches of the excavation bottom must be scarified, moistened, and proof-rolled with heavy equipment in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.).
- 7.4.6 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to optimum moisture content, and properly compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D 1557 (latest edition).
- 7.4.7. Where new paving is to be placed, it is recommended that all existing fill and soft alluvium be excavated and properly compacted for paving support. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to optimum moisture content, and compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.12).
- 7.4.8 It is anticipated that stable excavations for the recommended grading can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of the existing offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.15).
- 7.4.9 Foundations for small outlying structures, such as block walls less than 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed building, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils found at or below a depth of 30 inches, and should be deepened as necessary to maintain a minimum 12 inch embedment into the recommended bearing materials. Based on the variable subsurface conditions across the site, alternative miscellaneous foundation recommendations may be required and can be provided as the project progresses under separate cover. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

- 7.4.10 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry is also acceptable as backfill (see Section 7.4). Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).
- 7.4.11 All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 50 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B6). Import soils placed in the building area should be placed uniformly across a building pad or in a manner that is approved by the Geotechnical Engineer (a representative of Geocon).
- 7.4.12 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

7.5 Slope Construction

- 7.5.1 Prior to construction of slopes, it is recommended that all existing artificial fill be excavated within the footprint of the proposed slope. If all artificial fill may not be removed prior to placement of additional fill for construction of proposed slopes, the Client should be aware that placement of additional engineered fill over the existing artificial fill could induce settlement of the existing artificial fill that could adversely affect proposed improvements. If settlement of the existing artificial fill occurs, the overlying improvements may experience distress such as settlement or, in extreme circumstances, slope failure may occur. Recommendations for earthwork are provided in Section 7.4.
- 7.5.2 A keyway is required at the toe of all proposed fill slopes which are not directly underlain by newly placed engineered fill. The keyway should be cut a minimum of 2 feet into competent material and must be observed and approved in writing by the Geotechnical Engineer prior to placement of any fill. A detail is provided on Figure 5.

- 7.5.3 All engineered fill must be placed and compacted on a horizontal surface; benching into the existing ground surface must be performed as necessary such that all fill is placed and compacted on a horizontal surface.
- 7.5.4 Fill slopes comprised of on-site materials should be constructed at a gradient of 2:1 or flatter. Fill slopes should be overbuilt by at least 3 feet measured perpendicular to the slope face and trimmed back to the tight fill core. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.
- 7.5.5 As an alternative, fill slope faces may be compacted by track-rolling with a loaded sheepsfoot roller at vertical intervals not to exceed 4 feet, and should be track-walked at the completion of each slope such that the fill is compacted to a dry density of at least 90 percent of the laboratory maximum dry density.
- 7.5.6 All slopes should be planted, drained, and property maintained to reduce erosion. It is recommended that finished slopes be planted as soon after completion of grading as possible. Planting on the slope stabilizes the surface and reduces the potential for erosion. It is further suggested that a jute or mesh product be placed on the slope face prior to planting. The planting of the slope should be performed at the direction of a qualified landscaping consultant.

7.6 Shrinkage

- 7.6.1 Shrinkage results when a volume of material removed at one density is compacted to a higher density. A shrinkage factor of up to 8 percent should be anticipated when excavating and compacting the upper 5 feet of existing earth materials on the site to an average relative compaction of 92 percent. Bulking of cut bedrock is likely to occur and anticipated bulking percentages should be evaluated once the project proceeds to a more finalized plan.
- 7.4.2 If import soils will be utilized in the building pads, the soils must be placed uniformly and at equal thickness at the direction of the Geotechnical Engineer (a representative of Geokon West, Inc.). Soils can be borrowed from non-building pad areas and later replaced with imported soils.

7.7 Foundation Design

- 7.7.1 Subsequent to the recommended grading, a conventional shallow spread foundation system may be utilized for support of the proposed residential buildings provided foundations derive support in newly placed engineered fill. Foundations should be underlain by a minimum of 3 feet of newly placed engineered fill.
- 7.7.2 Continuous footings may be designed for an allowable bearing capacity of 2,400 pounds per square foot (psf), and should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

- 7.7.3 Isolated spread foundations may be designed for an allowable bearing capacity of 3,000 psf, and should be a minimum of 24 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.
- 7.7.4 The allowable soil bearing pressure above may be increased by 160 psf and 500 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 3,500 psf.
- 7.7.5 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.
- 7.7.6 If depth increases are utilized for the perimeter foundations, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary. Additional grading should be conducted as-needed in order to maintain the required 3-foot thick blanket of engineered fill below proposed foundations.
- 7.7.7 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.
- 7.7.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.
- 7.7.9 Due to the expansive potential of the subgrade soils, the moisture content in the slab and foundation subgrade should be maintained at 2 percent above optimum moisture content prior to and at the time of concrete placement.
- 7.7.10 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.
- 7.7.11 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.8 Foundation Settlement

- 7.8.1 The maximum expected static settlement for a residential building supported on a conventional foundation system deriving support in the recommended bearing materials and designed with a maximum bearing pressure of 3,500 psf is estimated to be less than ½ inch and occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on initial application of loading. Differential settlement is not expected to exceed ¼ inch over a distance of 20 feet.
- 7.8.2 Once the design and foundation loading configurations for the proposed residential buildings proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.9 Miscellaneous Foundations

- 7.9.1 Foundations for small outlying structures, such as block walls less than 6 feet in height, planter walls or trash enclosures which will not be tied to a proposed residential building may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils found at or below a depth of 30 inches, and should be deepened as necessary to maintain a minimum 12 inch embedment into the recommended bearing materials. Based on the variable subsurface conditions across the site, alternative miscellaneous foundation recommendations may be required and can be provided as the project progresses under separate cover
- 7.9.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.
- 7.9.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.10 Lateral Design

- 7.10.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.3 may be used with the dead load forces in properly compacted engineered fill or competent alluvial soils.
- 7.10.2 Passive earth pressure for the sides of foundations and slabs poured against properly compacted engineered fill or competent alluvial soils may be computed as an equivalent fluid having a density of 200 pcf with a maximum earth pressure of 2,000 psf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.11 Concrete Slabs-on-Grade

- 7.11.1 Concrete slabs-on-grade subject to vehicle loading should be designed in accordance with the recommendations in the *Preliminary Pavement Recommendations* section of this report (Section 7.12).
- 7.11.2 Subsequent to the recommended grading, concrete slabs-on-grade for structures, not subject to vehicle loading, should be a minimum of 4 inches thick and minimum slab reinforcement should consist of No. 4 steel reinforcing bars placed 16 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint.
- 7.11.3 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

- 7.11.4 For seismic design purposes, a coefficient of friction of 0.3 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.
- 7.11.5 Exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.
- 7.11.6 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.12 Preliminary Pavement Recommendations

- 7.12.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable alluvial materials be excavated and properly recompact for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft alluvium in the area of new paving is not required; however, paving constructed over existing unsuitable material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to optimum moisture content, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).
- 7.12.2 The following pavement sections are based on R-Value laboratory test result of 13. Once site grading activities are complete another R-Value should be obtained for laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

7.12.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking And Driveways	4.0	3.0	5.0
Trash Truck & Fire Lanes	7.0	4.0	13.5

7.12.4 Asphalt concrete should conform to Section 203-6 of the “*Standard Specifications for Public Works Construction*” (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the “*Standard Specifications of the State of California, Department of Transportation*” (Caltrans). The use of Crushed Miscellaneous Base in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200 2.4 of the “*Standard Specifications for Public Works Construction*” (Green Book).

7.12.5 Unless specifically designed and evaluated by the project structural engineer, where exterior concrete paving will be utilized for support of vehicles, it is recommended that the concrete be a minimum of 6 inches of concrete reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compactions as determined by ASTM Test Method D 1557 (latest edition).

7.12.6 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.13 Retaining Walls Design

- 7.13.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 6 feet. In the event that walls significantly higher than 6 feet are planned, Geocon should be contacted for additional recommendations.
- 7.13.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* sections of this report (see Section 7.7).
- 7.13.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure) of 30 pcf.
- 7.13.4 Restrained walls are those that are not allowed to rotate more than $0.001H$ (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure) of 50 pcf.
- 7.13.5 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils or engineered fill derived from onsite soils. If import material is placed behind proposed walls, revised earth pressures may be required. This should be evaluated once the use of import material is established and the geotechnical characteristics of the import soils can be further evaluated.
- 7.13.6 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 90 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.
- 7.13.7 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses. Once the design becomes more finalized, an addendum letter can be prepared revising recommendations and addressing specific surcharge conditions throughout the project, if necessary.

7.14 Retaining Wall Drainage

- 7.14.1 Retaining walls should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 6). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

- 7.14.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 7). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.
- 7.14.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures. Drainage should not be allowed to flow uncontrolled over descending slopes.
- 7.14.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.15 Temporary Excavations

- 7.15.1 Excavations on the order of 8 feet in height may be required during grading operations. The excavations are expected to expose artificial fill, alluvial soils, and bedrock which are suitable for vertical excavations up to 5 feet in height where loose soils or caving sands are not present, and where not surcharged by adjacent traffic or structures.
- 7.15.2 Vertical excavations greater than 5 feet or where surcharged by existing structures will require sloping or shoring measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter up to maximum height of 10 feet. A uniform slope does not have a vertical portion.
- 7.15.3 If excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures such as slot-cutting or shoring may be necessary in order to maintain lateral support of offsite improvements. Recommendations for special temporary excavation measures can be provided under separate cover once the proposed building layout is established.

7.15.4 Where sloped embankments are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.16 Stormwater Infiltration

7.16.1 During the April 13, 2017, site exploration, boring B3 was utilized to perform percolation testing. The percolation testing was performed at the depths listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with gravel. The boring was then filled with water to pre-saturate the soils. On April 14, 2017, the casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavation. Based on the test results, the average infiltration rate (adjusted percolation rate), for the earth materials encountered, is provided in the following table. The field-measured percolation rate has been adjusted to infiltration rates in accordance with the County of Orange Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (December 2013). Additional correction factors may be required and should be applied by the engineer in responsible charge of the design of the stormwater infiltration system and based on applicable guidelines. Percolation test data is provided as Figure 8.

Boring	Infiltration Depth (ft.)	Average Infiltration Rate (in / hour)
B3	20-22	1.9

7.16.2 The results of the percolation testing indicate that the soils at depths in the above table are conducive to infiltration. It is our opinion that the soil zone encountered at the depth and location as listed in the table above are suitable for infiltration of stormwater and will not induce excessive hydro-consolidation, will not affect soil structure interaction of existing or proposed foundations due to expansive soils, will not saturate soils supported by existing or proposed retaining walls, and will not increase the potential for liquefaction. Resulting settlements are anticipated to be less than ¼ inch, if any. Additional studies may be required to confirm that stormwater infiltration will not create a perched groundwater condition that would adversely affect the subject site or surrounding properties.

- 7.16.3 Where infiltration systems will be utilized, it is recommended that a minimum 10-foot horizontal and vertical setback be maintained from existing or proposed foundations. Additional setbacks may be required by the governing jurisdiction and should be incorporated into the stormwater infiltration system design as necessary.
- 7.16.4 Subsequent to the placement of the infiltration system, it is acceptable to backfill the resulting void space between the excavation sidewalls and the infiltration system with minimum two-sack slurry provided the slurry is not placed in the infiltration zone. It is recommended that pea gravel be utilized adjacent to the infiltration zone so communication of water to the soil is not hindered.
- 7.16.5 Due to the preliminary nature of the project at this time, the type of stormwater infiltration system and location of the stormwater infiltration systems has not yet been determined. The design drawings should be reviewed and approved by the Geotechnical Engineer. The installation of the stormwater infiltration system should be observed and approved by the Geotechnical Engineer (a representative of Geocon).

7.17 Surface Drainage

- 7.17.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.
- 7.17.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2016 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within five feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.
- 7.17.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pad and pavement areas should be fine graded such that water is not allowed to pond.

7.17.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.18 Plan Review

7.18.1 Grading and foundation plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.
2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.
4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

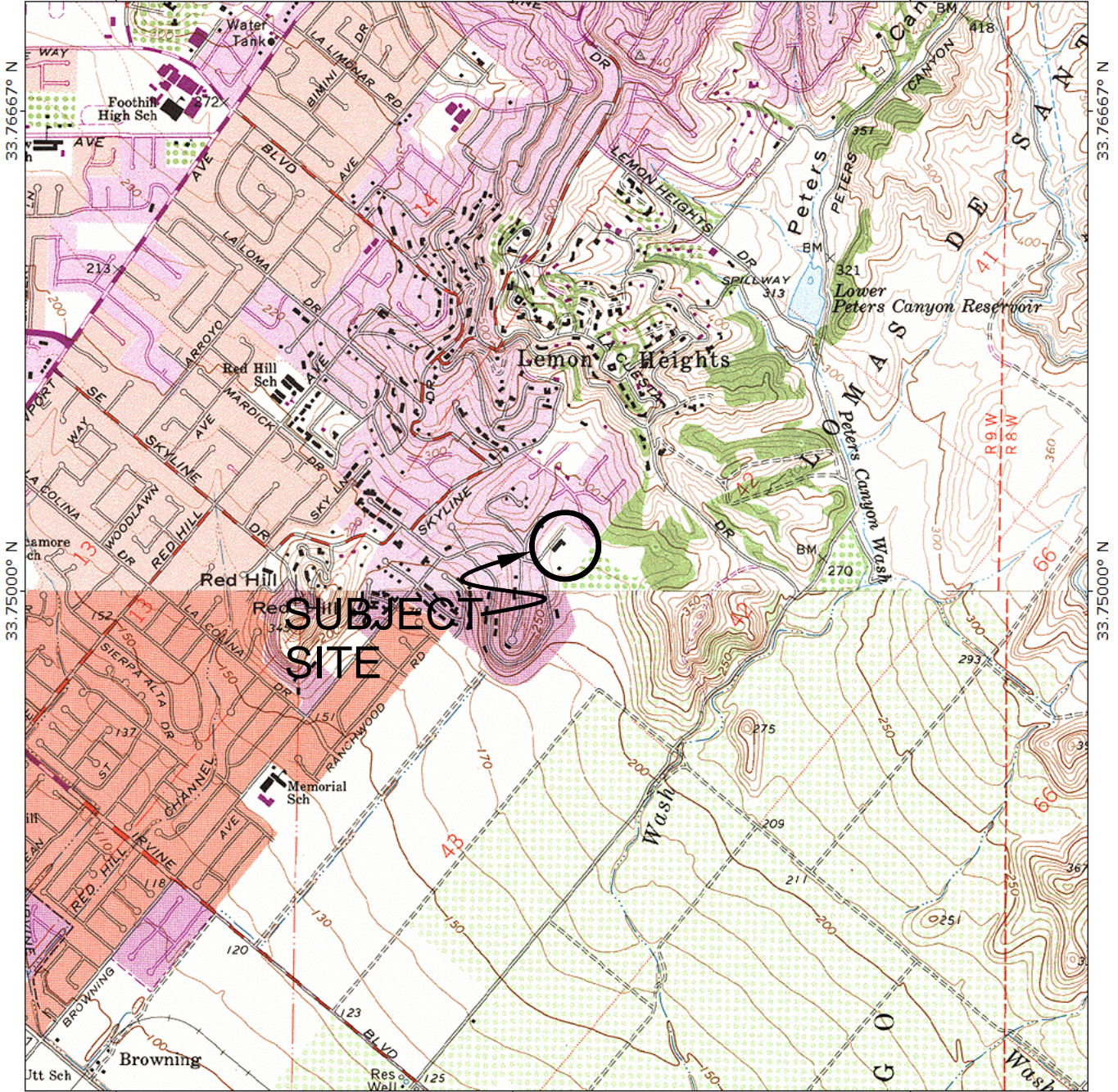
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117.80000° W

117.78333° W

WGS84 117.76667° W



33.76667° N

33.75000° N

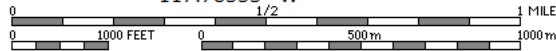
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WGS84 117.76667° W



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REFERENCE: U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, ORANGE, CA QUADRANGLE

GEOCON
WEST, INC.



ENVIRONMENTAL GEOTECHNICAL MATERIALS
15520 ROCKFIELD BLVD. - SUITE J - IRVINE, CA 92618
PHONE (949) 491-6570

VICINITY MAP

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

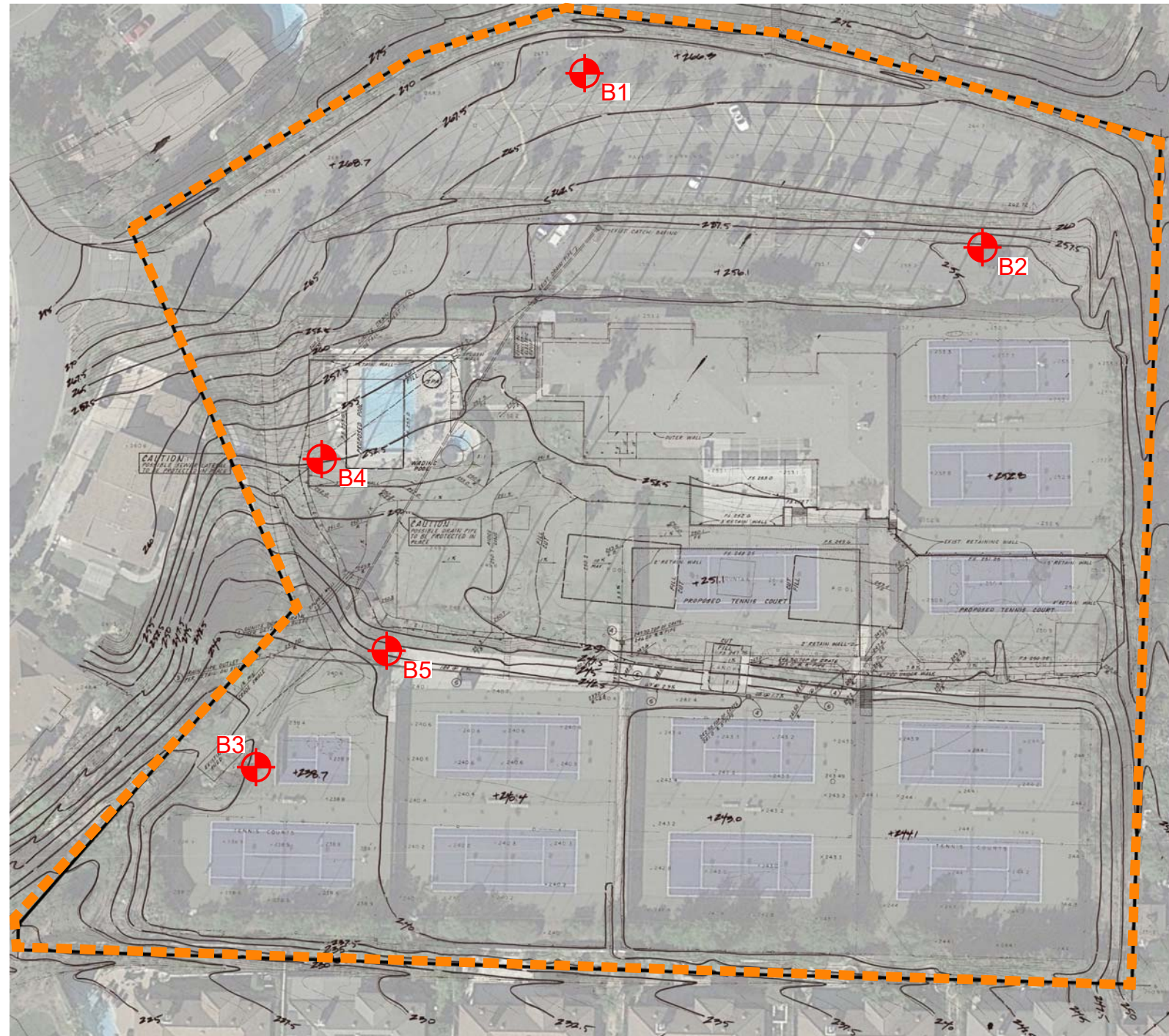
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CHECKED BY: GAK/SFK



MAY 2017

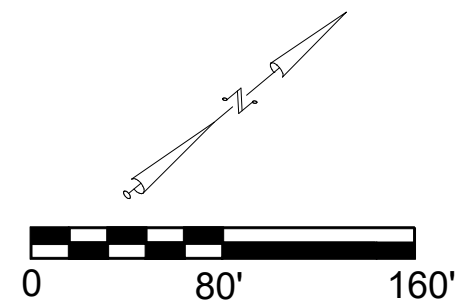
PROJECT NO. A9568-88-02


FIG. 1



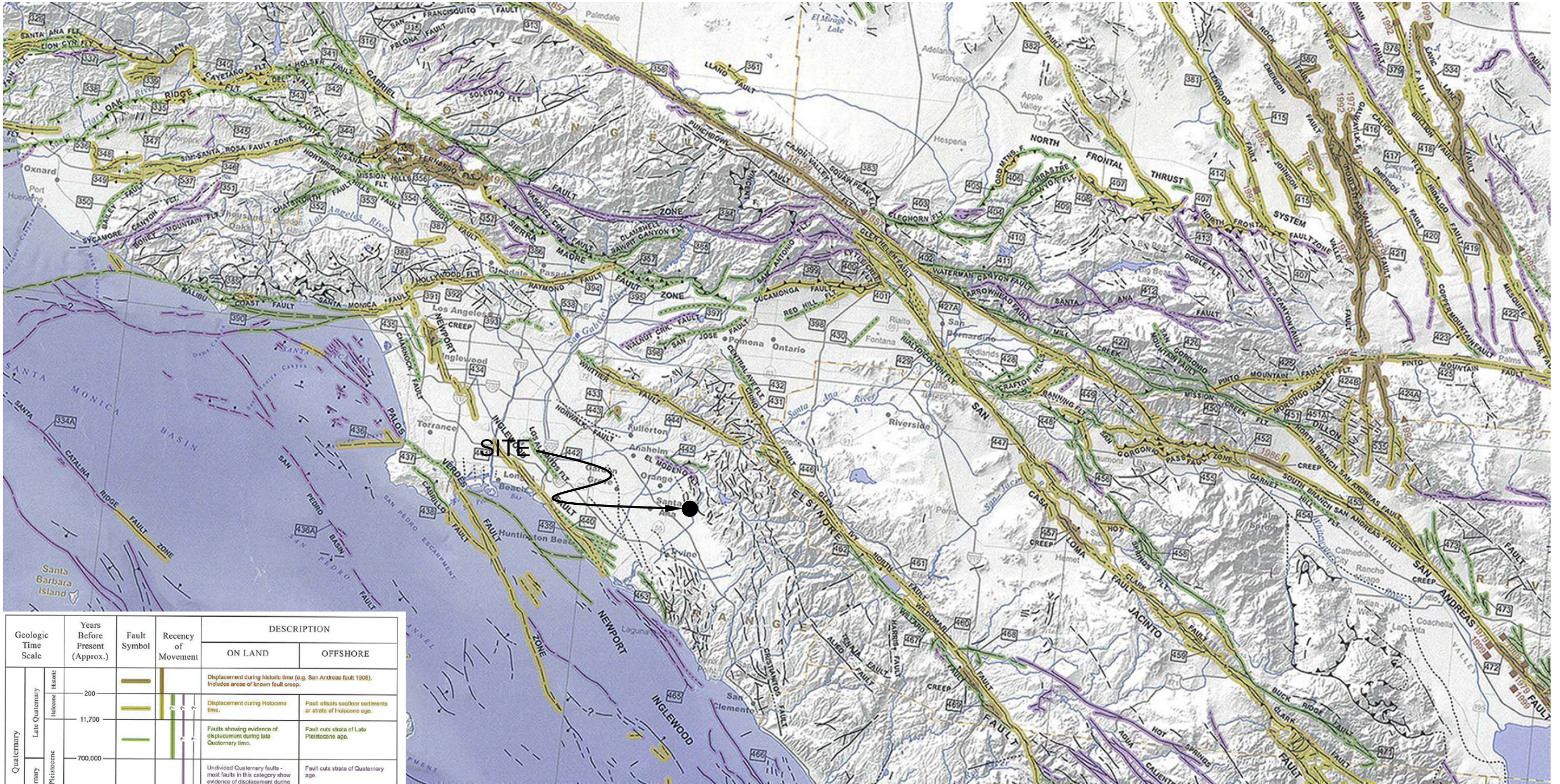
LEGEND

-  B5 Approximate Location of Boring
-  Approximate Location of Property Line



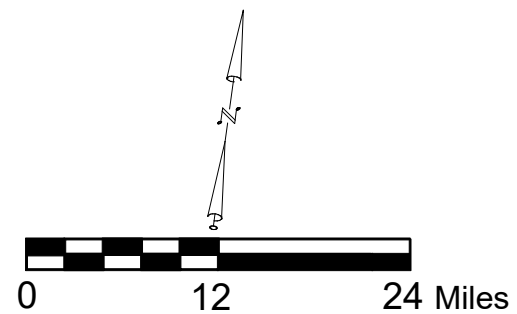
GEOCON WEST, INC.			
ENVIRONMENTAL GEOTECHNICAL MATERIALS 15520 ROCKFIELD BLVD. - SUITE J - IRVINE, CA 92618 PHONE (949) 491-6570			
DRAFTED BY: RMA		CHECKED BY: SFK	
SITE PLAN - EXISTING PROPOSED SINGLE-FAMILY RESIDENTIAL TRACT DEVELOPMENT 11782 SIMON RANCH ROAD SANTA ANA, CALIFORNIA		MAY 2017	PROJECT NO. A9568-88-02
			FIG. 2

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale	Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
				ON LAND	OFFSHORE
Quaternary	Holocene			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
	Late Quaternary			Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
Pre-Quaternary	Pleistocene			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary	1,600,000 ⁺			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
	4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.



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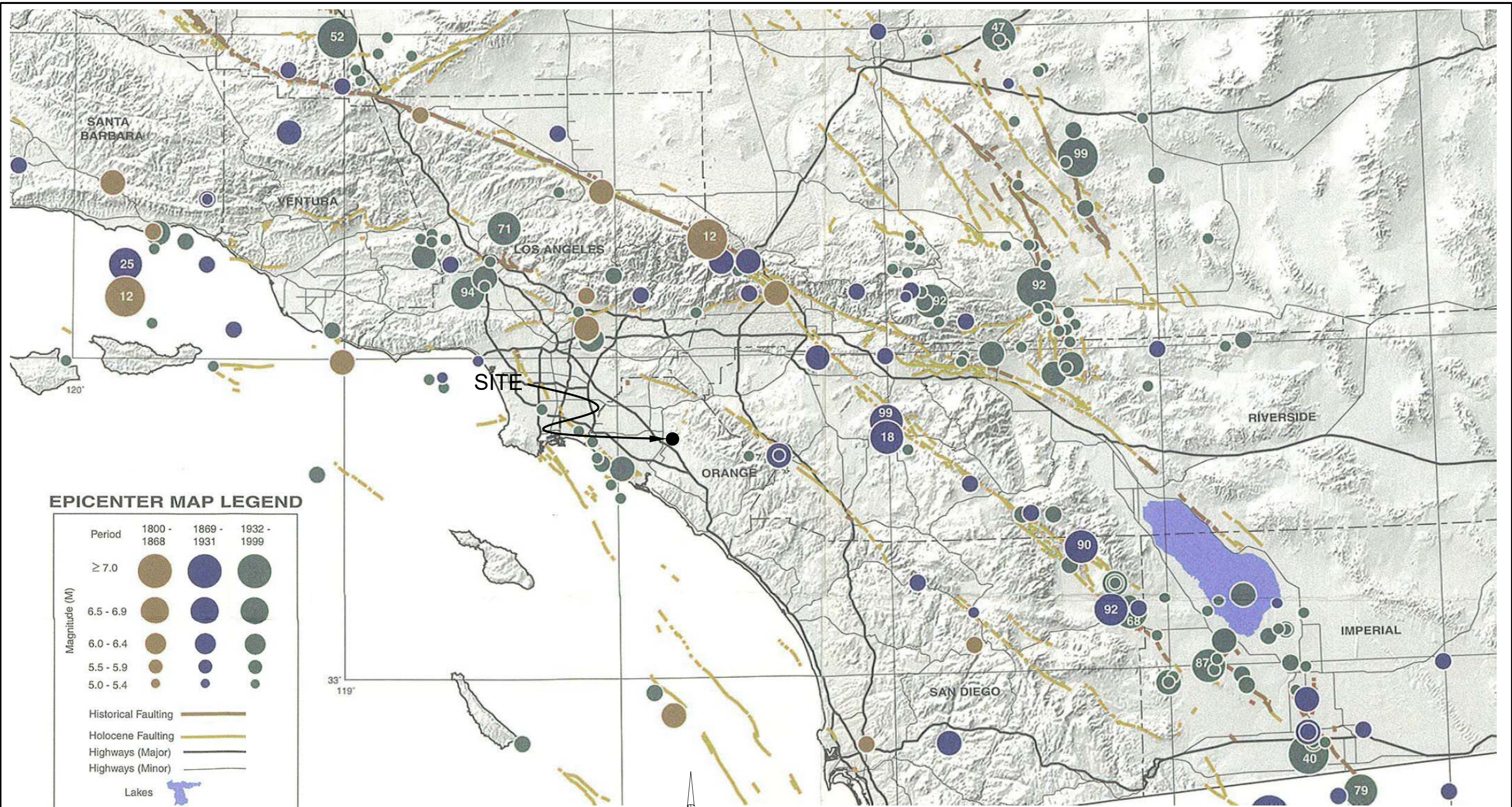
ENVIRONMENTAL GEOTECHNICAL MATERIALS
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PHONE (949) 491-6570

DRAFTED BY: RMA CHECKED BY: SFK

REGIONAL FAULT MAP

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

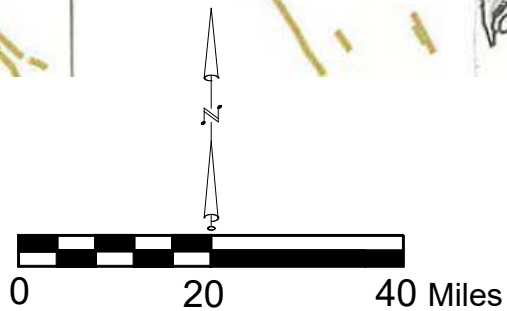
MAY 2017 PROJECT NO. A9568-88-02 FIG. 3



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M)			
≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			
Historical Faulting			
Holocene Faulting			
Highways (Major)			
Highways (Minor)			
Lakes			
	Last two digits of M ≥ 6.5 earthquake year		

Reference: Topozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.



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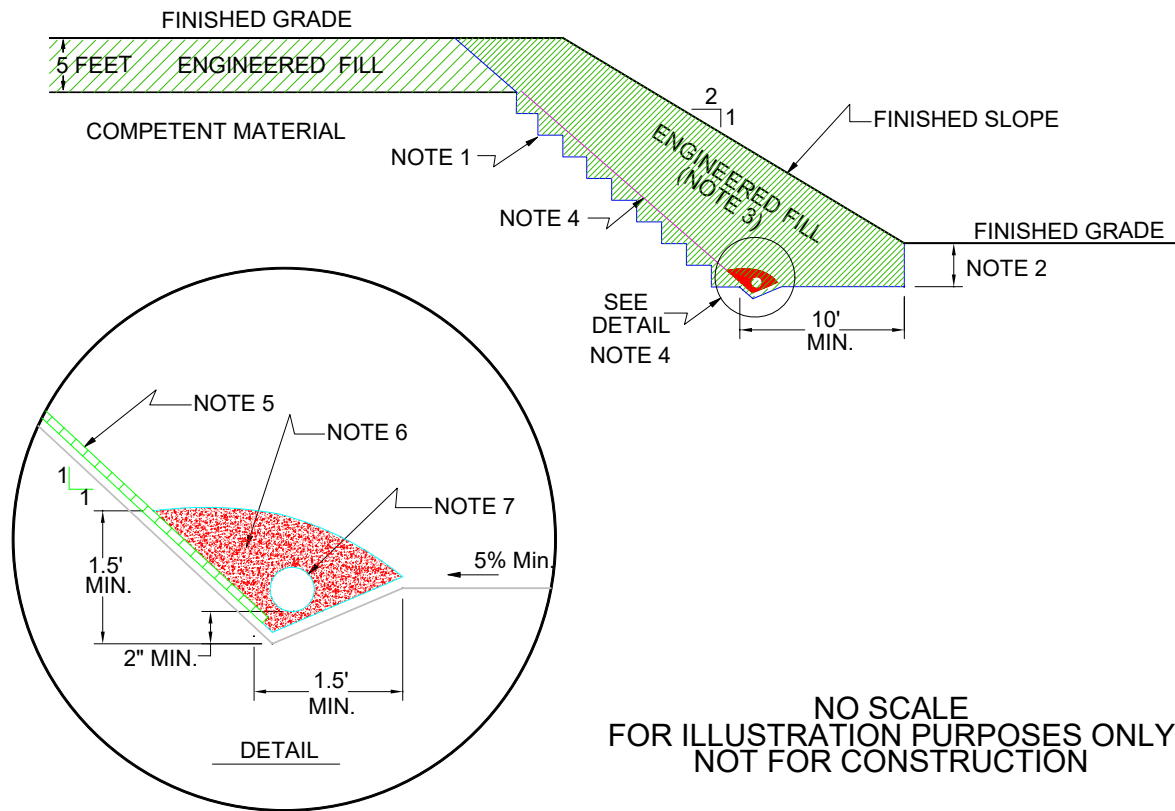
ENVIRONMENTAL GEOTECHNICAL MATERIALS
15520 ROCKFIELD BLVD. - SUITE J - IRVINE, CA 92618
PHONE (949) 491-6570

DRAFTED BY: RMA CHECKED BY: SFK

REGIONAL SEISMICITY MAP

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017 PROJECT NO. A9568-88-02 FIG. 4



NO SCALE
FOR ILLUSTRATION PURPOSES ONLY
NOT FOR CONSTRUCTION

NOTES

- 1 EXCAVATE BENCHED BACKCUT AT 1:1 INCLINATION OR FLATTER
- 2 BASE OF SLOPE KEYWAY TO BE 2 FEET BELOW PAD GRADE SLOPING A MINIMUM 5% INTO SLOPE
- 3 FILL SLOPE TO BE COMPOSED OF PROPERLY COMPACTED ENGINEERED FILL
- 4 KEYWAY DRAIN TO BE INSTALLED WHERE BEDROCK IS EXPOSED WITHIN EXCAVATION FOR FILL SLOPE
- 5 WHERE SEEPAGE IS ENCOUNTERED IN BACKCUT OR SLOPE HEIGHT EXCEEDS 15 FEET, CHIMNEY DRAINS ARE RECOMMENDED, CHIMNEY DRAINS TO BE APPROVED, PREFABRICATED DRAINS ARE CHIMNEY DRAIN PANELS (MIRIDRAIN 5000 OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE
- 6 FILTER MATERIAL TO BE 1-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC
- 7 COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET

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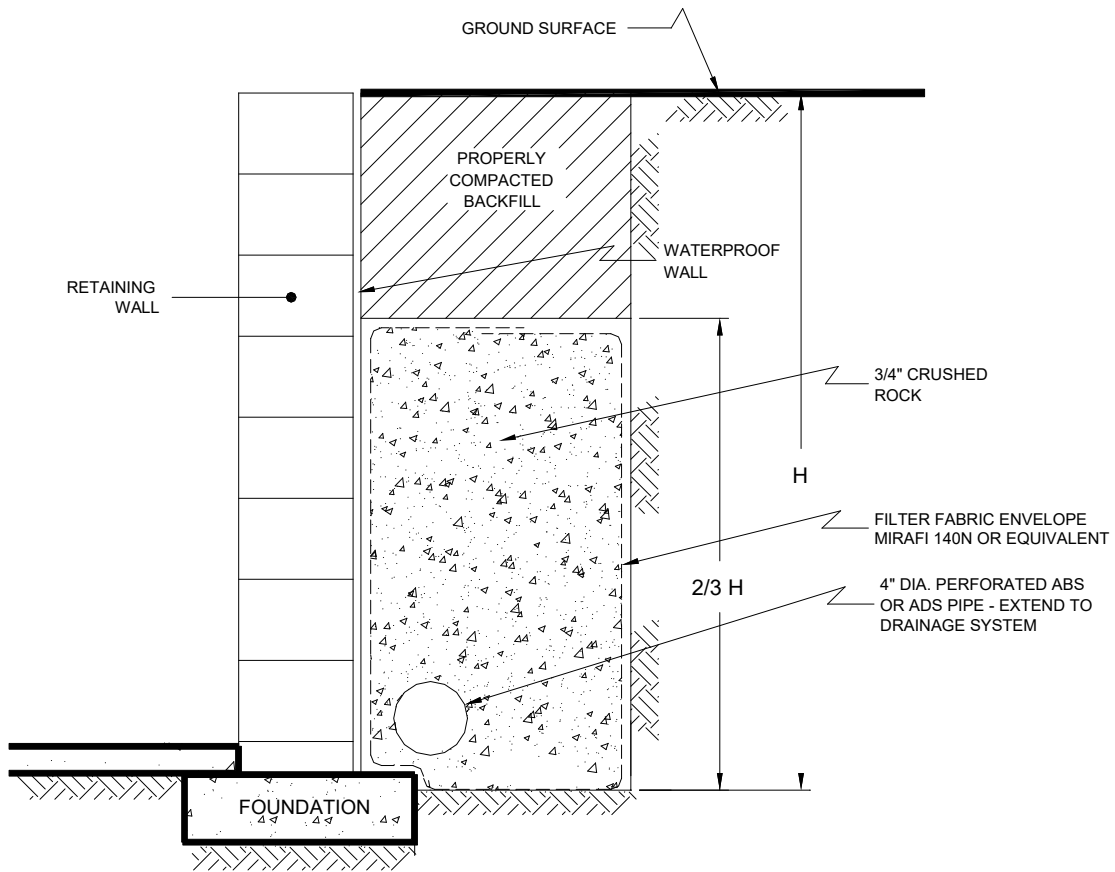
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FILL SLOPE DETAIL

PROPOSED SINGLE-FAMILY
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MAY 2017 PROJECT NO. A9568-88-02 FIG. 5



NO SCALE

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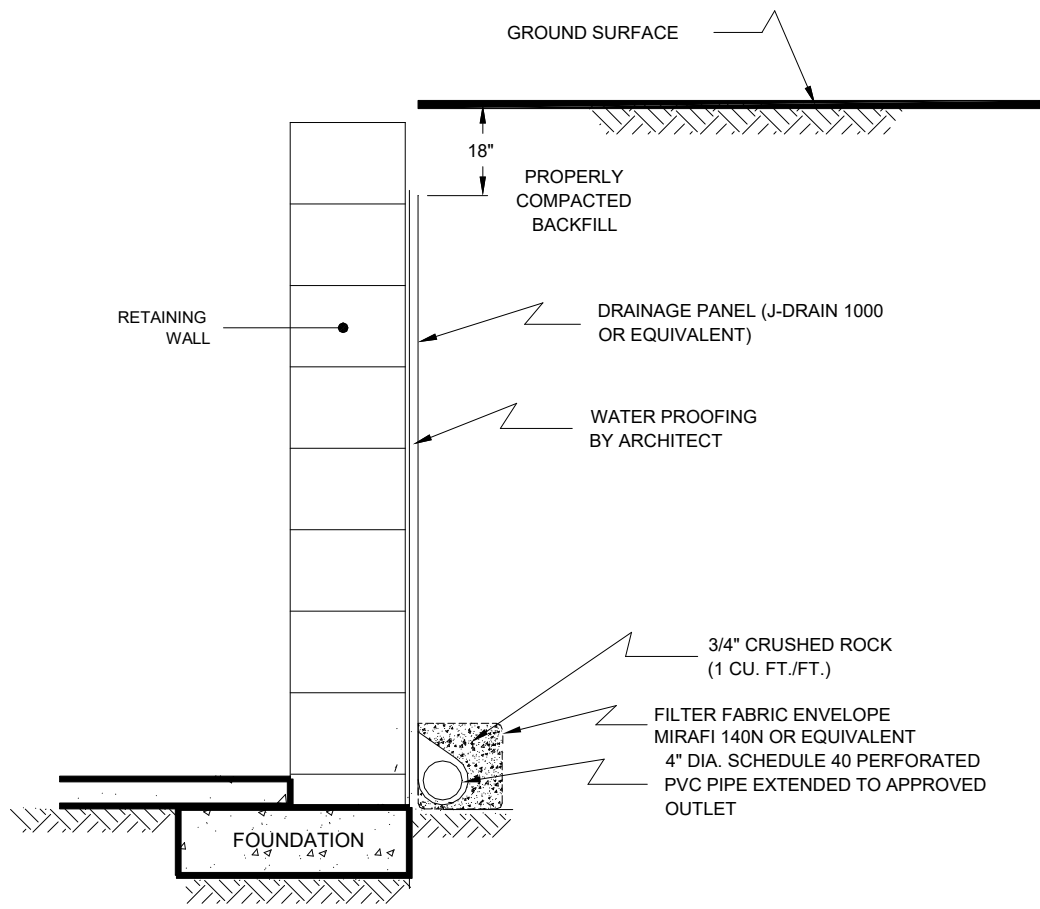
RETAINING WALL DRAIN DETAIL

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
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MAY 2017

PROJECT NO. A9568-88-02

FIG. 6



NO SCALE

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RETAINING WALL DRAIN DETAIL

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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MAY 2017

PROJECT NO. A9568-88-02

FIG. 7

PERCOLATION TEST DATA SHEET

Project:	11782 Simon Ranch Rd	Project No:	A9568-88-02	Date:	4/14/2017
Test Hole No:	B3	Tested By:	RA		
Depth of Test Hole, D _T :	22	USCS Soil Classification:			
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round) =	8	Sides (if rectangular) =	---	---	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D ₀ Initial Depth to Water (in)	D _f Final Depth to Water (in)	ΔD Change in Water Level (in)	Greater than or Equal to 6"? (y/n)
1	10:14	10:39	25	204.0	225.6	21.6	y
2	10:58	11:23	25	198.0	223.2	25.2	y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements, taken every 10 minutes. Otherwise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D ₀ Initial Depth to Water (in)	D _f Final Depth to Water (in)	ΔD Change in Water Level (in)	Percolation Rate (min/in)
1	11:32	11:42	10	204.0	213.6	9.6	1500
2	11:57	12:07	10	204.0	213.6	9.6	1500
3	12:10	12:20	10	204.0	214.9	10.9	1319
4	12:26	12:36	10	204.0	213.7	9.7	1481
5	12:38	12:48	10	201.0	210.0	9.0	1600
6	12:51	13:01	10	200.4	209.9	9.5	1519
7							
8							

Infiltration Rate Calculation:

Time Interval, Δt =	10	minutes	Ho =	63.6	inches
Final Depth to Water, D _f =	209.9	inches	H _f =	54.1	inches
Test Hole Radius, r =	4	inches	ΔH =	9.5	inches
Initial Depth to Water, D ₀ =	200.4	inches	H _{avg} =	58.9	inches
Total Depth of Test Hole, D _T =	264.0	inches			

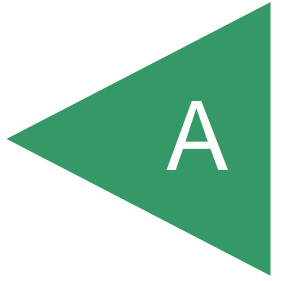
$$I_t = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Infiltration Rate, I_t = **1.9** inches/hour

Figure 8

APPENDIX

A



APPENDIX A

FIELD INVESTIGATION

The site was explored on April 13, 2017, by excavating five 8-inch diameter borings to depths of approximately 18½ to 33½ feet below the existing ground surface utilizing a truck-mounted hollow-stem auger drilling machine. Representative and relatively undisturbed samples were obtained by driving a 3-inch, O. D., California Modified Sampler into the “undisturbed” soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2³/₈-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the borings are presented on Figures A1 through A5. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The location of the borings are shown on Figure 2.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 1 ELEV. (MSL.) <u>266.0</u> DATE COMPLETED <u>4/13/17</u> EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
MATERIAL DESCRIPTION								
0	BULK 0-5'				AC: 5" BASE: NONE ARTIFICIAL FILL Sandy Silt, firm, slightly moist, yellowish brown, fine-grained, trace clay.			
2								
4								
6	B1@5'				UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Sandy Siltstone, soft, slightly moist, light yellowish brown, thinly bedded, unfractured to slightly fractured, slightly weathered.	50 (5.5")	109.7	12.1
8					- increase in fine-grained			
10	B1@10'					50 (6")	113.1	11.4
12								
14					Siltstone, olive brown, slightly fractured, thinly bedded, some oxidation staining, moderately weathered.			
16	B1@15'				Clayey Siltstone, soft, thinly bedded, moderately weathered.	70	99.1	23.5
18								
20	B1@20'				- soft to medium hard	50 (3")	97.2	29.4
					Total depth of boring: refusal at 21 feet Fill to 5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Asphalt patched. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

Figure A1,
Log of Boring 1, Page 1 of 1

A9568-88-02 BORING LOGS.GPJ

SAMPLE SYMBOLS	... SAMPLING UNSUCCESSFUL	... STANDARD PENETRATION TEST	... DRIVE SAMPLE (UNDISTURBED)
	... DISTURBED OR BAG SAMPLE	... CHUNK SAMPLE	... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 2		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) <u>255.0</u>	DATE COMPLETED <u>4/13/17</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u>		BY: <u>RMA</u>		
MATERIAL DESCRIPTION									
0	BULK 0-5'								
2									
4	B2@3'			SM			56	119.6	12.1
6	B2@6'			SM			41	121.6	13.3
8									
10	B2@9'			ML			35	114.8	15.9
12	B2@12'						64	122.1	11.5
14									
16	B2@15'						50 (4")	122.9	11.2
18	B2@18'						50 (6")	125.4	7.4
20									
21	B2@21'						50 (6")	110.0	17.1
					Total depth of boring: 21.5 feet Fill to 2.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Asphalt patched. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.				

Figure A2,
Log of Boring 2, Page 1 of 1

A9568-88-02 BORING LOGS.GPJ

SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)		
					ELEV. (MSL.) <u>238.0</u>	DATE COMPLETED <u>4/13/17</u>					
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>						
MATERIAL DESCRIPTION											
0	BULK 0-5'					ARTIFICIAL FILL Sandy Silt, soft, slightly moist, dark brown, fine-grained, some fine gravel (to 3"). - decrease in sand content					
2											
4	B3@3'							11	113.4	14.7	
6											
8	B3@6'							11	103.5	18.5	
10											
10	B3@9'			ML	ALLUVIUM Sandy Silt, stiff, slightly moist, yellowish brown, fine-grained, trace rootlets. - hard, trace clay	32	120.1	13.4			
12											
14	B3@12'						49	117.3	14.9		
16											
16	B3@15'			SM	Silty Sand, medium dense, slightly moist, yellowish brown, fine- to medium-grained. - increase in silt content, trace clay	39	117.2	14.7			
18											
20	BULK 15-20'										
22	B3@18'							43	110.4	17.4	
22	B3@21'				UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Sandy Siltstone, very soft, slightly moist, light grayish brown with dark orange mottles, thinly bedded to laminated, fine-grained, slightly fractured, slightly weathered.	21	117.1	13.6			
24											
26	B3@24'							19	104.0	19.4	
28	B3@27'				Sandstone, moderately hard, slightly moist, light gray, massive, friable, intensely fractured, fresh to slightly weathered.	50 (6")	120.8	12.1			

Figure A3,
Log of Boring 3, Page 1 of 2

A9568-88-02 BORING LOGS.GPJ



SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	
					ELEV. (MSL.) <u>238.0</u>	DATE COMPLETED <u>4/13/17</u>				
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>					
					MATERIAL DESCRIPTION					
30	B3@30'						50 (6")	111.9	10.7	
32					- slightly weathered, trace secondary clay					
	B3@33'						50 (3")	110.5	11.7	
					Total depth of boring: 33.5 feet Fill to 8 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.					

**Figure A3,
Log of Boring 3, Page 2 of 2**

A9568-88-02 BORING LOGS.GPJ







SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 4 ELEV. (MSL.) <u>253.0</u> DATE COMPLETED <u>4/13/17</u> EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
MATERIAL DESCRIPTION								
0	BULK 0-5'				ARTIFICIAL FILL Sandy Silt, firm, slightly moist, dark brown, fine- to medium-grained, some coarse-grained, some fine gravel (to 4"), some rootlets, trace clay.			
2								
4								
6	B4@6'				UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Silty Sandstone, gray, thinly bedded, friable, slightly fractured, fresh to slightly weathered. - decrease in silt content - slightly weathered	11	107.8	13.6
8								
10	B4@9' BULK 9-12'					86	121.4	10.7
12	B4@12'					50 (6")	116.5	6.8
14								
16	B4@15'					50 (4")	107.5	9.3
18	B4@18'				50 (6")	111.8	8.1	
					Total depth of boring: 18.5 feet Fill to 6.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

Figure A4,
Log of Boring 4, Page 1 of 1

A9568-88-02 BORING LOGS.GPJ







SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 5		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) <u>292.5</u>	DATE COMPLETED <u>4/13/17</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>				
MATERIAL DESCRIPTION									
0					ARTIFICIAL FILL Sandy Silt, firm, slightly moist, dark brown, fine-grained.				
2									
4	B5@3'				ALLUVIUM Silt with Sand, stiff, slightly moist, dark yellowish brown, fine-grained, trace clay. - hard, reddish brown		24	118.9	13.9
6	B5@6'						52	121.3	13.8
8				ML					
10	B5@9'						50	122.3	13.1
12	B5@12'				- gray mottling				
14									
16	B5@15'			SM	Silty Sand, dense, slightly moist, dark yellowish brown, fine-grained, trace clay.		75	126.4	9.4
18				SP-SM	Sand with Silt, poorly graded, medium dense, slightly moist, brown, fine- to medium-grained.				
20	B5@18'				Sandy Silt, hard, slightly moist, dark yellowish brown, fine-grained.		47	116.4	12.0
22				ML					
24	B5@21'				UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Siltstone, reddish brown, massive, slightly fractured, moderately weathered.		65	117.9	15.3
26					- some clay				
28	B5@24'						50 (6")	116.1	14.3
	B5@27'				Sandstone, moderately hard, slightly moist, gray, massive, friable, unfractured, fresh.		50 (4")	120.4	15.1

**Figure A5,
Log of Boring 5, Page 1 of 2**

A9568-88-02 BORING LOGS.GPJ

SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 5		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	
					ELEV. (MSL.) <u>292.5</u>	DATE COMPLETED <u>4/13/17</u>				
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>					
					MATERIAL DESCRIPTION					
30	B5@30'				Total depth of boring: 30.5 feet Fill to 3 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.		50 (5")	117.0	9.0	

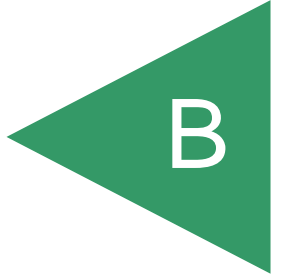
**Figure A5,
Log of Boring 5, Page 2 of 2**

A9568-88-02 BORING LOGS.GPJ

SAMPLE SYMBOLS	<input type="checkbox"/> ... SAMPLING UNSUCCESSFUL	<input type="checkbox"/> ... STANDARD PENETRATION TEST	<input type="checkbox"/> ... DRIVE SAMPLE (UNDISTURBED)
	<input checked="" type="checkbox"/> ... DISTURBED OR BAG SAMPLE	<input checked="" type="checkbox"/> ... CHUNK SAMPLE	<input checked="" type="checkbox"/> ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

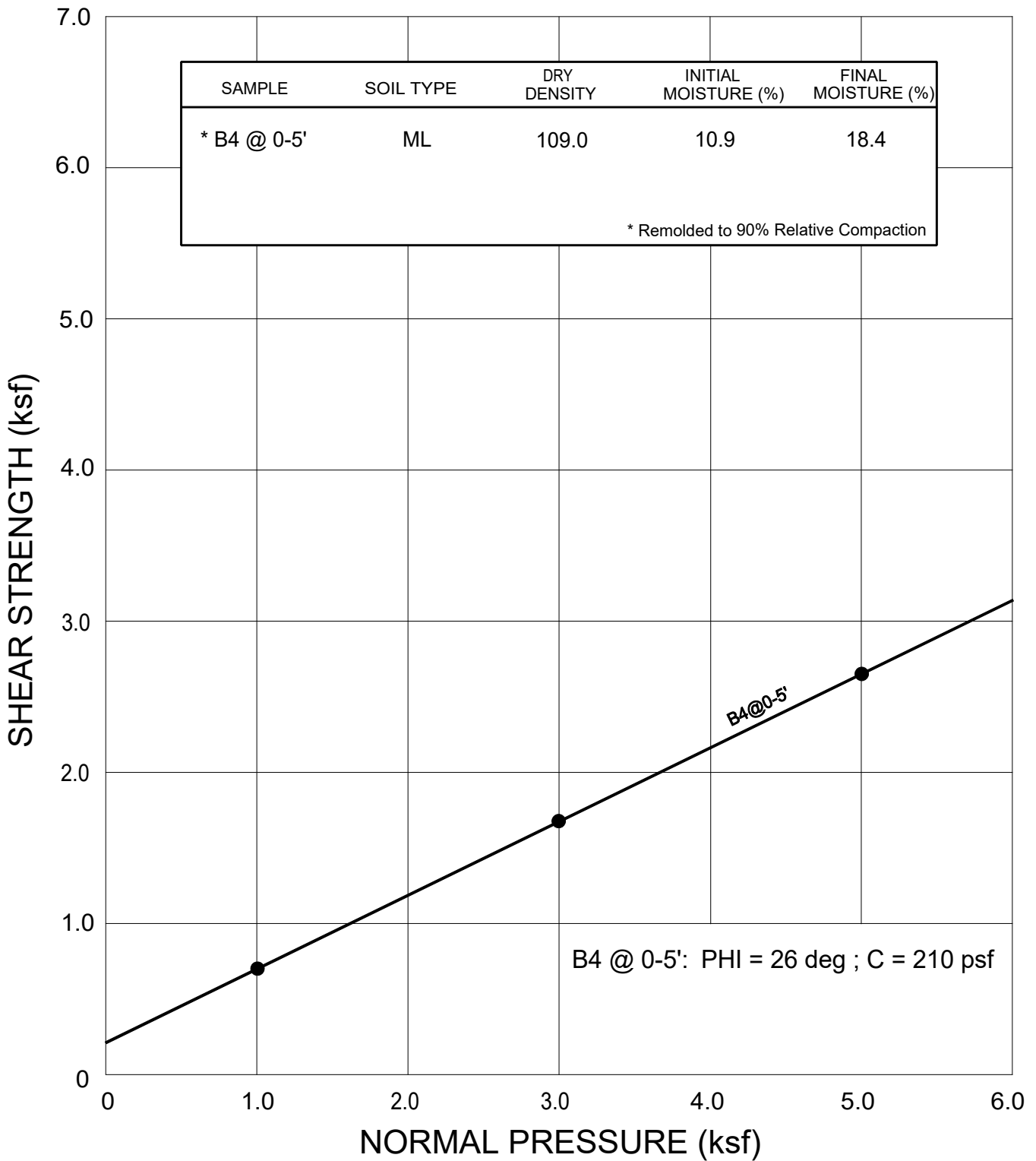
APPENDIX



APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the “American Society for Testing and Materials (ASTM)”, or other suggested procedures. Selected samples were tested for direct shear strength, consolidation, gradation, and expansion characteristics, compaction, resistance value (R-value), corrosivity, and in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B6. The in-place dry density and moisture content of the samples tested are presented on the boring logs, Appendix A.



● DIRECT SHEAR, SATURATED

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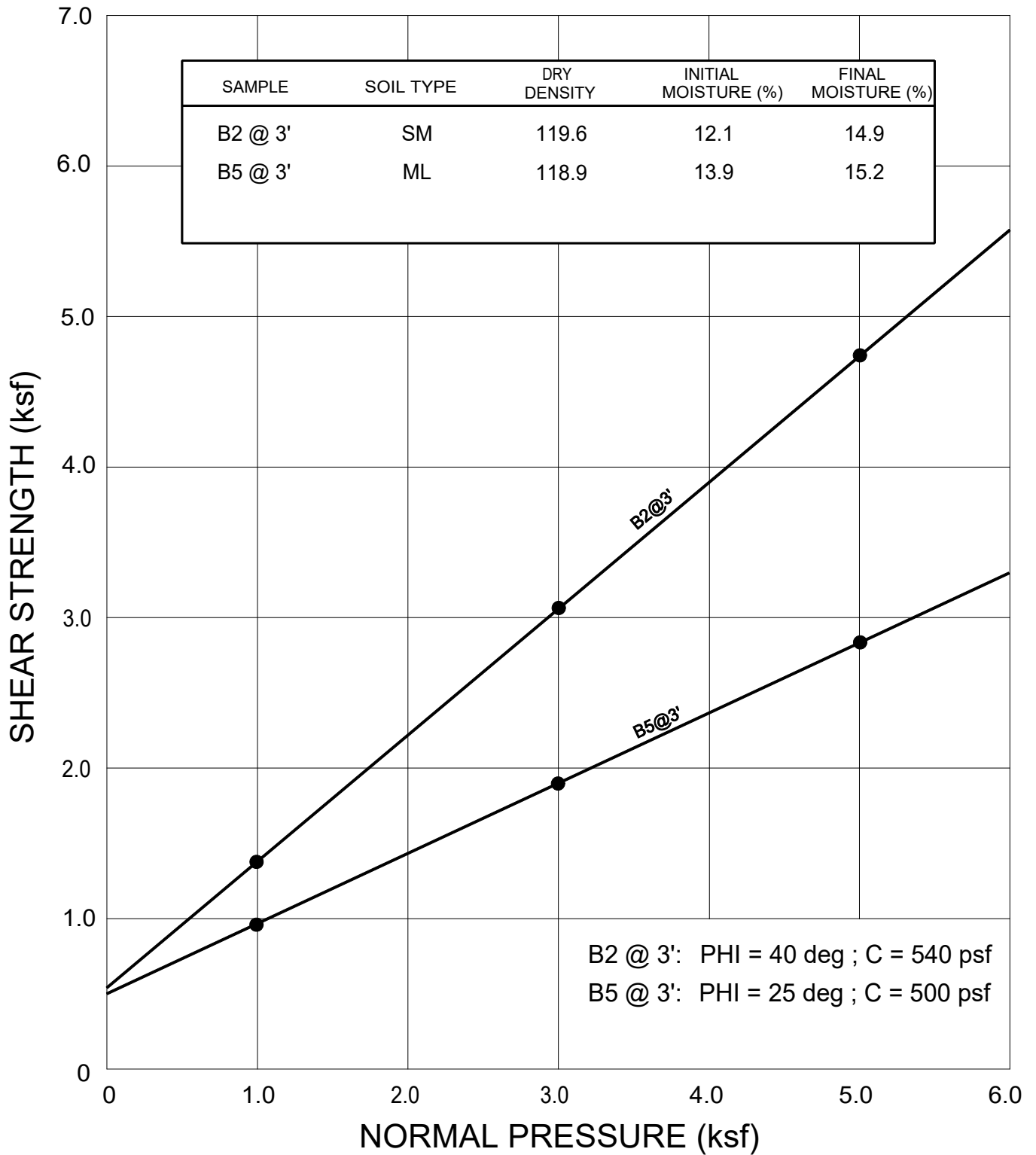
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PHONE (949) 491-6570

DRAFTED BY: AG CHECKED BY: JTA

DIRECT SHEAR TEST RESULTS

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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MAY 2017 PROJECT NO. A9568-88-02 FIG. B1



● DIRECT SHEAR, SATURATED

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CHECKED BY: JTA

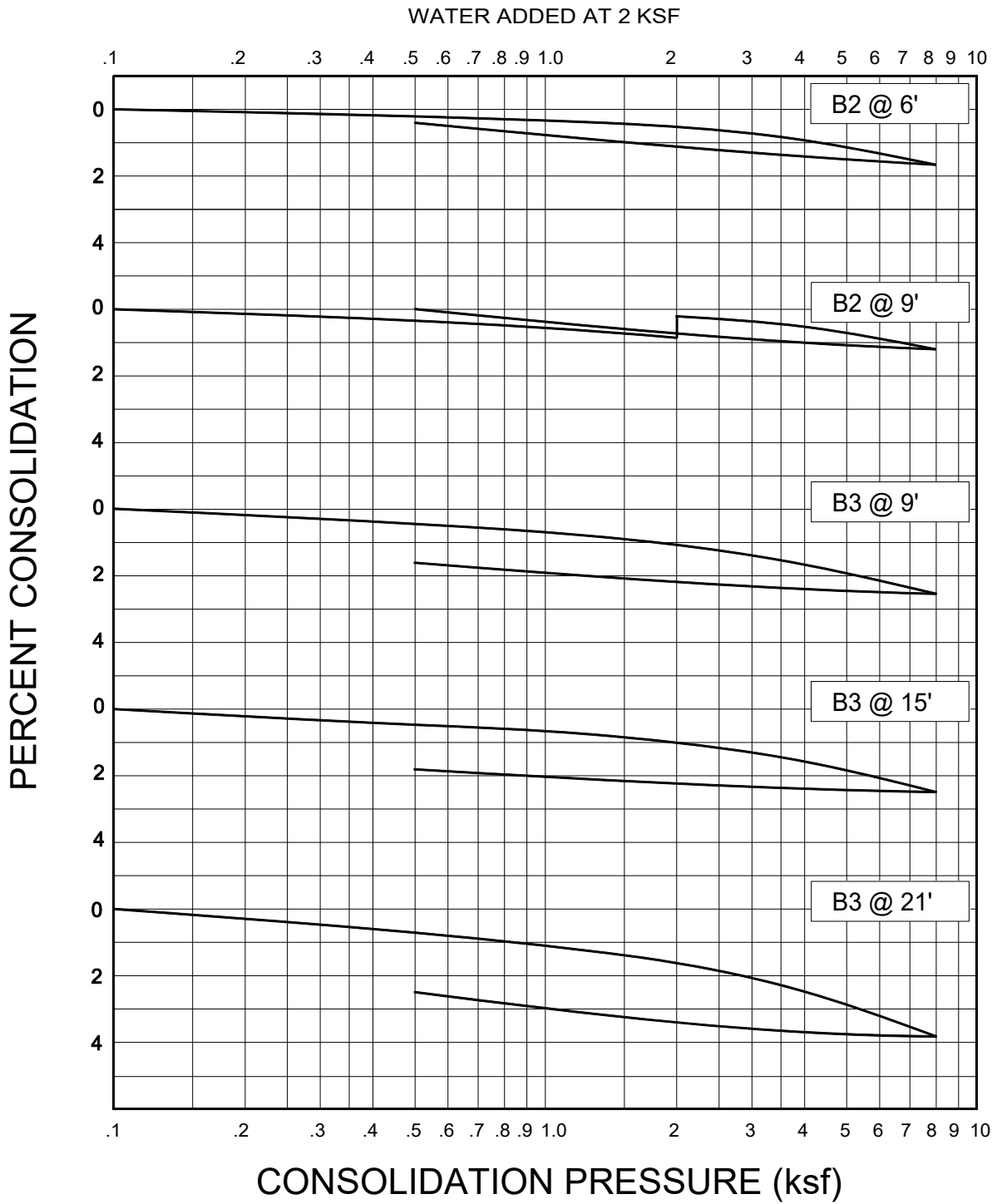
DIRECT SHEAR TEST RESULTS

PROPOSED SINGLE-FAMILY
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SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. B2



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CONSOLIDATION TEST RESULTS

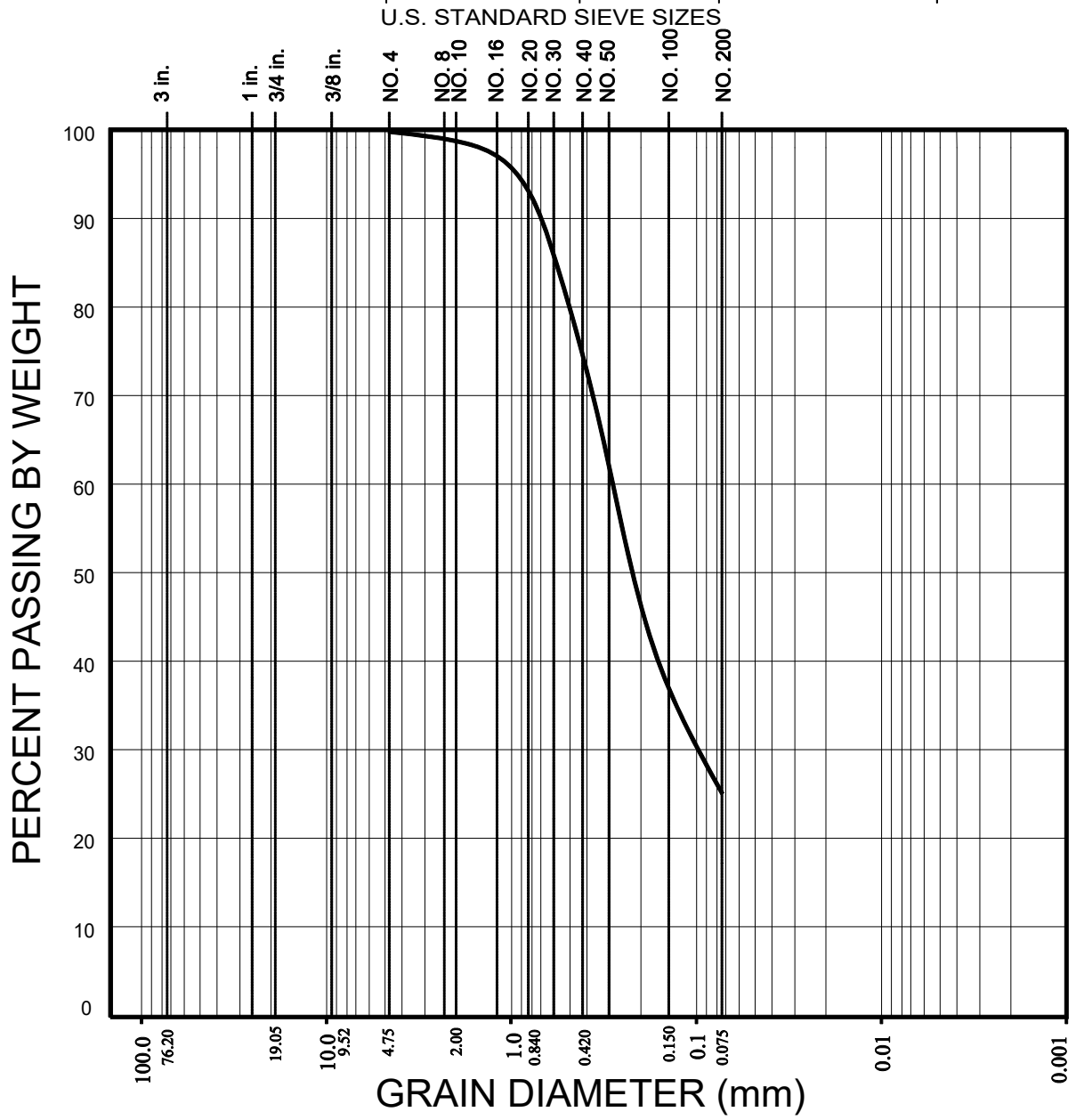
PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. B3

GRAVEL	SAND		SILT	CLAY
	MEDIUM TO COARSE	FINE		



SAMPLE	UNIFIED SOIL CLASSIFICATION
— B3 @ 20-22'	SM

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GRAIN SIZE DISTRIBUTION

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017	PROJECT NO. A9568-88-02	FIG. B4
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**SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS
ASTM D 4829-11**

SAMPLE NO.	MOISTURE CONTENT(%)		DRY DENSITY (PCF)	EXPANSION INDEX	*UBC CLASSIFICATION	**CBC CLASSIFICATION
	BEFORE	AFTER				
B4 @ 0-5'	10.0	20.5	110.4	66	Medium	Expansive

* Reference: 1997 Uniform Building Code, Table 18-I-B.

** Reference: 2016 California Building Code, Section 1803.5.3

**SUMMARY OF LABORATORY MAXIMUM DENSITY AND
AND OPTIMUM MOISTURE CONTENT TEST RESULTS
ASTM D 1557-12**

SAMPLE NO.	SOIL DESCRIPTION	MAXIMUM DRY DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)
B4 @0-5'	Dark Brown Sandy Silt	122.7	9.6

**SUMMARY OF LABORATORY RESISTANCE VALUE
(R-VALUE) TEST RESULTS
ASTM D 2844**

SAMPLE NO.	RESISTANCE VALUE (R-VALUE)
B1 @0-5'	13

GEOCON
WEST, INC.



ENVIRONMENTAL GEOTECHNICAL MATERIALS
15520 ROCKFIELD BLVD. - SUITE J - IRVINE, CA 92618
PHONE (949) 491-6570

DRAFTED BY: AG

CHECKED BY: JTA

LABORATORY TEST RESULTS

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. B5

**SUMMARY OF LABORATORY POTENTIAL OF
HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
CALIFORNIA TEST NO. 643**

SAMPLE NO.	pH	RESISTIVITY (OHM CENTIMETERS)
B4 @ 0-5'	8.4	1011 (Corrosive)

**SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
EPA NO. 325.3**

SAMPLE NO.	CHLORIDE ION CONTENT (%)
B4 @ 0-5'	0.030

**SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417**

SAMPLE NO.	WATER SOLUBLE SULFATE (% SO ₄)	SULFATE EXPOSURE *
B4 @ 0-5'	0.002	Not Applicable (S0)

* Reference: 2016 California Building Code, Section 1904.3 and ACI 318-11 Section 4.3.

GEOCON
WEST, INC.



ENVIRONMENTAL GEOTECHNICAL MATERIALS
15520 ROCKFIELD BLVD. - SUITE J - IRVINE, CA 92618
PHONE (949) 491-6570

DRAFTED BY: AG

CHECKED BY: JTA

CORROSIVITY TEST RESULTS

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. B6

Appendix G

Geotechnical Investigation Update



Project No. A9568-88-02
May 4, 2020

Ranch Hill Partners, LP
124 Tustin Avenue, Suite 200
Newport Beach, California 92663

Attention: Mr. Peter Zehnder

Subject: UPDATE OF GEOTECHNICAL INVESTIGATION
PROPOSED SINGLE-FAMILY RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

Reference: *Geotechnical Investigation, Property Transaction and Proposed Single-Family Residential Tract Development, 11782 Simon Ranch Road, Santa Ana, California*, prepared by Geocon West, Inc. (A9568-88-02), dated May 16, 2017.

Dear Mr. Zehnder:

This letter has been prepared to update the referenced geotechnical investigation report prepared by Geocon West, Inc. Based on our understanding of the project, the scope remains essentially unchanged. The geotechnical recommendations presented in the report remain applicable to the project as presently proposed. The recommendations presented herein are intended to update the referenced report for compliance with current building code requirements. Where differing, the recommendations herein supersede the previous recommendations.

Seismic Design Criteria

The following table summarizes the site-specific design criteria obtained from the 2019 California Building Code (CBC; Based on the 2018 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *Seismic Design Maps*, provided by OSHPD. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2019 CBC and Table 20.3-1 of ASCE 7-16. The values presented on the following page are for the risk-targeted maximum considered earthquake (MCE_R).

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2019 CBC Reference
Site Class	C	Section 1613.2.2
MCE _R Ground Motion Spectral Response Acceleration – Class B (short), S _S	1.321g	Figure 1613.2.1(1)
MCE _R Ground Motion Spectral Response Acceleration – Class B (1 sec), S _I	0.47g	Figure 1613.2.1(2)
Site Coefficient, F _A	1.2	Table 1613.2.3(1)
Site Coefficient, F _V	1.5	Table 1613.2.3(2)
Site Class Modified MCE _R Spectral Response Acceleration (short), S _{MS}	1.585g	Section 1613.2.3 (Eqn 16-36)
Site Class Modified MCE _R Spectral Response Acceleration – (1 sec), S _{M1}	0.705g	Section 1613.2.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S _{DS}	1.056g	Section 1613.2.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S _{D1}	0.47g	Section 1613.2.4 (Eqn 16-39)

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE _G Peak Ground Acceleration, PGA	0.5g	Figure 22-7
Site Coefficient, F _{PGA}	1.2	Table 11.8-1
Site Class Modified MCE _G Peak Ground Acceleration, PGA _M	0.6g	Section 11.8.3 (Eqn 11.8-1)

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

If you have any questions regarding this letter, or if we may be of further service, please contact the undersigned.

Very truly yours,

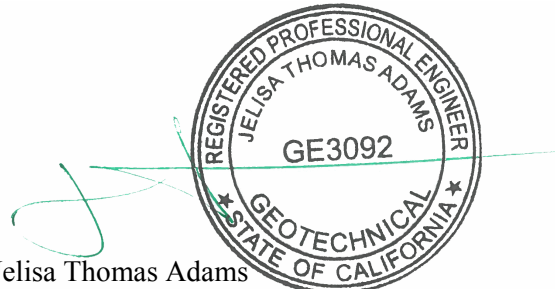
GEOCON WEST, INC.



Petrina Zen
PE 87489

(Email)

Addressee



Jelisa Thomas Adams
GE 3092

Appendix H

Phase I Environmental Site Assessment



**PHASE I
ENVIRONMENTAL SITE ASSESSMENT**

**TUSTIN HILLS RACQUET CLUB
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA**

PREPARED FOR:

**COLLECTIVE HOUSING SUPPLY COMPANY
124 TUSTIN AVENUE, SUITE 200
NEWPORT BEACH, CALIFORNIA 92663**

PREPARED BY:

**GEOCON WEST, INC.
3303 N. SAN FERNANDO ROAD, SUITE 100
BURBANK, CALIFORNIA 91504-2531**



GEOCON PROJECT NO. A9568-77-01

APRIL 2017



Project No. A9568-77-01
April 19, 2017

Mr. Peter Zehnder
Collective Housing Supply Company
124 Tustin Avenue, Suite 200
Newport Beach, California 92663

Subject: PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT
TUSTIN HILLS RACQUET CLUB
11782 SIMON RANCH ROAD
SANTA ANA, ORANGE COUNTY, CALIFORNIA

Dear Mr. Zehnder:

As you (on behalf of Collective Housing Supply Company, the Client) requested we have performed a Phase I Environmental Site Assessment (ESA) for the 5.88-acre parcel developed as the Tustin Hills Racquet Club located at 11782 Simon Ranch Road in Santa Ana, California. The Site is identified by the County of Orange assessor's parcel number 104-321-01.

You requested a Phase I ESA to provide information regarding the potential for existing hazardous substances and/or petroleum products at the Site prior to purchasing for redevelopment. The accompanying report presents the details of our Phase I ESA.

We appreciate the opportunity to have performed this Phase I ESA for you. Please contact us if you have any questions concerning this report or if we may be of further service.

Very truly yours,

GEOCON WEST, INC.

Scott M. Nunes, CAC
Senior Environmental Scientist

John E. Juhrend, PE, CEG
Senior Engineer

(EMAIL) Addressee

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- B. EDR Radius MapTM Report with GeoCheck[®]
- C. EDR Historical Aerial Photographs
- D. EDR Historical Topographic Maps
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PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

1.0 INTRODUCTION

This report presents the findings of a Phase I Environmental Site Assessment (ESA) of a 5.88-acre parcel developed as the Tustin Hills Racquet Club (the Site) located at 11782 Simon Ranch Road in Santa Ana, California (Figure 1). The Phase I ESA was requested by Collective Housing Supply Company (the Client) to provide information regarding the potential for existing hazardous substances and/or petroleum product impacts at the Site prior to purchasing for redevelopment.

1.1 Purpose and Objectives

The purpose of the Phase I ESA was to identify evidence or indications of ‘recognized environmental conditions’ (REC) as defined by the American Society for Testing and Materials (ASTM) *Designation E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Section 1.1.1 of ASTM Designation E 1527-13 defines an REC as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.” De minimis conditions are those that generally do not present a threat to human health or the environment and that generally would not be the subject of the enforcement action if brought to the attention of appropriate governmental agencies.

ASTM *Designation E 1527-13* also defines ‘Historical’ and ‘Controlled’ RECs. They define an ‘Historical REC’ as “A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).” ASTM defines a ‘Controlled REC’ as “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).” An HREC is not a REC if the property meets current standards for unrestricted residential use. A CREC remains a REC by definition because the property does not meet the unrestricted residential use requirement unconditionally.

We also conducted the Phase I ESA in general accordance with the requirements of 40 Code of Federal Regulations (CFR) Part 312 titled *Standards and Practices for All Appropriate Inquiries*, as required under Sections 101(35)(B)(ii) and (iii) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The purpose of conducting an all appropriate inquiries investigation into the previous ownership and uses of a property is to meet the provisions necessary for the landowner, contiguous property owner, and/or bona fide prospective purchaser to qualify for certain landowner liability protections under CERCLA.

The following principles are an integral part of ASTM Designation E1527-13:

- **“Uncertainty Not Eliminated** - No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost.”
- **“Not Exhaustive** - All Appropriate Inquiries does not mean an exhaustive assessment of a property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of this practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information.”
- **“Level of Inquiry is Variable** – Not every property will warrant the same level of assessment. Consistent with good commercial and customary practice, the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry.”

1.2 Scope of Services

Our Proposal No. LP-2017-143, dated February 16, 2017, describes the scope of services for this Phase I ESA. We performed the scope of services outlined in the proposal with the exception that Sanborn Maps were not reviewed. Environmental Data Resources, Inc. (EDR) stated that Sanborn Map coverage does not exist for the Site.

1.3 Report Limitations

The main components of the Phase I ESA and their objectives, as specified by the referenced standards, include the following:

- **Physical Setting:** we reviewed physical setting references to obtain information concerning the topographic, geologic, and hydrogeologic characteristics of the Site and vicinity. Such information may be indicative of the direction and/or extent that a contaminant could migrate in the event of a spill or release.
- **Regulatory Agency Records Review:** we reviewed regulatory agency records to obtain information that could potentially help identify RECs at or potentially affecting the Site. We reviewed publicly available Federal, State, and local regulatory agency records for the Site.

- **Site History:** we reviewed historical references to assess the previous uses of the Site and surrounding area to identify those that could have led to RECs on or near the Site. Historical sources reviewed included aerial photographs, topographic maps, and city directories. In addition, we conducted interviews with persons who were expected to be reasonably knowledgeable about historical and/or current conditions at and uses of the Site.
- **Site Reconnaissance:** we performed a site reconnaissance to observe site conditions and activities for indications of evidence of RECs. The site reconnaissance was for the Site only. Offsite properties and features were viewed solely from the vantage of the Site and public thoroughfares.

1.4 Data Gaps

ASTM Designation E 1527-13 defines a data gap as “a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information.” Data gaps could include such things as insufficient historical information, the inability to interview persons with direct site knowledge (e.g., the owner(s), past owner(s), tenants, workers, etc.) or the lack of access to all parts of a site during the site reconnaissance. No significant data gaps were identified during the performance of this Phase I ESA. Sanborn maps were not available for the Site, however, this is not considered a data gap as it did not affect our ability to assess the historical use of the Site.

2.0 SITE DESCRIPTION

This section provides information regarding the location and physical characteristics of the Site including its size, topography, geologic, soil, and hydrogeologic conditions.

2.1 Location and Legal Description

The Site is located at 11782 Simon Ranch Road in Santa Ana, California (Figure 1). The Site is identified by County of Orange assessor’s parcel number (APN) 104-321-01. The Site is depicted in Section 11 of Township 5 South, Range 9 West, San Bernardino Base and Meridian on the United States Geological Survey’s (USGS) *Orange, California, 7.5-minute Topographic Map* (USGS, 2012).

2.2 Site and Vicinity General Characteristics

The Site is currently developed with the Tustin Hills Racquet Club consisting of a clubhouse, twelve tennis courts, and a swimming pool. Paved parking is located on the upper western portion of the Site. The site vicinity is single-family residential development in all directions. The Site Plan (Figure 2) depicts the site boundaries and features, and surrounding properties.

2.2.1 Topography

The topography of the Site and surrounding vicinity generally slopes to the south-southeast. The *USGS Orange, 7.5-minute Topographic Map* (USGS, 2012) shows the site elevation ranging from approximately 242 feet to 275 feet above mean sea level, with a general topographic gradient of the site vicinity to the southwest.

2.2.2 Geologic Conditions

Based on a concurrent geotechnical subsurface exploration performed by Geocon (five borings drilled to depths ranging from 21.5 to 33 feet), a northeasterly trending geologic contact transects the Site, separating Eocene age bedrock on the northwest from alluvium/colluvium deposits of Quaternary age on the southeast. The bedrock is reportedly sandstone and conglomerate assigned to the Vaqueros/Sespe Formation, and the alluvium/colluvium is composed of unconsolidated to well indurated sands, silts and gravels.

According to the United States Department of Agriculture's (USDA) Soil Conservation Service (SCS), which leads the National Cooperative Soil Survey (NCSS), soil at the Site is generally moderately well-drained clay loam. The soil has moderate infiltration rates.

2.2.3 Hydrologic and Hydrogeologic Conditions

State historical groundwater maps reveal an absence of shallow groundwater beneath the Site (to a depth of at least 50 feet). No groundwater was encountered in the geotechnical borings that were advanced to depths ranging from 21.5 to 33 feet. The flow direction of groundwater is anticipated to generally follow the topography of the site vicinity to the southwest.

2.3 Current and Planned Uses of the Site

The Site is currently developed with the Tustin Hills Racquet Club. The planned use of the Site is for construction of 37 dwelling units comprised of 17 duplexes and 3 single unit buildings.

2.4 Descriptions of Structures, Roads, Other Improvements on the Site

A one-story clubhouse, twelve tennis courts, and a swimming pool are located on the Site. Paved parking is located on the upper western portion of the Site. Further description of the Site is presented in Section 6.0.

2.5 Current Uses of Adjoining Properties

Current uses of adjoining properties are single-family residences in all directions.

3.0 USER-PROVIDED INFORMATION

This section provides responses to inquiries made to the Client for site information. The Client was asked if they know of previous environmental reports or documents that may exist and, if so, whether copies could be provided. They were also asked if they have knowledge of legal or administrative proceedings involving the Site. Peter Zehnder, the Client representative, completed a User Questionnaire (Appendix A).

3.1 Title, Appraisal and Sale Agreement Records

The Client did not provide any title, appraisal, or sale agreement records for review.

3.2 Environmental Liens or Activity and Use Limitations

Mr. Zehnder stated the he is unaware of any environmental liens on, or use limitations for, the Site.

3.3 Specialized Knowledge

Mr. Zehnder indicated that he has no specialized knowledge of the Site.

3.4 Commonly Known or Reasonably Ascertainable Information

Mr. Zehnder stated that he has no known or reasonably ascertainable information regarding the Site.

3.5 Owner, Property Manager, and Occupant Information

Mr. Chuck Pate owns the Site. Interview information provided by Mr. Pate is summarized in Section 7.0.

3.6 Valuation Reduction for Environmental Issues

Mr. Zehnder indicated that he was not aware of any environmental conditions on the Site which could lead to a potential valuation reduction of the Site.

3.7 Reason for Performing Phase I ESA

The Client requested the Phase I ESA to obtain information regarding the potential for existing hazardous substances or petroleum product impacts at the Site prior to purchasing for redevelopment.

4.0 RECORDS REVIEW

This section summarizes our review of readily available agency records for the Site and properties in the surrounding vicinity.

4.1 Standard Environmental Record Sources

Environmental Data Resources, Inc. (EDR) searched Federal, State, and local databases for the Site and surrounding area within one mile of the Site. A copy of *The EDR Radius MapTM Report with GeoCheck*, dated March 1, 2017, is in Appendix B.

4.2 Site

The Site is not listed in any of the databases searched by EDR.

4.3 Nearby Properties

No adjacent or other properties within ¼-mile of the Site are listed on databases searched by EDR.

4.4 Orphan Summary

The Orphan Summary in EDR's report identifies properties that have incomplete address information and could not be specifically plotted. No properties are listed in the Orphan Summary.

4.5 Additional Environmental Record Sources

We searched additional readily available environmental record sources for properties/facilities within approximately 1/4 mile of the Site. This section summarizes our findings.

4.5.1 GeoTracker and EnviroStor Websites

We searched GeoTracker (<http://geotracker.waterboards.ca.gov/>) and the DTSC EnviroStor webpage (<http://www.envirostor.dtsc.ca.gov/public/>) for information regarding properties/facilities of concern within 1/4 mile of the Site. The GeoTracker and EnviroStor website databases do not have any contamination, assessment, or remediation listings for properties/facilities within approximately 1/4 mile of the Site.

4.5.2 State of California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR)

We reviewed information available from the DOGGR website (<http://www.conservation.ca.gov>) for existing/former oil, gas, or geothermal wells on or within the site vicinity. According to the website, no oil and gas wells are listed on or adjacent to the Site.

4.5.3 Orange County Agricultural Commissioner

We submitted a request to the Orange County Agricultural Commissioner regarding restricted pesticide use at the Site. No response to our inquiry regarding possible pesticide use at the Site has been received to date.

4.5.4 Orange County Health Care Agency

We submitted a request to the Orange County Health Care Agency for records pertaining to the Site. No response to our inquiry has been received to date.

5.0 HISTORICAL USE

This section summarizes information we obtained from a variety of sources regarding the historical uses of the Site and identifies historical uses that could have led to RECs. The sources of information included historical aerial photographs, historical topographic maps, and city directories provided by EDR.

5.1 Sanborn, Inc. Fire Insurance Maps

According to EDR's Sanborn Map Report dated March 1, 2017, Sanborn maps do not exist for the Site or site vicinity.

5.2 Aerial Photographs

We reviewed historical aerial photographs provided by EDR for the years 1938, 1946, 1952, 1963, 1966, 1972, 1977, 1985, 1989, 1994, 2005, 2009, 2010 and 2012 (Appendix C) for indications of past land uses that had the potential to have impacted the Site through the use, storage or disposal of hazardous substances and/or petroleum. The following table summarizes the observations of the Site and adjacent properties on the aerial photographs.

AERIAL PHOTOGRAPH REVIEW SUMMARY

Year	Observations	
	Site	Adjacent Properties
1938 (1" = 500')	The Site appears to have been agricultural groves.	Adjacent properties appear to have been agricultural groves in all directions.
1946 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph, with the exception to the east appears to be fallow land.
1952 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph.
1963 (1" = 500')	The Site appears to have been under construction with the current racquet club.	We observed no significant change in conditions from those observed on the previous photograph, with the exception the properties to the northwest, west, and south appear to have been graded in preparation for residential development. In addition, the fallow land to the east now has groves.
1966 (1" = 500')	The Site appears to have been developed with the current Tustin Hill Racquet Club.	We observed no significant change in conditions from those observed on the previous photograph, with the exception of some residences built to the north, west, and south.
1972 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph, with the exception fallow land is present to the east and southeast.
1977 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph, with the exception that all of the residential lots to the north, west, and south appear to have been developed. Also, agriculture is now present to the southeast.
1985 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph.
1989 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph, with the exception of fallow land to the southeast.

Year	Observations	
	Site	Adjacent Properties
1994 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph.
2005 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	The adjacent properties to the east and southeast are now developed with residences.
2009 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph.
2010 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph.
2012 (1" = 500')	We observed no significant change in conditions from those observed on the previous photograph.	We observed no significant change in conditions from those observed on the previous photograph.

We observed no site or vicinity conditions on the aerial photographs that would suggest the potential presence of RECs on the Site or adjoining or nearby properties. Agricultural use (groves) was present on the Site from at least 1938 until sometime prior to 1963 and represents a potential environmental concern because of the possible use of pesticides. However, the Site has since been graded and developed with the current Tustin Hills Racquet Club and the potential presence of pesticides in soil from past agricultural use is not expected to be of concern due to the disturbance/grading of the soil, construction of buildings, and hardscape, likely diminishing pesticides (if present).

5.3 Topographic Maps

We reviewed historical topographic maps for the years 1896, 1898, 1901, 1902, 1932, 1935, 1942, 1948/1949, 1950, 1964/1965, 1972, 1981, and 2012 provided by EDR (Appendix D). The following summarizes observations of the Site and adjacent properties on the historical topographic maps.

TOPOGRAPHIC MAP REVIEW SUMMARY

Year	Observations	
	Site	Adjacent Properties
1896 (1:62,500)	No land use is depicted.	No land use is depicted.
1898 (1:62,500)	No land use is depicted.	No land use is depicted.
1901 (1: 62,500)	No land use is depicted.	No land use is depicted.
1902 (1:125,000)	No land use is depicted.	No land use is depicted.
1932 (1:31,680)	No land use is depicted.	No land use is depicted.
1935 (1:31,680)	No land use is depicted.	No land use is depicted.
1942 (1: 50,000)	The Site is depicted with agricultural groves.	Adjacent properties are depicted with agricultural groves.
1948/1949 (1:24,000)	No significant changes are depicted on the Site from the previous topographic map.	No significant changes are depicted from the previous topographic map.
1950 (1:24,000)	No significant changes are depicted on the Site from the previous topographic map.	No significant changes are depicted from the previous topographic map.
1964/1965 (1:24,000)	The Site is depicted with structures (current racquet club).	Agricultural groves are depicted to the north, east, and southeast. No land use is depicted to the west and south, with the exception of roads.
1972 (1:24,000)	No significant changes are depicted on the Site from the previous topographic map.	No significant changes are depicted from the previous topographic map, with the exception of some residential development to the west and south.
1981 (1:24,000)	No significant changes are depicted on the Site from the previous topographic map.	No significant changes are depicted from the previous topographic map, with the exception of some residential development to the north.
2012 (1:24,000)	No significant changes are depicted on the Site from the previous topographic map.	The adjacent properties are depicted with residential development.

The historical topographic maps did not depict features that would suggest the presence of RECs on the Site or adjacent properties. Agricultural use (groves) was depicted on the Site from at least 1942 until sometime prior to 1964 and represents a potential environmental concern because of the possible use of pesticides. However, the Site has since been graded and developed with the current Tustin Hills Racquet Club and the potential presence of pesticides in soil from past agricultural use is not expected to be of concern due the disturbance/grading of the soil, construction of buildings, and hardscape, likely diminishing pesticides (if present).

5.4 City Directories

EDR prepared a city directory image report of cross-referenced directories reviewed at approximately 5-year intervals from 1920 through 2013. The Site is listed as either Red Hill Tennis Club or Tustin Hills Racquet Club from 1966 to 2013. There are listings for residential properties in the site vicinity. A copy of the EDR city directory image report including information regarding offsite facilities is in Appendix E.

6.0 SITE RECONNAISSANCE

This section summarizes observations of the Site and surrounding properties made during the site reconnaissance.

6.1 Methodology and Limiting Conditions

Scott Nunes with Geocon performed the site reconnaissance on March 9, 2017, by walking the Site. Mr. Nunes performed the offsite survey by making observations of adjacent properties from the Site and adjacent roads and thoroughfares. Observations of the tennis courts (eastern portion of the Site) were made from the clubhouse area, as the owner did not want Geocon walking on that portion of the Site. Weather on the day of the site reconnaissance was sunny with temperatures in the mid-70s. Photographs of various site features and offsite properties are attached. Figure 2 illustrates selected site features and photo locations and orientations.

6.2 General Site Setting

The Site is located in an area of residential properties.

6.3 Onsite Survey

The Site consists of the Tustin Hills Racquet Club, consisting of a clubhouse, twelve tennis courts, swimming pool, and paved parking (Photo #s 1-5). The Site in general slopes from the western portion to the eastern portion. The clubhouse has a banquet room (Photo # 6) and a kitchen (Photo # 7). Paints and cleaners are stored on shelving in the hot water heater room of the clubhouse (Photo # 8). Five-gallon containers of chlorine and muriatic acid are stored in a metal cabinet in the pool pump area (Photo # 9). Paints and lubricants are stored in the area between the clubhouse and the pool pump

equipment (Photo # 10). No leaks or stains were observed where the chemicals were stored. A block enclosure with a chain-link gate and ceiling between the clubhouse and the pool equipment enclosure contains three utility-owned (Southern California Edison) electrical transformers (Photo # 11). No leaks or staining were observed around the transformers. Sewer manhole covers (Photo #12) are located in a concrete driveway southwest of the clubhouse. A concrete drainage culvert is located along the northwestern, north, and eastern boundaries.

6.4 Offsite Survey

Properties within the site vicinity include:

- **North** – Residences (Photo #13).
- **East** – Residences (Photo #14).
- **South** – Residences (Photo #15).
- **West** – Residencies (Photo #16).

7.0 INTERVIEWS

We interviewed Mr. Chuck Pate, the site owner, via a site owner questionnaire regarding the current and past uses of the Site (the questionnaire is in Appendix A). Mr. Pate stated the Site has been a private tennis club from 1958 to the present. Mr. Pate stated the current and past uses of the adjoining properties and vicinity were residential and agriculture. Mr. Pate was not aware of any environmental concerns on the Site.

8.0 CONCLUSIONS AND RECOMMENDATIONS

We have performed a Phase I ESA, in general conformance with the scope and limitations of ASTM *Designation E 1527-13*, for the Site in Santa Ana, California. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

The assessment has revealed no evidence of RECs on the Site.

Agricultural use (groves) was present on the Site from at least 1938 until sometime prior to 1963 and represents a potential environmental concern because of the possible use of pesticides. However, the Site has since been plowed and tilled and the potential presence of pesticides in soil from past agricultural use is not expected to be of concern due the disturbance/grading of the soil, construction of buildings, and hardscape, likely diminishing pesticides (if present).

Chemicals such as chlorine tablets, muriatic acid, paints, lubricants, and cleaners are stored in the general area of the pool pump equipment and the hot water heater storage room. No leaks or staining were observed. However, it is recommended that all chemicals be stored in non-flammable storage cabinets or on secondary containment devices.

9.0 REFERENCES

American Society for Testing and Materials, *Designation E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, 2013.

California Division of Oil, Gas & Geothermal Resources, 2016. Website database, District 1, <http://maps.conservation.ca.gov/doms/index.html>.

California State Water Resources Control Board, GeoTracker website, 2016, <https://geotracker.waterboards.ca.gov>.

Department of Toxic Substances Control, EnviroStor website, 2016, <http://www.envirostor.dtsc.ca.gov>.

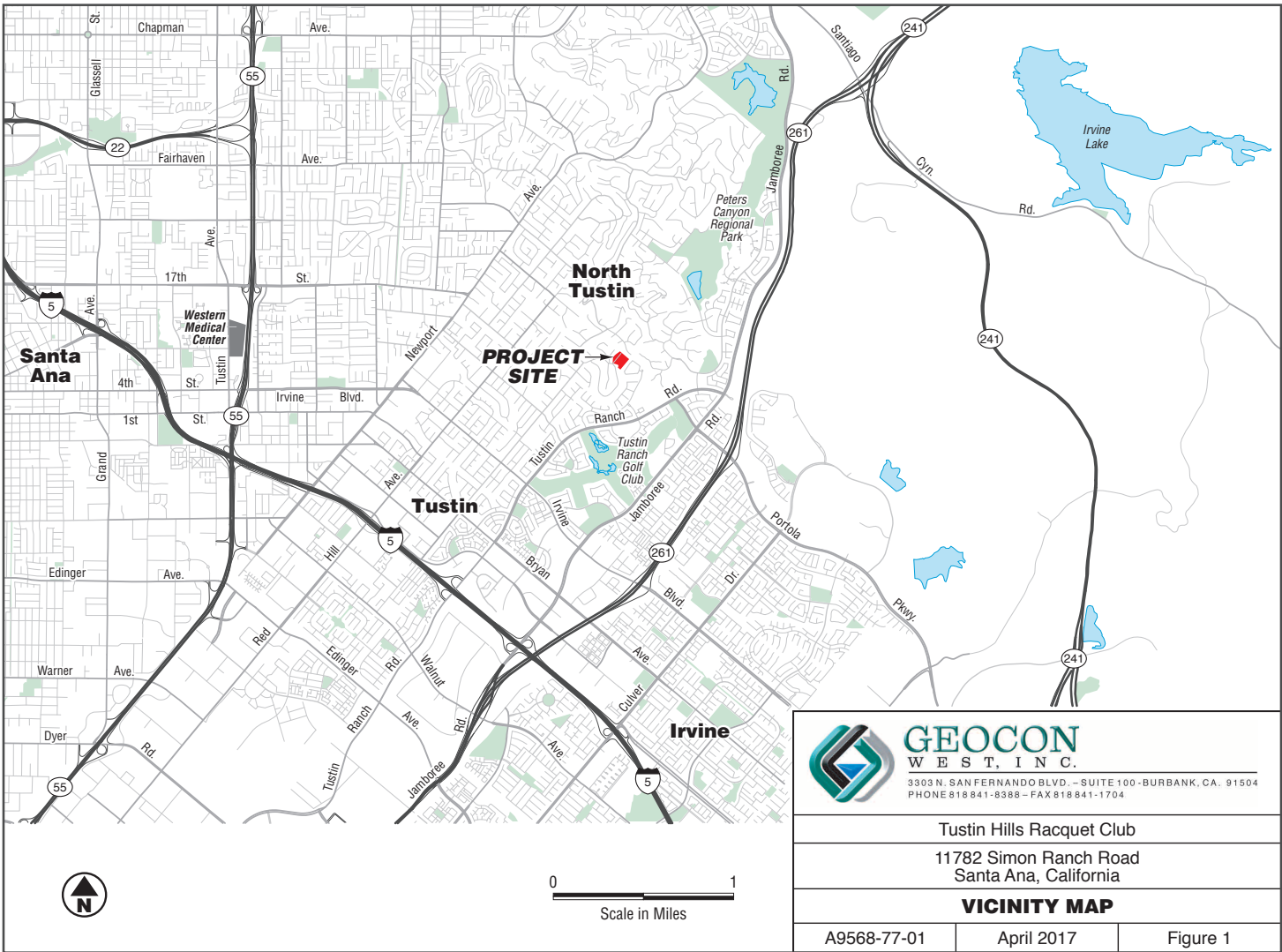
United States Geological Survey, *Orange, California, Quadrangle Topographic Map (7.5', 1:24,000)*, 2012.

10.0 QUALIFICATIONS

This Phase I ESA report was prepared by Mr. Scott Nunes and reviewed by Mr. John Juhrend. We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR Part 312. We have the specific qualifications based on education, training, and experience, to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries investigation in conformance with the standards and practices set forth in 40 CFR Part 312.

Mr. Juhrend has over 31 years of experience in the environmental and geotechnical consulting industry in California. Mr. Juhrend is Professional Geologist and Certified Engineering Geologist, with a BS degree in engineering geology and MS degree in civil engineering. His personal experience includes the performance of hundreds of environmental projects including Phase I and Phase II site assessments, remedial investigations and feasibility studies, corrective action programs and litigation support. His primary expertise includes hazardous waste evaluations of transportation corridors, industrial, commercial and residential properties.

Mr. Nunes is a Senior Environmental Scientist for Geocon. He has over 29 years conducting and managing environmental investigations. Mr. Nunes has completed numerous Phase I and II ESAs, Preliminary Endangerment Assessments, underground storage tank removals, and asbestos and lead-based paint survey and abatement activities for a variety of residential, commercial, school, hospital, industrial, agricultural, and municipal properties. He has a Bachelor's of Arts in Geography-Ecosystems (Environmental Science) and is a Certified Asbestos Consultant (CAC) in California.




GEOCON
 WEST, INC.
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA. 91504
 PHONE 818 841-8388 - FAX 818 841-1704

Tustin Hills Racquet Club
 11782 Simon Ranch Road
 Santa Ana, California

VICINITY MAP
 A9568-77-01 April 2017 Figure 1



LEGEND:

① Site Photograph Location & Orientation



GEOCON
WEST, INC.

3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA. 91504
PHONE 818 841-8388 - FAX 818 841-1704

Tustin Hills Racquet Club

11782 Simon Ranch Road
Santa Ana, California

SITE PLAN

A9568-77-01

April 2017

Figure 2



Photo 1 – View to the northeast of the Site.



Photo 2 – View to the north along the western portion of the Site.



Photo 3 – View to the southeast along the northern edge of the Site.



Photo 4 – View of the clubhouse.

SITE PHOTOS 3 & 4		
Tustin Hills Racquet Club 11782 Simon Ranch Road Santa Ana California		
A9568-77-01		April 2017



Photo 5 – View of tennis courts from the clubhouse.



Photo 6 – View of the banquet room in the clubhouse.



Photo 7 – View of the kitchen in the clubhouse.



Photo 8 – Paints and cleaners storage in the hot water heater room in the clubhouse.



Photo 9 – Chlorine and muriatic acid storage at pool pump area.



Photo 10 – Paints and lubricants adjacent to transformer cage.



Photo 11 – Transformer cage.



Photo 12 – Sewer manhole covers southwest of the clubhouse.



Photo 13 – View to the north of adjacent residential properties.



Photo 14 – View to the east of adjacent residential properties.

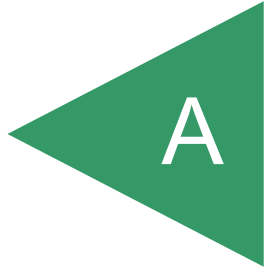


Photo 15 – View to the south of adjacent residential properties.



Photo 16 – View to the west of adjacent residential properties.

APPENDIX



CLIENT-PROVIDED INFORMATION FOR THE SITE

SITE: Tustin Hills Racquet Club
Geocon Project Number: A9568-77-01

***Please elaborate on any question answered "yes." If the question does not apply to the site, please answer "N/A".**

1. If possible, please provide us with the title, appraisal, or sale agreement records to review and discuss in the Phase I ESA. **Attached.**
2. Are you aware of any environmental liens or activity and use limitations associated with the Site? **No**
3. Do you have any specialized knowledge of the Site? **No**
4. Please provide any commonly known or reasonably ascertainable information about the Site. **N/A**
5. Who currently owns, manages, and operates the Site? **Mr Chuck Pate**
6. Has the monetary value of the Site been reduced due to environmental issues associated with the Site or adjacent properties? **No**
7. Why are you requesting a Phase I ESA for the Site? **We plan on purchasing the site for redevelopment.**

Peter Zehnder

4/12/2017

NAME (IN PRINT)

DATE

SIGNATURE

COMPANY NAME AND TITLE

Please feel free to contact me if you have any questions.
When complete, return the questionnaire via email or fax:

Mr. Scott Nunes
Geocon West, Inc.
nunes@geoconinc.com

PHASE I INTERVIEW QUESTIONNAIRE

The purpose of this questionnaire is to obtain information from knowledgeable individuals regarding the site. This questionnaire will become part of the Phase I ESA report.

A. SITE INFORMATION

Project Number: A9568-7-01 Site Name/Reference: Tustin Hills Racquet Club
Site Location: 11782 Simon Ranch Road, Santa Ana, CA

B. INTERVIEW INFORMATION

Date/Time: MARCH 10, 2017 / 9:30AM In Person
Interviewer: _____ By Telephone, Number: _____
Person Interviewed: CHUCK PATE By Facsimile, Number: _____
Title/Company: OWNER By E-mail, address: _____

1. What is your relationship to the site? OWNER OF PROPERTY

2. Do you have good knowledge regarding the uses and physical characteristics of the site?
 Yes
 No If not, who does? _____ Phone Number: _____

3. Do you have good knowledge regarding the activities/processes conducted at the site?
 Yes
 No If not, who does? _____ Phone Number: _____

C. PROPERTY INFORMATION

1. To the best of your knowledge, what are the current and past uses of the site? Please describe with approximate dates.

PRIVATE TENNIS CLUB 1958 TO PRESENT

2. To the best of your knowledge, what are the current and past uses of the adjoining properties?

HOMES

AGRICULTURE

3. To the best of your knowledge, what are the current and past uses in the surrounding area?

HOMES

AGRICULTURE

PHASE I INTERVIEW QUESTIONNAIRE

Page 2 of 7

4. Are there currently, or have there been in the past, any surface water bodies such as creeks or streams or other surface drainage on or adjacent to the site?

NA

5. Any historical or current pools of liquid noted? Source? Location? Describe.

NA

6. Any historical or current standing water noted? Source? Location? Describe.

NA

7. Are there any waste water discharges (including storm water) to a drain, ditch, or stream on the site and/or on adjacent properties:

NA

8. Are there currently, or have there been in the past, any wells (e.g. water, oil, gas, irrigation, injection, abandoned), pits, clarifiers, cisterns, cesspools, or similar receptacles noted where liquids drain, collect or are stored (sumps) that are likely to contain hazardous substances or petroleum products on the site or adjacent properties?

NA

9. Identify the source of potable water on the site.

TUSTIN WATER DISTRICT

10. Identify the sewage disposal system on the site (type and age).

NA

11. Is there any historical or current solid waste disposal on site? Describe.

NA

12. Is there any historical or current unnatural fill or grading, particularly fill of unknown origin? Describe.

NA

PHASE I INTERVIEW QUESTIONNAIRE

13. Is there any historical or currently stained soil or pavement? Describe

NA

14. Is there any historical or current stressed vegetation noted (other than caused by drought)? Describe.

NA

15. To your knowledge, are there or have there been:

Hazardous substances on the site?

Yes No

Petroleum products on the site?

Yes No

If current uses involve hazardous substances or petroleum products, please identify the type, quantity and storage conditions of those substances.

Hazardous Substance or Petroleum Products	Location	Quantity	Storage Conditions
<i>NOT TO MY KNOWLEDGE</i>			

If hazardous or otherwise controlled waste storage areas are present on the site, please identify the type, location, quantity, and storage conditions of the waste materials.

Material Stored	Location	Quantity	Storage Conditions
<i>NOT TO MY KNOWLEDGE</i>			

16. If hazardous substances and/or petroleum products are present, are there indications of any of the following:

An existing release?

Yes No

A past release?

Yes No

A threat of their release?

Yes No

If yes to any of the above, please describe:

PHASE I INTERVIEW QUESTIONNAIRE

17. Are there any aboveground or underground storage tanks? Identify tank volume, location, material, age.

AST/UST and Age	Location	Tank Volume	Material stored
<i>NO</i>			

18. Are there any historical or current drums and/or other containers? Identify volume, material, and location.

Volume	Material	Location
<i>NO</i>		

19. Have there been any historical or any current noxious odors noted on the Site? Source? Describe.

NO

20. To your knowledge, are there any utility corridors on the Site? Describe.

NO

21. Any electrical or hydraulic equipment likely to contain PCB's such as transformers, hydraulic lifts, or elevators (fluorescent light ballast excluded).

NO

22. Are there any occupants on the Site? Describe and list duration of occupancy.

NO

PHASE I INTERVIEW QUESTIONNAIRE

Page 5 of 7

23. Are there structures present on the site? Provide a general description of the structures on the site (amount, size, and age)?

Structure	Sq. Footage	Age
<i>CLUBHOUSE</i>	<i>APPROXIMATELY 10,000</i>	<i>59 YEARS</i>

24. If any structures identify the type of HVAC system and fuel source on the interior. Any boilers present?

NA

25. Is the facility equipped with any backup generators? Fuel source?

NO

26. Any historical or current stains or corrosion on floors, walls or ceilings?

NO

27. Do you have good knowledge regarding the identity of any existing documents relating to the site?

Yes

No If not, who does? _____ Phone Number: _____

28. To your knowledge, do any of the following documents exist with respect to the site? If yes, please name the document and comment upon whether it is available for review.

Document	Availability/ Source	Title of Document
Environmental site assessment reports?	<i>NA</i>	
Environmental audit reports?	<i>NA</i>	
Environmental permits?	<i>NA</i>	
Storage Tank registrations?	<i>NA</i>	
Underground Injection System registrations?	<i>NA</i>	
Material safety data sheets (MSDS)?	<i>NA</i>	
Community right-to-know plans?	<i>NA</i>	

PHASE I INTERVIEW QUESTIONNAIRE

Page 6 of 7

Document	Availability/ Source	Title of Document
Safety plans?	NA	
Spill Prevention, Countermeasure, & Control Plans?	NA	
Illness and Injury Prevention Plans?	NO	
Reports regarding hydrogeologic conditions on the site or surrounding area?	NA	
Hazardous waste generator notices or reports?	NA	
Geotechnical studies?	NA	
Risk assessments?	NA	
Recorded Activity and Use Limitations (AULs)?	NA	

To your knowledge, do any of the following exist with respect to the Site?

29. Notices or other correspondence from any government agency relating to past or current violations of environmental laws? Yes No

If yes, describe: _____

30. Notices or other correspondence from any government agency relating to environmental liens encumbering the Site? Yes No

If yes, describe: _____

31. Pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances, or petroleum products in, on, or from the Site? Yes No

If yes, describe: _____

32. Notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? Yes No

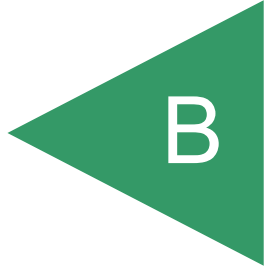
If yes, describe: _____

PHASE I INTERVIEW QUESTIONNAIRE

Page 7 of 7

33. Please provide any additional information relative to this project.

APPENDIX



B

Tustin Hills Racquet Club Phase I

11782 Simon Ranch Road
Santa Ana, CA 92705

Inquiry Number: 4866681.2s
March 01, 2017

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
 Please contact EDR at 1-800-352-0050
 with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

11782 SIMON RANCH ROAD
SANTA ANA, CA 92705

COORDINATES

Latitude (North): 33.7515570 - 33° 45' 5.60"
Longitude (West): 117.7815430 - 117° 46' 53.55"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 427614.3
UTM Y (Meters): 3734690.2
Elevation: 256 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5641308 ORANGE, CA
Version Date: 2012

South Map: 5640942 TUSTIN, CA
Version Date: 2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20140514, 20140515
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:
11782 SIMON RANCH ROAD
SANTA ANA, CA 92705

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	RED HILL MINE	BETWEEN RANCHVIEW DR	RESPONSE, ENVIROSTOR	Higher	3150, 0.597, WSW
A2	CAMP COMMANDER		FUDS	Higher	4889, 0.926, NE
A3	CAMP COMMANDER	LOWER PETERS CANYON	ENVIROSTOR	Higher	4896, 0.927, NE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing
SEMS..... Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System
US ENG CONTROLS..... Engineering Controls Sites List

EXECUTIVE SUMMARY

US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

SLIC..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing

UST..... Active UST Facilities

AST..... Aboveground Petroleum Storage Tank Facilities

INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database

SWRCY..... Recycler Database

HAULERS..... Registered Waste Tire Haulers Listing

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

ODI..... Open Dump Inventory

IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register

HIST Cal-Sites..... Historical Calsites Database

SCH..... School Property Evaluation Program

CDL..... Clandestine Drug Labs

EXECUTIVE SUMMARY

Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing
HIST UST..... Hazardous Substance Storage Container Database
CA FID UST..... Facility Inventory Database

Local Land Records

LIENS..... Environmental Liens Listing
LIENS 2..... CERCLA Lien Information
DEED..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
CHMIRS..... California Hazardous Material Incident Report System
LDS..... Land Disposal Sites Listing
MCS..... Military Cleanup Sites Listing
Orange Co. Industrial Site..... List of Industrial Site Cleanups
SPILLS 90..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated
DOD..... Department of Defense Sites
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR..... Financial Assurance Information
EPA WATCH LIST..... EPA WATCH LIST
2020 COR ACTION..... 2020 Corrective Action Program List
TSCA..... Toxic Substances Control Act
TRIS..... Toxic Chemical Release Inventory System
SSTS..... Section 7 Tracking Systems
ROD..... Records Of Decision
RMP..... Risk Management Plans
RAATS..... RCRA Administrative Action Tracking System
PRP..... Potentially Responsible Parties
PADS..... PCB Activity Database System
ICIS..... Integrated Compliance Information System
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS..... Material Licensing Tracking System
COAL ASH DOE..... Steam-Electric Plant Operation Data
COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER..... PCB Transformer Registration Database
RADINFO..... Radiation Information Database
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS..... Incident and Accident Data
CONSENT..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV..... Indian Reservations
FUSRAP..... Formerly Utilized Sites Remedial Action Program
UMTRA..... Uranium Mill Tailings Sites
LEAD SMELTERS..... Lead Smelter Sites

EXECUTIVE SUMMARY

US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
US MINES.....	Mines Master Index File
FINDS.....	Facility Index System/Facility Registry System
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
UXO.....	Unexploded Ordnance Sites
CA BOND EXP. PLAN.....	Bond Expenditure Plan
Cortese.....	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings.....	CUPA Resources List
DRYCLEANERS.....	Cleaner Facilities
EMI.....	Emissions Inventory Data
ENF.....	Enforcement Action Listing
Financial Assurance.....	Financial Assurance Information Listing
HAZNET.....	Facility and Manifest Data
ICE.....	ICE
HIST CORTESE.....	Hazardous Waste & Substance Site List
HWP.....	EnviroStor Permitted Facilities Listing
HWT.....	Registered Hazardous Waste Transporter Database
MINES.....	Mines Site Location Listing
MWMP.....	Medical Waste Management Program Listing
NPDES.....	NPDES Permits Listing
PEST LIC.....	Pesticide Regulation Licenses Listing
PROC.....	Certified Processors Database
Notify 65.....	Proposition 65 Records
UIC.....	UIC Listing
WASTEWATER PITS.....	Oil Wastewater Pits Listing
WDS.....	Waste Discharge System
WIP.....	Well Investigation Program Case List
ABANDONED MINES.....	Abandoned Mines
FUELS PROGRAM.....	EPA Fuels Program Registered Listing
ECHO.....	Enforcement & Compliance History Information

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto.....	EDR Exclusive Historic Gas Stations
EDR Hist Cleaner.....	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF.....	Recovered Government Archive Solid Waste Facilities List
RGA LUST.....	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent NPL

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, has revealed that there is 1 RESPONSE site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
RED HILL MINE Database: RESPONSE, Date of Government Version: 10/31/2016 Status: No Further Action Facility Id: 60001226	BETWEEN RANCHVIEW DR	WSW 1/2 - 1 (0.597 mi.)	1	8

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 10/31/2016 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
RED HILL MINE Facility Id: 60001226 Status: No Further Action	BETWEEN RANCHVIEW DR	WSW 1/2 - 1 (0.597 mi.)	1	8
CAMP COMMANDER Facility Id: 80001098 Status: Inactive - Action Required	LOWER PETERS CANYON	NE 1/2 - 1 (0.927 mi.)	A3	11

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/31/2015 has revealed that there is 1 FUDS

EXECUTIVE SUMMARY

site within approximately 1 mile of the target property.














<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CAMP COMMANDER		NE 1/2 - 1 (0.926 mi.)	A2	10

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 4866681.2S



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  National Priority List Sites
-  Dept. Defense Sites
-  Indian Reservations BIA
-  Power transmission lines
-  100-year flood zone
-  500-year flood zone
-  National Wetland Inventory
-  State Wetlands
-  Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

<p>SITE NAME: Tustin Hills Racquet Club Phase I ADDRESS: 11782 Simon Ranch Road Santa Ana CA 92705 LAT/LONG: 33.751557 / 117.781543</p>	<p>CLIENT: Geocon Geotechnical & Env CONTACT: Mike Akoto INQUIRY #: 4866681.2s DATE: March 01, 2017 2:52 pm</p>
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DETAIL MAP - 4866681.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

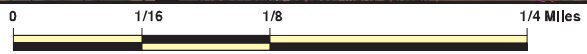
Dept. Defense Sites

Indian Reservations BIA

100-year flood zone

500-year flood zone

Areas of Concern



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Tustin Hills Racquet Club Phase I
 ADDRESS: 11782 Simon Ranch Road
 Santa Ana CA 92705
 LAT/LONG: 33.751557 / 117.781543

CLIENT: Geocon Geotechnical & Env
 CONTACT: Mike Akoto
 INQUIRY #: 4866681.2s
 DATE: March 01, 2017 2:53 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>STANDARD ENVIRONMENTAL RECORDS</u>								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	0.001		0	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL RESPONSE</i>								
RESPONSE	1.000		0	0	0	1	NR	1
<i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i>								
ENVIROSTOR	1.000		0	0	0	2	NR	2
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
Orange Co. Industrial Site	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	1	NR	1
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0

- Totals --		0	0	0	0	4	0	4
-------------	--	---	---	---	---	---	---	---

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

1
WSW
1/2-1
0.597 mi.
3150 ft.

RED HILL MINE
BETWEEN RANCHVIEW DRIVE & MCLEAN DR
TUSTIN, CA 92780

RESPONSE **S110121727**
ENVIROSTOR **N/A**

Relative:
Higher

Actual:
272 ft.

RESPONSE:
 Facility ID: 60001226
 Site Type: State Response
 Site Type Detail: State Response or NPL
 Acres: 0
 National Priorities List: NO
 Cleanup Oversight Agencies: SMBRP
 Lead Agency Description: DTSC - Site Cleanup Program
 Project Manager: Not reported
 Supervisor: Manny Alonzo
 Division Branch: Cleanup Cypress
 Site Code: 401515
 Site Mgmt. Req.: NONE SPECIFIED
 Assembly: 68
 Senate: 37
 Special Program Status: EPA - PASI
 Status: No Further Action
 Status Date: 08/08/2016
 Restricted Use: NO
 Funding: EPA Grant
 Latitude: 33.74735
 Longitude: -117.7929
 APN: NONE SPECIFIED
 Past Use: MINE
 Potential COC : Arsenic Mercury (elemental)
 Confirmed COC: Arsenic Mercury (elemental)
 Potential Description: NONE SPECIFIED
 Alias Name: 401515
 Alias Type: Project Code (Site Code)
 Alias Name: 60001226
 Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Correspondence
 Completed Date: 12/26/2012
 Comments: Not reported

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: PA/SI Site Screening
 Completed Date: 01/10/2011
 Comments: Not reported

Future Area Name: Not reported
 Future Sub Area Name: Not reported
 Future Document Type: Not reported
 Future Due Date: Not reported
 Schedule Area Name: Not reported
 Schedule Sub Area Name: Not reported
 Schedule Document Type: Not reported
 Schedule Due Date: Not reported
 Schedule Revised Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RED HILL MINE (Continued)

S110121727

ENVIROSTOR:

Facility ID: 60001226
Status: No Further Action
Status Date: 08/08/2016
Site Code: 401515
Site Type: State Response
Site Type Detailed: State Response or NPL
Acres: 0
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Manny Alonzo
Division Branch: Cleanup Cypress
Assembly: 68
Senate: 37
Special Program: EPA - PASI
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: EPA Grant
Latitude: 33.74735
Longitude: -117.7929
APN: NONE SPECIFIED
Past Use: MINE
Potential COC: Arsenic Mercury (elemental)
Confirmed COC: Arsenic Mercury (elemental)
Potential Description: NONE SPECIFIED
Alias Name: 401515
Alias Type: Project Code (Site Code)
Alias Name: 60001226
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/26/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: PA/SI Site Screening
Completed Date: 01/10/2011
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

A2	CAMP COMMANDER	FUDS	1011813671
NE			N/A
1/2-1	TUSTIN, CA		
0.926 mi.			
4889 ft.	Site 1 of 2 in cluster A		

Relative:
Higher

Actual:
322 ft.

FUDS:
 EPA Region: 09
 Congressional District: 45
 FUDS Number: J09CA7347
 State: CA
 Facility Name: CAMP COMMANDER
 Fiscal Year: 2013
 City: TUSTIN
 Federal Facility ID: CA9799FA375
 Telephone: 213-452-3920
 INST ID: 63083
 County: ORANGE
 RAB: Not reported
 CORPS_DIST: Los Angeles District (SPL)
 NPL Status: Not Listed
 CTC: 9.5
 Current Owner: Local Government
 Future Prog: Not reported
 Description:

The U.S. Army leased land from private owner before or during 1944 for establishment of the area known as Camp Commander near Little Peters Lake, California. The number of acres leased is unknown. Real estate records were neither specific, nor complete. The site of the former Camp Commander is adjacent to Little Peters Lake, now known as Lower Peters Canyon Retarding Basin, in Peters Canyon Regional Park, Orange County, California. It is located at the eastern boundary of the City of Tustin. The Army disposed of the site before or during 1946. The land was returned to private ownership. Records were neither complete, nor specific. The site is currently owned by Orange County, and, as part of Peters Canyon Regional Park, is used by the public for recreation. The site is part of a recreational area, Peters Canyon Regional Park, used by the general public. The land surrounding the park is either highly developed as a residential area or is undergoing development as a residential area. The Army did not erect permanent structures at the site, which today is without evidence of an Army camp. This property is known or suspected to contain military munitions and explosives of concern (e.g., unexploded ordnance) and therefore may present an explosive hazard.

Current Program:
 History:

Not reported
 The Army acquired the site, estimated as 10 acres, before or during 1944. A tent camp was established on the eastern shore of Little Peters Lake, in a eucalyptus grove. The Army used the camp to train infantry troops in field exercises. Mock battles were staged with Camp Rathke, another Army post 2 miles north. The Army left Camp Commander before or during 1946, when it also left Camp Rathke. The site was returned to private ownership. In 1952 it was renamed Camp Myford. The Boy Scouts of America starting using the site in 1957, and it was used as a youth site until 1986. In 1992, the Irvine Company donated 354 acres of Peters Canyon, including the site, to the County of Orange. The County created Peters Canyon Regional Park for public recreation.

Latitude Degree: 33
 Latitude Minute: 46
 Latitude Second: 38
 Latitude Direction: N

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

CAMP COMMANDER (Continued)

1011813671

Longitude Degree: -117
 Longitude Minute: 46
 Longitude Second: 8
 Longitude Direction: E

**A3
 NE
 1/2-1
 0.927 mi.
 4896 ft.**

**CAMP COMMANDER
 LOWER PETERS CANYON RETARDING BASIN
 ORANGE, CA 92869**

**ENVIROSTOR S118757500
 N/A**

Site 2 of 2 in cluster A

**Relative:
 Higher**

ENVIROSTOR:
 Facility ID: 80001098
 Status: Inactive - Action Required
 Status Date: 09/15/2016
 Site Code: Not reported
 Site Type: Military Evaluation
 Site Type Detailed: FUDS
 Acres: 10
 NPL: NO
 Regulatory Agencies: SMBRP
 Lead Agency: SMBRP
 Program Manager: Martin Herrmann
 Supervisor: Noel Shrum
 Division Branch: Cleanup Sacramento
 Assembly: 68
 Senate: 37
 Special Program: Not reported
 Restricted Use: NO
 Site Mgmt Req: NONE SPECIFIED
 Funding: DERA
 Latitude: 33.7625
 Longitude: -117.7708
 APN: NONE SPECIFIED
 Past Use: NONE SPECIFIED
 Potential COC: Explosives (UXO, MEC)
 Confirmed COC: NONE SPECIFIED
 Potential Description: NONE SPECIFIED
 Alias Name: CA99799FA37500
 Alias Type: Federal Facility ID
 Alias Name: J09CA7347
 Alias Type: INPR
 Alias Name: 80001098
 Alias Type: Envirostor ID Number

**Actual:
 322 ft.**

Completed Info:
 Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Inventory Project Report (INPR)
 Completed Date: 09/28/1999
 Comments: Not reported

 Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Site Screening
 Completed Date: 11/03/2015
 Comments: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CAMP COMMANDER (Continued)

S118757500

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Count: 0 records.

ORPHAN SUMMARY

<u>City</u>	<u>EDR ID</u>	<u>Site Name</u>	<u>Site Address</u>	<u>Zip</u>	<u>Database(s)</u>
NO SITES FOUND					

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/05/2016	Source: EPA
Date Data Arrived at EDR: 01/05/2017	Telephone: N/A
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 01/05/2017
Number of Days to Update: 29	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/05/2016	Source: EPA
Date Data Arrived at EDR: 01/05/2017	Telephone: N/A
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 01/05/2017
Number of Days to Update: 29	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 08/15/2011
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/05/2016	Source: EPA
Date Data Arrived at EDR: 01/05/2017	Telephone: N/A
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 01/05/2017
Number of Days to Update: 29	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 09/14/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/04/2016	Telephone: 703-603-8704
Date Made Active in Reports: 10/21/2016	Last EDR Contact: 01/05/2017
Number of Days to Update: 17	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/10/2016	Source: EPA
Date Data Arrived at EDR: 10/20/2016	Telephone: 800-424-9346
Date Made Active in Reports: 01/06/2017	Last EDR Contact: 01/06/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 05/01/2017
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 10/10/2016	Source: EPA
Date Data Arrived at EDR: 10/20/2016	Telephone: 800-424-9346
Date Made Active in Reports: 01/06/2017	Last EDR Contact: 01/06/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 05/01/2017
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/12/2016	Source: EPA
Date Data Arrived at EDR: 12/28/2016	Telephone: 800-424-9346
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/28/2016
Number of Days to Update: 44	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/12/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/28/2016	Telephone: (415) 495-8895
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/28/2016
Number of Days to Update: 44	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/28/2016	Telephone: (415) 495-8895
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/28/2016
Number of Days to Update: 44	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/12/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/28/2016	Telephone: (415) 495-8895
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/28/2016
Number of Days to Update: 44	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/28/2016	Telephone: (415) 495-8895
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/28/2016
Number of Days to Update: 44	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015	Source: Department of the Navy
Date Data Arrived at EDR: 05/29/2015	Telephone: 843-820-7326
Date Made Active in Reports: 06/11/2015	Last EDR Contact: 02/13/2017
Number of Days to Update: 13	Next Scheduled EDR Contact: 05/29/2017
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/15/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/29/2016	Telephone: 703-603-0695
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 02/28/2017
Number of Days to Update: 66	Next Scheduled EDR Contact: 06/12/2017
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 11/15/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/29/2016	Telephone: 703-603-0695
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 02/28/2017
Number of Days to Update: 66	Next Scheduled EDR Contact: 06/12/2017
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/26/2016
Date Data Arrived at EDR: 09/29/2016
Date Made Active in Reports: 11/11/2016
Number of Days to Update: 43

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/28/2016
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 10/31/2016
Date Data Arrived at EDR: 11/01/2016
Date Made Active in Reports: 01/18/2017
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 10/31/2016
Date Data Arrived at EDR: 11/01/2016
Date Made Active in Reports: 01/18/2017
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 11/15/2016
Date Made Active in Reports: 01/20/2017
Number of Days to Update: 66

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/15/2017
Next Scheduled EDR Contact: 05/29/2017
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/12/2016	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/14/2016	Telephone: see region list
Date Made Active in Reports: 01/20/2017	Last EDR Contact: 12/14/2016
Number of Days to Update: 37	Next Scheduled EDR Contact: 03/27/2017
	Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calaveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/25/2016 Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/27/2016 Telephone: 415-972-3372
Date Made Active in Reports: 06/03/2016 Last EDR Contact: 01/26/2017
Number of Days to Update: 37 Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015 Source: EPA Region 8
Date Data Arrived at EDR: 10/23/2015 Telephone: 303-312-6271
Date Made Active in Reports: 02/18/2016 Last EDR Contact: 01/26/2017
Number of Days to Update: 118 Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/09/2015 Source: EPA Region 7
Date Data Arrived at EDR: 02/12/2016 Telephone: 913-551-7003
Date Made Active in Reports: 06/03/2016 Last EDR Contact: 01/26/2017
Number of Days to Update: 112 Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 12/11/2015 Source: EPA Region 6
Date Data Arrived at EDR: 02/19/2016 Telephone: 214-665-6597
Date Made Active in Reports: 06/03/2016 Last EDR Contact: 01/26/2017
Number of Days to Update: 105 Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/05/2016 Source: EPA Region 4
Date Data Arrived at EDR: 04/29/2016 Telephone: 404-562-8677
Date Made Active in Reports: 06/03/2016 Last EDR Contact: 01/24/2017
Number of Days to Update: 35 Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015 Source: EPA Region 1
Date Data Arrived at EDR: 10/29/2015 Telephone: 617-918-1313
Date Made Active in Reports: 01/04/2016 Last EDR Contact: 01/26/2017
Number of Days to Update: 67 Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 02/17/2016 Source: EPA, Region 5
Date Data Arrived at EDR: 04/27/2016 Telephone: 312-886-7439
Date Made Active in Reports: 06/03/2016 Last EDR Contact: 01/26/2017
Number of Days to Update: 37 Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC: Statewide SLIC Cases

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/14/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 40

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/14/2016
Next Scheduled EDR Contact: 03/27/2017
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/23/2017
Next Scheduled EDR Contact: 04/24/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/12/2016	Source: SWRCB
Date Data Arrived at EDR: 09/14/2016	Telephone: 916-341-5851
Date Made Active in Reports: 10/14/2016	Last EDR Contact: 12/15/2016
Number of Days to Update: 30	Next Scheduled EDR Contact: 03/27/2017
	Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/12/2016	Telephone: 916-327-5092
Date Made Active in Reports: 09/19/2016	Last EDR Contact: 12/22/2016
Number of Days to Update: 69	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 01/26/2016	Source: EPA Region 8
Date Data Arrived at EDR: 02/05/2016	Telephone: 303-312-6137
Date Made Active in Reports: 06/03/2016	Last EDR Contact: 01/26/2017
Number of Days to Update: 119	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014	Source: EPA Region 7
Date Data Arrived at EDR: 11/25/2014	Telephone: 913-551-7003
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 01/26/2017
Number of Days to Update: 65	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 12/03/2015	Source: EPA Region 6
Date Data Arrived at EDR: 02/04/2016	Telephone: 214-665-7591
Date Made Active in Reports: 06/03/2016	Last EDR Contact: 01/26/2017
Number of Days to Update: 120	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 10/29/2015	Telephone: 617-918-1313
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/26/2017
Number of Days to Update: 67	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/05/2016	Source: EPA Region 4
Date Data Arrived at EDR: 04/29/2016	Telephone: 404-562-9424
Date Made Active in Reports: 06/03/2016	Last EDR Contact: 01/24/2017
Number of Days to Update: 35	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015	Source: EPA Region 5
Date Data Arrived at EDR: 11/13/2015	Telephone: 312-886-6136
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/26/2017
Number of Days to Update: 52	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016	Source: EPA Region 10
Date Data Arrived at EDR: 01/08/2016	Telephone: 206-553-2857
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 01/26/2017
Number of Days to Update: 41	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/25/2016	Source: EPA Region 9
Date Data Arrived at EDR: 04/27/2016	Telephone: 415-972-3368
Date Made Active in Reports: 06/03/2016	Last EDR Contact: 01/26/2017
Number of Days to Update: 37	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 12/27/2016
Number of Days to Update: 142	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 10/31/2016	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 11/01/2016	Telephone: 916-323-3400
Date Made Active in Reports: 01/18/2017	Last EDR Contact: 01/31/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfields Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 02/29/2016	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/07/2016	Telephone: 916-323-7905
Date Made Active in Reports: 05/04/2016	Last EDR Contact: 01/04/2017
Number of Days to Update: 58	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/19/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/20/2016	Telephone: 202-566-2777
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/20/2016
Number of Days to Update: 52	Next Scheduled EDR Contact: 04/03/2017
	Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 02/03/2017
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/22/2017
	Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/12/2016
Date Data Arrived at EDR: 09/14/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 30

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/14/2016
Next Scheduled EDR Contact: 03/27/2017
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 08/25/2016
Date Data Arrived at EDR: 08/26/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 49

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/13/2017
Next Scheduled EDR Contact: 05/29/2017
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/31/2016
Next Scheduled EDR Contact: 02/13/2017
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/23/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/30/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/30/2016	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 01/05/2017	Telephone: 202-307-1000
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 02/28/2017
Number of Days to Update: 36	Next Scheduled EDR Contact: 06/12/2017
	Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 10/31/2016	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 11/01/2016	Telephone: 916-323-3400
Date Made Active in Reports: 01/18/2017	Last EDR Contact: 01/31/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 08/31/2016	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 11/18/2016	Telephone: 916-255-6504
Date Made Active in Reports: 12/22/2016	Last EDR Contact: 01/09/2017
Number of Days to Update: 34	Next Scheduled EDR Contact: 04/24/2017
	Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/27/2009
	Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/30/2016	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 12/05/2016	Telephone: 202-307-1000
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 02/28/2017
Number of Days to Update: 67	Next Scheduled EDR Contact: 06/12/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/07/2005	Telephone: N/A
Date Made Active in Reports: 08/11/2005	Last EDR Contact: 06/03/2005
Number of Days to Update: 35	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/01/2016	Source: Department of Public Health
Date Data Arrived at EDR: 12/06/2016	Telephone: 707-463-4466
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 02/27/2017
Number of Days to Update: 35	Next Scheduled EDR Contact: 06/12/2017
	Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/25/1991	Telephone: 916-341-5851
Date Made Active in Reports: 02/12/1991	Last EDR Contact: 07/26/2001
Number of Days to Update: 18	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/05/1995	Telephone: 916-341-5851
Date Made Active in Reports: 09/29/1995	Last EDR Contact: 12/28/1998
Number of Days to Update: 24	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 11/29/2016	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 12/06/2016	Telephone: 916-323-3400
Date Made Active in Reports: 01/23/2017	Last EDR Contact: 12/02/2016
Number of Days to Update: 48	Next Scheduled EDR Contact: 03/20/2017
	Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/18/2014	Telephone: 202-564-6023
Date Made Active in Reports: 04/24/2014	Last EDR Contact: 01/24/2017
Number of Days to Update: 37	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/06/2016	Source: DTSC and SWRCB
Date Data Arrived at EDR: 12/06/2016	Telephone: 916-323-3400
Date Made Active in Reports: 01/20/2017	Last EDR Contact: 12/06/2016
Number of Days to Update: 45	Next Scheduled EDR Contact: 03/20/2017
	Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/28/2016	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 12/28/2016	Telephone: 202-366-4555
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 12/28/2016
Number of Days to Update: 37	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 09/26/2016	Source: Office of Emergency Services
Date Data Arrived at EDR: 10/26/2016	Telephone: 916-845-8400
Date Made Active in Reports: 01/17/2017	Last EDR Contact: 01/25/2017
Number of Days to Update: 83	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/12/2016	Source: State Water Quality Control Board
Date Data Arrived at EDR: 12/14/2016	Telephone: 866-480-1028
Date Made Active in Reports: 01/20/2017	Last EDR Contact: 12/14/2016
Number of Days to Update: 37	Next Scheduled EDR Contact: 03/27/2017
	Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/12/2016	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/14/2016	Telephone: 866-480-1028
Date Made Active in Reports: 01/20/2017	Last EDR Contact: 12/14/2016
Number of Days to Update: 37	Next Scheduled EDR Contact: 03/27/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/12/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/28/2016	Telephone: (415) 495-8895
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/28/2016
Number of Days to Update: 44	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 07/08/2015	Telephone: 202-528-4285
Date Made Active in Reports: 10/13/2015	Last EDR Contact: 02/24/2017
Number of Days to Update: 97	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 01/13/2017
Number of Days to Update: 62	Next Scheduled EDR Contact: 04/24/2017
	Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005	Source: U.S. Geological Survey
Date Data Arrived at EDR: 02/06/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 01/13/2017
Number of Days to Update: 339	Next Scheduled EDR Contact: 04/24/2017
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/07/2011 Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/09/2011 Telephone: 615-532-8599
Date Made Active in Reports: 05/02/2011 Last EDR Contact: 02/03/2017
Number of Days to Update: 54 Next Scheduled EDR Contact: 05/29/2017
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 10/11/2016 Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/16/2016 Telephone: 202-566-1917
Date Made Active in Reports: 02/03/2017 Last EDR Contact: 02/15/2017
Number of Days to Update: 79 Next Scheduled EDR Contact: 05/29/2017
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013 Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014 Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014 Last EDR Contact: 02/03/2017
Number of Days to Update: 88 Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013 Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/03/2015 Telephone: 703-308-4044
Date Made Active in Reports: 03/09/2015 Last EDR Contact: 02/10/2017
Number of Days to Update: 6 Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012 Source: EPA
Date Data Arrived at EDR: 01/15/2015 Telephone: 202-260-5521
Date Made Active in Reports: 01/29/2015 Last EDR Contact: 12/23/2016
Number of Days to Update: 14 Next Scheduled EDR Contact: 04/03/2017
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2014	Source: EPA
Date Data Arrived at EDR: 11/24/2015	Telephone: 202-566-0250
Date Made Active in Reports: 04/05/2016	Last EDR Contact: 02/24/2017
Number of Days to Update: 133	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009	Source: EPA
Date Data Arrived at EDR: 12/10/2010	Telephone: 202-564-4203
Date Made Active in Reports: 02/25/2011	Last EDR Contact: 01/23/2017
Number of Days to Update: 77	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013	Source: EPA
Date Data Arrived at EDR: 12/12/2013	Telephone: 703-416-0223
Date Made Active in Reports: 02/24/2014	Last EDR Contact: 12/06/2016
Number of Days to Update: 74	Next Scheduled EDR Contact: 03/20/2017
	Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/22/2016	Telephone: 202-564-8600
Date Made Active in Reports: 11/11/2016	Last EDR Contact: 01/23/2017
Number of Days to Update: 81	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 10/17/2014	Telephone: 202-564-6023
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 02/10/2017
Number of Days to Update: 3	Next Scheduled EDR Contact: 05/22/2017
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2016	Source: EPA
Date Data Arrived at EDR: 04/28/2016	Telephone: 202-566-0500
Date Made Active in Reports: 09/02/2016	Last EDR Contact: 01/13/2017
Number of Days to Update: 127	Next Scheduled EDR Contact: 04/24/2017
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-5088
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 01/09/2017
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/24/2017
	Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/17/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/17/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 09/08/2016	Telephone: 301-415-7169
Date Made Active in Reports: 10/21/2016	Last EDR Contact: 02/03/2017
Number of Days to Update: 43	Next Scheduled EDR Contact: 05/22/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 12/06/2016
Number of Days to Update: 76	Next Scheduled EDR Contact: 03/20/2017
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2014	Telephone: N/A
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 12/06/2016
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/20/2017
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/19/2011	Telephone: 202-566-0517
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 01/29/2016
Number of Days to Update: 83	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/04/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/06/2017	Telephone: 202-343-9775
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 01/06/2017
Number of Days to Update: 35	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/01/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 11/18/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 77

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/23/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/22/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/13/2017
Next Scheduled EDR Contact: 04/24/2017
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 02/03/2017
Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/14/2010	Source: Department of Energy
Date Data Arrived at EDR: 10/07/2011	Telephone: 505-845-0011
Date Made Active in Reports: 03/01/2012	Last EDR Contact: 02/21/2017
Number of Days to Update: 146	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/05/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/05/2017	Telephone: 703-603-8787
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 01/05/2017
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001	Source: American Journal of Public Health
Date Data Arrived at EDR: 10/27/2010	Telephone: 703-305-6451
Date Made Active in Reports: 12/02/2010	Last EDR Contact: 12/02/2009
Number of Days to Update: 36	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016	Source: EPA
Date Data Arrived at EDR: 10/26/2016	Telephone: 202-564-2496
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 12/22/2016
Number of Days to Update: 100	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016	Source: EPA
Date Data Arrived at EDR: 10/26/2016	Telephone: 202-564-2496
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 12/22/2016
Number of Days to Update: 100	Next Scheduled EDR Contact: 04/10/2017
	Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/05/2016	Source: Department of Labor, Mine Safety and Health Administration
Date Data Arrived at EDR: 09/01/2016	Telephone: 303-231-5959
Date Made Active in Reports: 09/23/2016	Last EDR Contact: 02/28/2017
Number of Days to Update: 22	Next Scheduled EDR Contact: 06/12/2017
	Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/05/2005 Source: USGS
Date Data Arrived at EDR: 02/29/2008 Telephone: 703-648-7709
Date Made Active in Reports: 04/18/2008 Last EDR Contact: 12/12/2016
Number of Days to Update: 49 Next Scheduled EDR Contact: 03/13/2017
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Source: USGS
Date Data Arrived at EDR: 06/08/2011 Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011 Last EDR Contact: 12/02/2016
Number of Days to Update: 97 Next Scheduled EDR Contact: 03/13/2017
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/15/2016 Source: EPA
Date Data Arrived at EDR: 09/07/2016 Telephone: (415) 947-8000
Date Made Active in Reports: 11/11/2016 Last EDR Contact: 02/22/2017
Number of Days to Update: 65 Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016 Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/03/2016 Telephone: 202-564-0527
Date Made Active in Reports: 09/02/2016 Last EDR Contact: 02/24/2017
Number of Days to Update: 91 Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015 Source: Department of Defense
Date Data Arrived at EDR: 01/29/2016 Telephone: 571-373-0407
Date Made Active in Reports: 04/05/2016 Last EDR Contact: 01/20/2017
Number of Days to Update: 67 Next Scheduled EDR Contact: 05/01/2017
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989 Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994 Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994 Last EDR Contact: 05/31/1994
Number of Days to Update: 6 Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/26/2016
Date Data Arrived at EDR: 09/27/2016
Date Made Active in Reports: 11/18/2016
Number of Days to Update: 52

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/28/2016
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/02/2016
Date Data Arrived at EDR: 09/27/2016
Date Made Active in Reports: 12/15/2016
Number of Days to Update: 79

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/02/2016
Next Scheduled EDR Contact: 03/20/2017
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 09/23/2016
Date Made Active in Reports: 10/24/2016
Number of Days to Update: 31

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/23/2016
Next Scheduled EDR Contact: 04/03/2017
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 12/06/2016
Date Data Arrived at EDR: 12/09/2016
Date Made Active in Reports: 01/18/2017
Number of Days to Update: 40

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/23/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/25/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/23/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/16/2016
Date Data Arrived at EDR: 11/18/2016
Date Made Active in Reports: 01/20/2017
Number of Days to Update: 63

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/13/2017
Next Scheduled EDR Contact: 05/29/2017
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 10/12/2016
Date Made Active in Reports: 12/15/2016
Number of Days to Update: 64

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/09/2017
Next Scheduled EDR Contact: 04/24/2017
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 11/21/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 62

Source: Department of Toxic Substances Control
Telephone: 877-786-9427
Last EDR Contact: 02/22/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 11/21/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 62

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/22/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/12/2016
Date Made Active in Reports: 12/15/2016
Number of Days to Update: 64

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/11/2017
Next Scheduled EDR Contact: 04/24/2017
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/12/2016
Date Data Arrived at EDR: 09/14/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 30

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 01/13/2017
Next Scheduled EDR Contact: 03/27/2017
Data Release Frequency: Varies

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/06/2016
Date Data Arrived at EDR: 09/07/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 37

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 12/06/2016
Next Scheduled EDR Contact: 03/20/2017
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/16/2016
Date Data Arrived at EDR: 05/18/2016
Date Made Active in Reports: 06/23/2016
Number of Days to Update: 36

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/15/2017
Next Scheduled EDR Contact: 05/29/2017
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 09/06/2016
Date Data Arrived at EDR: 09/07/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 37

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 12/06/2016
Next Scheduled EDR Contact: 03/20/2017
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 09/12/2016
Date Data Arrived at EDR: 09/14/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 30

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/14/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/19/2016
Date Data Arrived at EDR: 09/20/2016
Date Made Active in Reports: 12/16/2016
Number of Days to Update: 87

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/16/2016
Next Scheduled EDR Contact: 04/03/2017
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 09/14/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 30

Source: Department of Conservation
Telephone: 916-445-2408
Last EDR Contact: 12/14/2016
Next Scheduled EDR Contact: 03/27/2017
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board's review found that more than one-third of the region's active disposal pits are operating without permission.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 01/13/2017
Next Scheduled EDR Contact: 04/24/2017
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/17/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/22/2016
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 06/09/2016
Date Data Arrived at EDR: 06/13/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 81

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/09/2016
Next Scheduled EDR Contact: 03/27/2017
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 12/11/2016
Date Data Arrived at EDR: 12/20/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 12/20/2016
Next Scheduled EDR Contact: 04/03/2017
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/21/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 73

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/22/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGALF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/13/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 196	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A

Date Data Arrived at EDR: 07/01/2013

Date Made Active in Reports: 12/30/2013

Number of Days to Update: 182

Source: State Water Resources Control Board

Telephone: N/A

Last EDR Contact: 06/01/2012

Next Scheduled EDR Contact: N/A

Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 10/12/2016

Date Data Arrived at EDR: 10/14/2016

Date Made Active in Reports: 11/18/2016

Number of Days to Update: 35

Source: Alameda County Environmental Health Services

Telephone: 510-567-6700

Last EDR Contact: 01/06/2017

Next Scheduled EDR Contact: 04/24/2017

Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/10/2016

Date Data Arrived at EDR: 10/12/2016

Date Made Active in Reports: 01/10/2017

Number of Days to Update: 90

Source: Alameda County Environmental Health Services

Telephone: 510-567-6700

Last EDR Contact: 01/09/2017

Next Scheduled EDR Contact: 04/24/2047

Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 11/10/2016

Date Data Arrived at EDR: 12/13/2016

Date Made Active in Reports: 12/22/2016

Number of Days to Update: 9

Source: Amador County Environmental Health

Telephone: 209-223-6439

Last EDR Contact: 12/02/2016

Next Scheduled EDR Contact: 03/20/2017

Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 10/21/2016

Date Data Arrived at EDR: 10/26/2016

Date Made Active in Reports: 11/18/2016

Number of Days to Update: 23

Source: Public Health Department

Telephone: 530-538-7149

Last EDR Contact: 01/23/2017

Next Scheduled EDR Contact: 04/24/2017

Data Release Frequency: No Update Planned

CALVERAS COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing

Cupa Facility Listing

Date of Government Version: 10/25/2016
Date Data Arrived at EDR: 10/27/2016
Date Made Active in Reports: 11/18/2016
Number of Days to Update: 22

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 12/27/2016
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 09/02/2016
Date Data Arrived at EDR: 09/06/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 38

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/21/2017
Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/17/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 01/26/2017
Number of Days to Update: 65

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 01/30/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List

Cupa Facility list

Date of Government Version: 11/01/2016
Date Data Arrived at EDR: 11/03/2016
Date Made Active in Reports: 11/22/2016
Number of Days to Update: 19

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 01/30/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 11/22/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 01/17/2017
Number of Days to Update: 55

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 01/30/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

FRESNO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/11/2016	Source: Dept. of Community Health
Date Data Arrived at EDR: 10/14/2016	Telephone: 559-445-3271
Date Made Active in Reports: 11/18/2016	Last EDR Contact: 01/03/2017
Number of Days to Update: 35	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 10/25/2016	Source: Humboldt County Environmental Health
Date Data Arrived at EDR: 10/27/2016	Telephone: N/A
Date Made Active in Reports: 11/18/2016	Last EDR Contact: 02/21/2017
Number of Days to Update: 22	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 10/24/2016	Source: San Diego Border Field Office
Date Data Arrived at EDR: 10/27/2016	Telephone: 760-339-2777
Date Made Active in Reports: 11/18/2016	Last EDR Contact: 01/23/2017
Number of Days to Update: 22	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 09/10/2013	Source: Inyo County Environmental Health Services
Date Data Arrived at EDR: 09/11/2013	Telephone: 760-878-0238
Date Made Active in Reports: 10/14/2013	Last EDR Contact: 02/21/2017
Number of Days to Update: 33	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 11/07/2016	Source: Kern County Environment Health Services Department
Date Data Arrived at EDR: 11/08/2016	Telephone: 661-862-8700
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 02/06/2017
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/22/2017
	Data Release Frequency: Quarterly

KINGS COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/14/2016	Source: Kings County Department of Public Health
Date Data Arrived at EDR: 12/16/2016	Telephone: 559-584-1411
Date Made Active in Reports: 12/22/2016	Last EDR Contact: 02/21/2017
Number of Days to Update: 6	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 09/08/2016	Source: Lake County Environmental Health
Date Data Arrived at EDR: 09/09/2016	Telephone: 707-263-1164
Date Made Active in Reports: 10/14/2016	Last EDR Contact: 01/17/2017
Number of Days to Update: 35	Next Scheduled EDR Contact: 05/01/2017
	Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009	Source: EPA Region 9
Date Data Arrived at EDR: 03/31/2009	Telephone: 415-972-3178
Date Made Active in Reports: 10/23/2009	Last EDR Contact: 12/15/2016
Number of Days to Update: 206	Next Scheduled EDR Contact: 04/03/2017
	Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 11/14/2016	Source: Department of Public Works
Date Data Arrived at EDR: 11/18/2016	Telephone: 626-458-3517
Date Made Active in Reports: 01/23/2017	Last EDR Contact: 01/23/2017
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/24/2017
	Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/17/2016	Source: La County Department of Public Works
Date Data Arrived at EDR: 10/18/2016	Telephone: 818-458-5185
Date Made Active in Reports: 12/15/2016	Last EDR Contact: 01/18/2017
Number of Days to Update: 58	Next Scheduled EDR Contact: 05/01/2017
	Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2016	Source: Engineering & Construction Division
Date Data Arrived at EDR: 01/26/2016	Telephone: 213-473-7869
Date Made Active in Reports: 03/22/2016	Last EDR Contact: 01/17/2017
Number of Days to Update: 56	Next Scheduled EDR Contact: 05/01/2017
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/29/2016	Source: Community Health Services
Date Data Arrived at EDR: 04/06/2016	Telephone: 323-890-7806
Date Made Active in Reports: 06/13/2016	Last EDR Contact: 01/17/2017
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/01/2017
	Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 03/30/2015	Source: City of El Segundo Fire Department
Date Data Arrived at EDR: 04/02/2015	Telephone: 310-524-2236
Date Made Active in Reports: 04/13/2015	Last EDR Contact: 01/17/2017
Number of Days to Update: 11	Next Scheduled EDR Contact: 05/01/2017
	Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 11/04/2015	Source: City of Long Beach Fire Department
Date Data Arrived at EDR: 11/13/2015	Telephone: 562-570-2563
Date Made Active in Reports: 12/17/2015	Last EDR Contact: 01/23/2017
Number of Days to Update: 34	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/04/2016	Source: City of Torrance Fire Department
Date Data Arrived at EDR: 10/11/2016	Telephone: 310-618-2973
Date Made Active in Reports: 01/12/2017	Last EDR Contact: 01/09/2017
Number of Days to Update: 93	Next Scheduled EDR Contact: 04/24/2017
	Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/05/2016	Source: Madera County Environmental Health
Date Data Arrived at EDR: 12/09/2016	Telephone: 559-675-7823
Date Made Active in Reports: 01/19/2017	Last EDR Contact: 02/21/2017
Number of Days to Update: 41	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 10/19/2016	Source: Public Works Department Waste Management
Date Data Arrived at EDR: 10/25/2016	Telephone: 415-499-6647
Date Made Active in Reports: 01/12/2017	Last EDR Contact: 01/17/2017
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Semi-Annually

MERCED COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

CUPA facility list.

Date of Government Version: 12/02/2016
Date Data Arrived at EDR: 12/06/2016
Date Made Active in Reports: 01/17/2017
Number of Days to Update: 42

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/21/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List

CUPA Facility List

Date of Government Version: 11/29/2016
Date Data Arrived at EDR: 12/05/2016
Date Made Active in Reports: 12/22/2016
Number of Days to Update: 17

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/24/2016
Date Data Arrived at EDR: 06/27/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 43

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 02/21/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List

CUPA facility list.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 11/08/2016
Date Made Active in Reports: 12/22/2016
Number of Days to Update: 44

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 01/30/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 11/03/2016
Date Data Arrived at EDR: 11/11/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/06/2017
Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/04/2016
Date Data Arrived at EDR: 11/11/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/06/2017
Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 11/03/2016
Date Data Arrived at EDR: 11/08/2016
Date Made Active in Reports: 01/12/2017
Number of Days to Update: 65

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/07/2017
Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/02/2016
Date Data Arrived at EDR: 09/06/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 38

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 12/02/2016
Next Scheduled EDR Contact: 03/20/2017
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/20/2016
Date Data Arrived at EDR: 10/25/2016
Date Made Active in Reports: 12/15/2016
Number of Days to Update: 51

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/19/2016
Next Scheduled EDR Contact: 04/03/2017
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 10/20/2016	Source: Department of Environmental Health
Date Data Arrived at EDR: 10/25/2016	Telephone: 951-358-5055
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 12/19/2016
Number of Days to Update: 77	Next Scheduled EDR Contact: 04/03/2017
	Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/22/2016	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 10/04/2016	Telephone: 916-875-8406
Date Made Active in Reports: 11/18/2016	Last EDR Contact: 01/05/2017
Number of Days to Update: 45	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/22/2016	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 10/04/2016	Telephone: 916-875-8406
Date Made Active in Reports: 12/16/2016	Last EDR Contact: 01/05/2017
Number of Days to Update: 73	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 09/06/2016	Source: San Bernardino County Fire Department Hazardous Materials Division
Date Data Arrived at EDR: 09/07/2016	Telephone: 909-387-3041
Date Made Active in Reports: 10/19/2016	Last EDR Contact: 02/06/2017
Number of Days to Update: 42	Next Scheduled EDR Contact: 05/22/2017
	Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013	Source: Hazardous Materials Management Division
Date Data Arrived at EDR: 09/24/2013	Telephone: 619-338-2268
Date Made Active in Reports: 10/17/2013	Last EDR Contact: 12/06/2016
Number of Days to Update: 23	Next Scheduled EDR Contact: 03/20/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 01/23/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 12/02/2016
Next Scheduled EDR Contact: 03/20/2017
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 02/03/2017
Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/16/2016
Date Data Arrived at EDR: 11/21/2016
Date Made Active in Reports: 01/12/2017
Number of Days to Update: 52

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 02/21/2017
Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/21/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/14/2017
Number of Days to Update: 49

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/15/2016
Next Scheduled EDR Contact: 04/03/2017
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 11/17/2016
Date Data Arrived at EDR: 11/21/2016
Date Made Active in Reports: 01/19/2017
Number of Days to Update: 59

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/21/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

SAN MATEO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 06/02/2016	Source: San Mateo County Environmental Health Services Division
Date Data Arrived at EDR: 06/07/2016	Telephone: 650-363-1921
Date Made Active in Reports: 06/22/2016	Last EDR Contact: 01/30/2017
Number of Days to Update: 15	Next Scheduled EDR Contact: 03/20/2017
	Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/09/2016	Source: San Mateo County Environmental Health Services Division
Date Data Arrived at EDR: 06/13/2016	Telephone: 650-363-1921
Date Made Active in Reports: 08/09/2016	Last EDR Contact: 12/09/2016
Number of Days to Update: 57	Next Scheduled EDR Contact: 03/27/2017
	Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011	Source: Santa Barbara County Public Health Department
Date Data Arrived at EDR: 09/09/2011	Telephone: 805-686-8167
Date Made Active in Reports: 10/07/2011	Last EDR Contact: 02/21/2017
Number of Days to Update: 28	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 11/16/2016	Source: Department of Environmental Health
Date Data Arrived at EDR: 11/21/2016	Telephone: 408-918-1973
Date Made Active in Reports: 01/19/2017	Last EDR Contact: 02/21/2017
Number of Days to Update: 59	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005	Source: Santa Clara Valley Water District
Date Data Arrived at EDR: 03/30/2005	Telephone: 408-265-2600
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 03/23/2009
Number of Days to Update: 22	Next Scheduled EDR Contact: 06/22/2009
	Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014	Source: Department of Environmental Health
Date Data Arrived at EDR: 03/05/2014	Telephone: 408-918-3417
Date Made Active in Reports: 03/18/2014	Last EDR Contact: 02/24/2017
Number of Days to Update: 13	Next Scheduled EDR Contact: 06/12/2017
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/07/2016	Source: City of San Jose Fire Department
Date Data Arrived at EDR: 11/10/2016	Telephone: 408-535-7694
Date Made Active in Reports: 01/24/2017	Last EDR Contact: 02/06/2017
Number of Days to Update: 75	Next Scheduled EDR Contact: 05/22/2017
	Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List

CUPA facility listing.

Date of Government Version: 11/16/2016	Source: Santa Cruz County Environmental Health
Date Data Arrived at EDR: 11/21/2016	Telephone: 831-464-2761
Date Made Active in Reports: 01/19/2017	Last EDR Contact: 02/21/2017
Number of Days to Update: 59	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 09/12/2016	Source: Shasta County Department of Resource Management
Date Data Arrived at EDR: 09/15/2016	Telephone: 530-225-5789
Date Made Active in Reports: 10/14/2016	Last EDR Contact: 02/21/2017
Number of Days to Update: 29	Next Scheduled EDR Contact: 06/05/2017
	Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 11/29/2016	Source: Solano County Department of Environmental Management
Date Data Arrived at EDR: 12/21/2016	Telephone: 707-784-6770
Date Made Active in Reports: 12/22/2016	Last EDR Contact: 12/09/2016
Number of Days to Update: 1	Next Scheduled EDR Contact: 03/27/2017
	Data Release Frequency: Quarterly

Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 11/29/2016	Source: Solano County Department of Environmental Management
Date Data Arrived at EDR: 12/22/2016	Telephone: 707-784-6770
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 12/09/2016
Number of Days to Update: 19	Next Scheduled EDR Contact: 03/27/2017
	Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List

Cupa Facility list

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/27/2016
Date Data Arrived at EDR: 09/28/2016
Date Made Active in Reports: 11/22/2016
Number of Days to Update: 55

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 12/22/2016
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/04/2016
Date Data Arrived at EDR: 10/06/2016
Date Made Active in Reports: 12/16/2016
Number of Days to Update: 71

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/22/2016
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 12/02/2016
Date Data Arrived at EDR: 12/06/2016
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 35

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 12/02/2016
Next Scheduled EDR Contact: 03/20/2017
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 10/27/2016
Date Data Arrived at EDR: 10/28/2016
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 74

Source: Division of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/23/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/26/2016
Date Data Arrived at EDR: 10/27/2016
Date Made Active in Reports: 01/17/2017
Number of Days to Update: 82

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/23/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/30/2016
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008	Source: Environmental Health Division
Date Data Arrived at EDR: 06/24/2008	Telephone: 805-654-2813
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 02/13/2017
Number of Days to Update: 37	Next Scheduled EDR Contact: 05/29/2017
	Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/26/2016	Source: Ventura County Resource Management Agency
Date Data Arrived at EDR: 10/27/2016	Telephone: 805-654-2813
Date Made Active in Reports: 01/24/2017	Last EDR Contact: 01/23/2017
Number of Days to Update: 89	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/28/2016	Source: Environmental Health Division
Date Data Arrived at EDR: 12/14/2016	Telephone: 805-654-2813
Date Made Active in Reports: 01/12/2017	Last EDR Contact: 12/14/2016
Number of Days to Update: 29	Next Scheduled EDR Contact: 03/27/2017
	Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 11/14/2016	Source: Yolo County Department of Health
Date Data Arrived at EDR: 11/18/2016	Telephone: 530-666-8646
Date Made Active in Reports: 01/12/2017	Last EDR Contact: 01/03/2017
Number of Days to Update: 55	Next Scheduled EDR Contact: 04/17/2017
	Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 10/28/2016	Source: Yuba County Environmental Health Department
Date Data Arrived at EDR: 11/03/2016	Telephone: 530-749-7523
Date Made Active in Reports: 12/15/2016	Last EDR Contact: 01/30/2017
Number of Days to Update: 42	Next Scheduled EDR Contact: 05/08/2017
	Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/11/2016
Next Scheduled EDR Contact: 02/27/2017
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 09/29/2016
Date Made Active in Reports: 01/03/2017
Number of Days to Update: 96

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/09/2017
Next Scheduled EDR Contact: 04/24/2017
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/30/2017
Date Data Arrived at EDR: 02/01/2017
Date Made Active in Reports: 02/13/2017
Number of Days to Update: 12

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/01/2017
Next Scheduled EDR Contact: 05/08/2017
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 07/22/2016
Date Made Active in Reports: 11/22/2016
Number of Days to Update: 123

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/12/2017
Next Scheduled EDR Contact: 05/01/2017
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/21/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 04/14/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 50

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/12/2016
Next Scheduled EDR Contact: 03/27/2017
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish & Game

Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TUSTIN HILLS RACQUET CLUB PHASE I
11782 SIMON RANCH ROAD
SANTA ANA, CA 92705

TARGET PROPERTY COORDINATES

Latitude (North): 33.751557 - 33° 45' 5.61"
Longitude (West): 117.781543 - 117° 46' 53.55"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 427614.3
UTM Y (Meters): 3734690.2
Elevation: 256 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 5641308 ORANGE, CA
Version Date: 2012

South Map: 5640942 TUSTIN, CA
Version Date: 2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

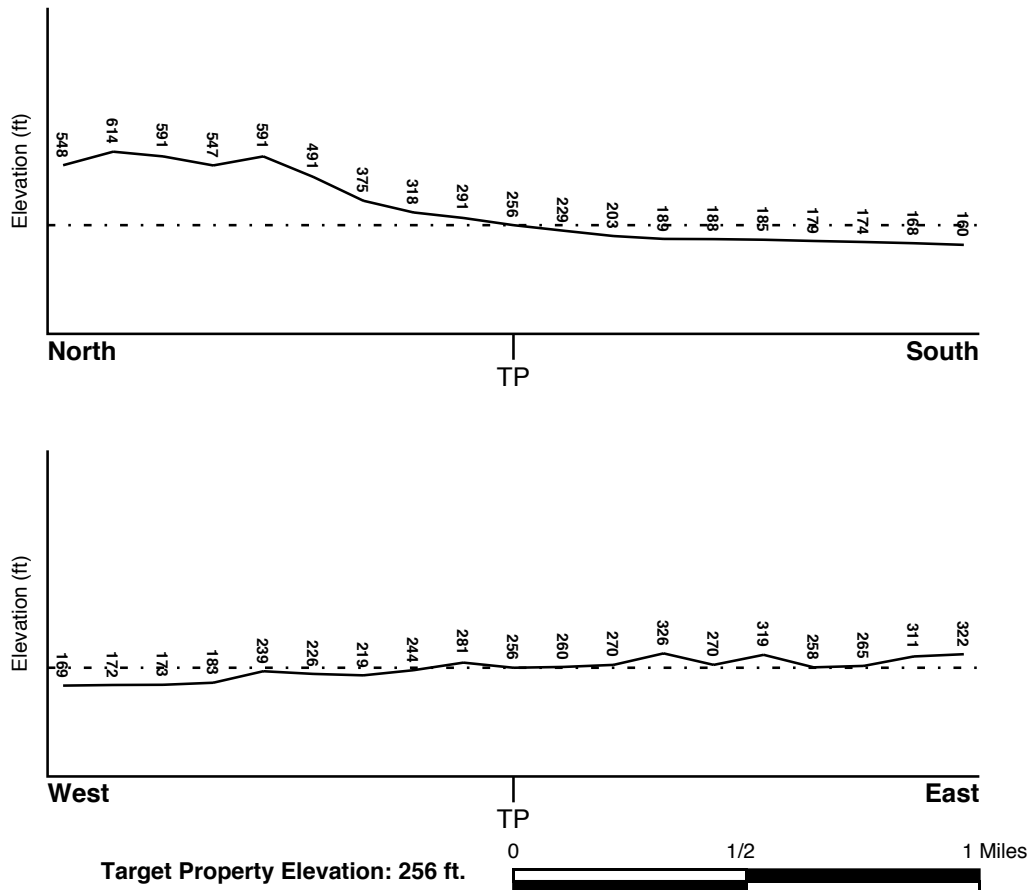
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
06059C0168J	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
06059C0169J	FEMA FIRM Flood data
06059C0281J	FEMA FIRM Flood data
06059C0282J	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
ORANGE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

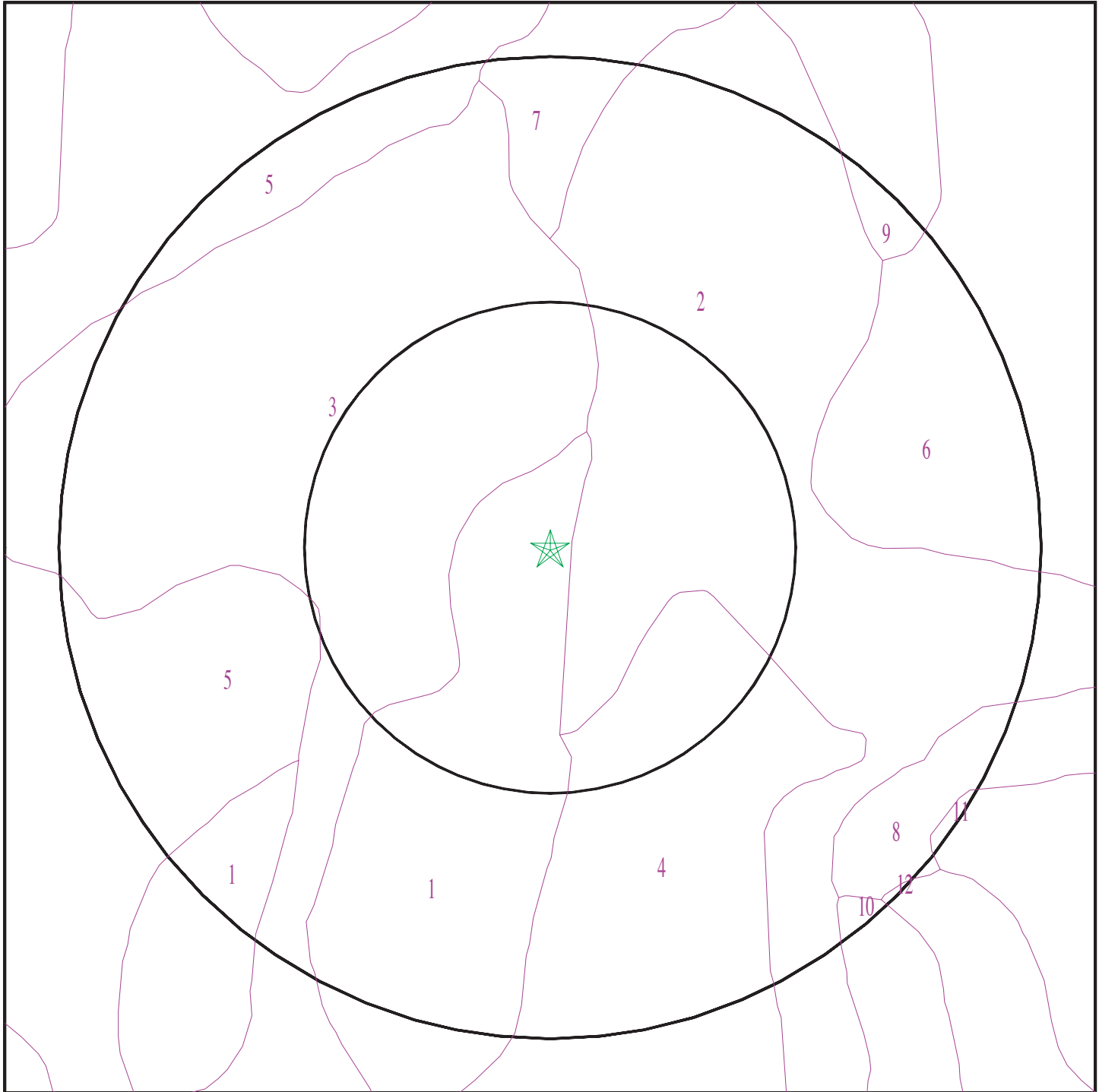
Era: Cenozoic
System: Tertiary
Series: Eocene
Code: Te (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4866681.2s



- ★ Target Property
- SSURGO Soil
- Water



SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana CA 92705
LAT/LONG: 33.751557 / 117.781543

CLIENT: Geocon Geotechnical & Env
CONTACT: Mike Akoto
INQUIRY #: 4866681.2s
DATE: March 01, 2017 2:54 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: BALCOM

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	29 inches	clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	29 inches	33 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 2

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6 Min: 5.1
2	11 inches	18 inches	sandy clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
3	18 inches	27 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
4	27 inches	70 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 8.4 Min: 6.1
5	70 inches	79 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 3

Soil Component Name: BALCOM

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	33 inches	clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	33 inches	38 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 4

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	22 inches	sandy loam	Not reported	Not reported	Max: 42 Min: 14	Max: 6 Min: 5.1
2	22 inches	27 inches	sandy clay	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
3	27 inches	38 inches	sandy clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
4	38 inches	70 inches	sandy clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 6.1
5	70 inches	79 inches	sandy loam	Not reported	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 6.1

Soil Map ID: 5

Soil Component Name: BOTELLA

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 5.6
2	7 inches	35 inches	silty clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 5.6
3	35 inches	66 inches	sandy clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 6

Soil Component Name: SOPER

Soil Surface Texture: cobbly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	cobbly loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 6.1
2	9 inches	29 inches	cobbly clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1
3	29 inches	33 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 7

Soil Component Name: BALCOM

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	33 inches	clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	33 inches	38 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 8

Soil Component Name: ALO VARIANT

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	25 inches	clay	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
2	25 inches	38 inches	clay	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.9
3	38 inches	42 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 9

Soil Component Name: CIENEBA

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 7.3 Min: 5.6
2	7 inches	11 inches	weathered bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 10

Soil Component Name: CALLEGUAS

Soil Surface Texture: clay loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
2	14 inches	18 inches	weathered bedrock	Not reported	Not reported	Max: 1.4 Min: 0	Max: Min:

Soil Map ID: 11

Soil Component Name: SOPER

Soil Surface Texture: gravelly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 7.3 Min: 6.1
2	9 inches	29 inches	gravelly clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
3	29 inches	33 inches	weathered bedrock	Not reported	Not reported	Max: 4 Min: 1.4	Max: Min:

Soil Map ID: 12

Soil Component Name: ANAHEIM

Soil Surface Texture: loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	25 inches	loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.8 Min: 6.1
2	25 inches	29 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	USGS40000137851	1/4 - 1/2 Mile WSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

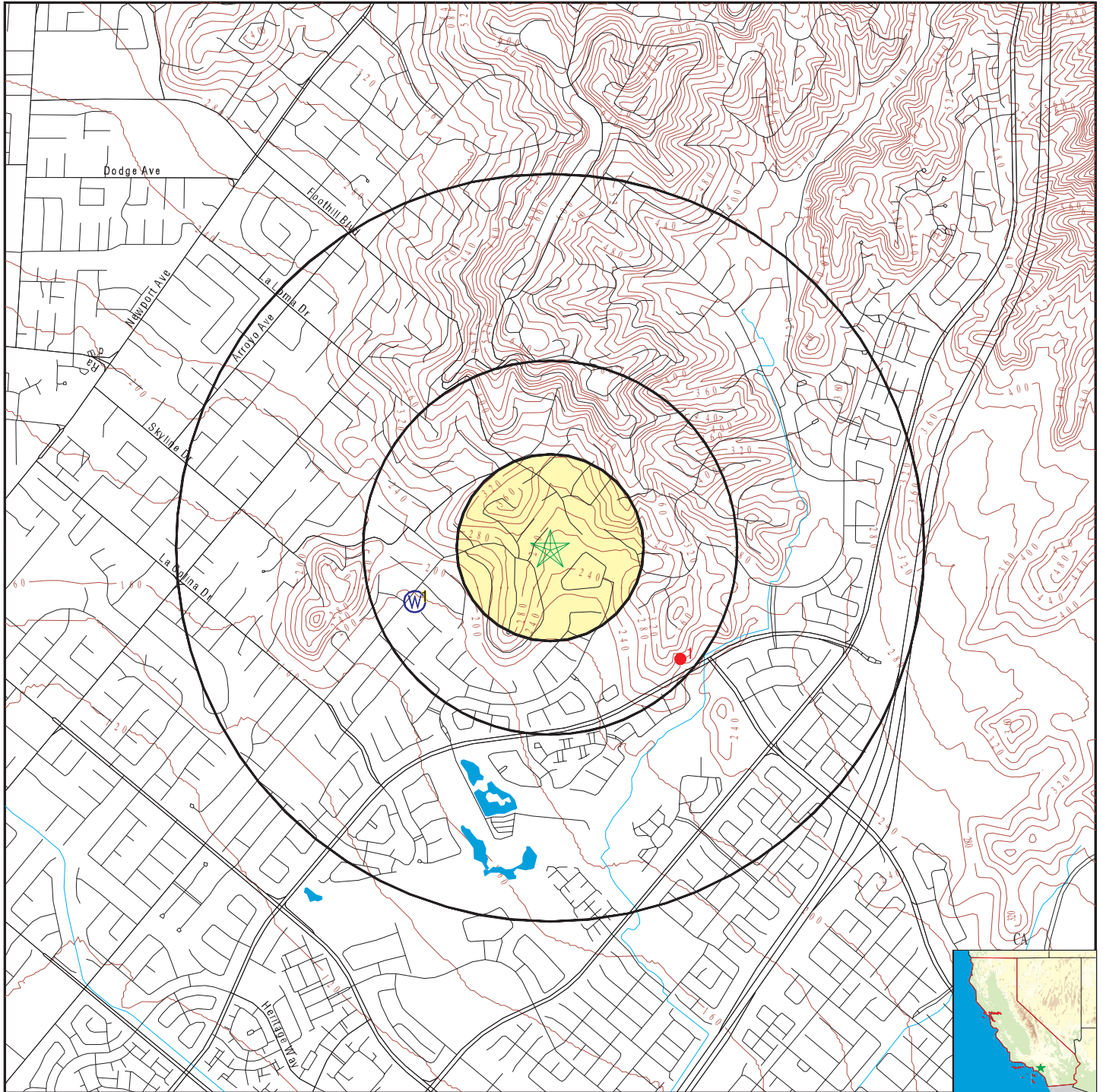
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	CAOG11000217997	1/4 - 1/2 Mile SE

PHYSICAL SETTING SOURCE MAP - 486681.2s



County Boundary

Major Roads

Contour Lines

Earthquake Fault Lines

Earthquake epicenter, Richter 5 or greater

Water Wells

Public Water Supply Wells

Cluster of Multiple Icons

Groundwater Flow Direction

Indeterminate Groundwater Flow at Location

Groundwater Flow Varies at Location

Closest Hydrogeological Data

Oil, gas or related wells



SITE NAME: Tustin Hills Racquet Club Phase I
 ADDRESS: 11782 Simon Ranch Road
 Santa Ana CA 92705
 LAT/LONG: 33.751557 / 117.781543

CLIENT: Geocon Geotechnical & Env
 CONTACT: Mike Akoto
 INQUIRY #: 486681.2s
 DATE: March 01, 2017 2:54 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

1
WSW **FED USGS** **USGS40000137851**
1/4 - 1/2 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334458117471301		
Monloc name:	005S009W14Q002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070204	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.7494624
Longitude:	-117.7878315	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	124.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 26

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1986-08-15	128.09		1986-04-30	109.22	
1986-02-20	77.98		1985-11-05	126.15	
1985-08-16	125.45		1985-05-06	123.70	
1985-02-12	66.90		1984-10-26	125.03	
1984-08-13	84.68		1984-05-09	92.07	
1984-02-07	57.17		1983-11-03	72.03	
1983-08-09	84.77		1983-05-16	52.60	
1983-02-14	51.56		1982-11-05	74.69	
1982-08-02	83.60				
Note: A nearby site that taps the same aquifer had been pumped recently.					
1982-04-30	56.98		1982-01-28	49.39	
1981-11-05	77.25		1981-07-28	78.44	
1981-05-05	66.58		1981-02-06	48.22	
1980-10-31	60.20		1980-08-27	75.08	
1980-06-19	75.37				

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
SE

OIL_GAS CAOG11000217997

1/4 - 1/2 Mile

District nun:	1	Api number:	05901219
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Orange	Fieldname:	Any Field
Area name:	Any Area	Section:	12
Township:	05S	Range:	09W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Irvine Core Hole	Wellnumber:	5-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported		
Directiona:	Unknown	Completion:	Not Reported
Site id:	CAOG11000217997	Gissymbol:	POG

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92705	64	5

Federal EPA Radon Zone for ORANGE County: 3

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for ORANGE COUNTY, CA

Number of sites tested: 30

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.763 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geological Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish & Game

Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations

Source: Department of Conservation

Telephone: 916-323-1779

Oil and Gas well locations in the state.

RADON

State Database: CA Radon

Source: Department of Health Services

Telephone: 916-324-2208

Radon Database for California

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

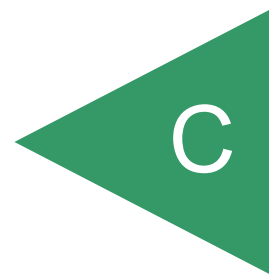
Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX



Tustin Hills Racquet Club Phase I
11782 Simon Ranch Road
Santa Ana, CA 92705

Inquiry Number: 4866681.9

March 01, 2017

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

03/01/17

Site Name:

Tustin Hills Racquet Club Phas
11782 Simon Ranch Road
Santa Ana, CA 92705
EDR Inquiry # 4866681.9

Client Name:

Geocon Geotechnical & Env
3303 North San Fernando Blvd.
Burbank, CA 91504
Contact: Mike Akoto



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1994	1"=500'	Acquisition Date: June 01, 1994	USGS/DOQQ
1989	1"=500'	Flight Date: August 03, 1989	USDA
1985	1"=500'	Flight Date: September 13, 1985	USDA
1977	1"=500'	Flight Date: January 18, 1977	EDR Proprietary Brewster Pacific
1972	1"=500'	Flight Date: October 30, 1972	USGS
1966	1"=500'	Flight Date: April 16, 1966	USGS
1963	1"=500'	Flight Date: February 28, 1963	USGS
1952	1"=500'	Flight Date: December 12, 1952	USDA
1946	1"=500'	Flight Date: December 29, 1946	USGS
1938	1"=500'	Flight Date: June 21, 1938	USDA

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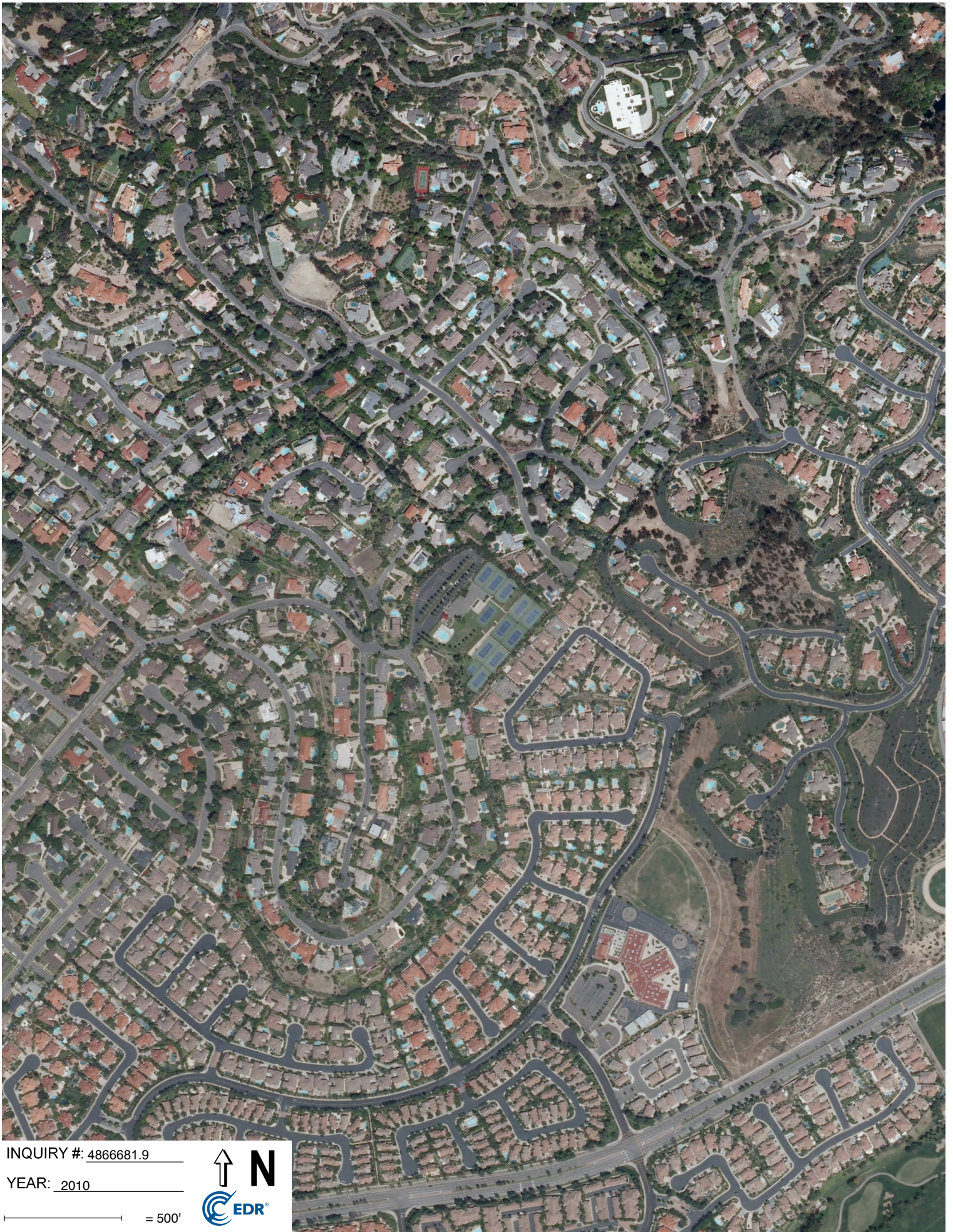


INQUIRY #: 4866681.9

YEAR: 2012

_____ = 500'





INQUIRY #: 4866681.9

YEAR: 2010

_____ = 500'





INQUIRY #: 4866681.9

YEAR: 2009

_____ = 500'





INQUIRY #: 4866681.9

YEAR: 2005

_____ = 500'





INQUIRY #: 4866681.9

YEAR: 1994

_____ = 500'





INQUIRY #: 4866681.9

YEAR: 1989

— = 500'





INQUIRY #: 4866681.9

YEAR: 1985

_____ = 500'





INQUIRY #: 4866681.9

YEAR: 1977

— = 500'





INQUIRY #: 4866681.9

YEAR: 1972

_____ = 500'



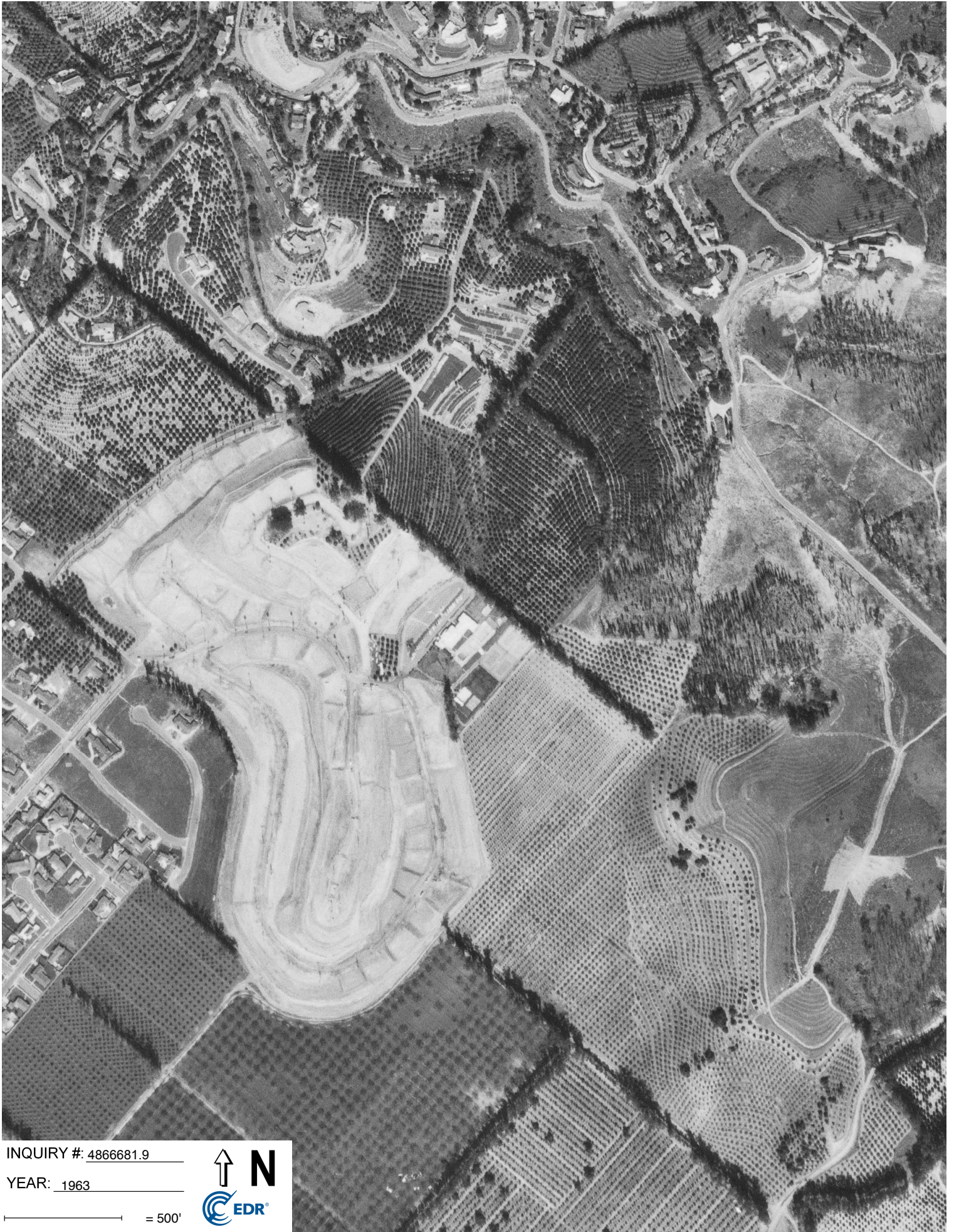


INQUIRY #: 4866681.9

YEAR: 1966

— = 500'





INQUIRY #: 4866681.9

YEAR: 1963

_____ = 500'





INQUIRY #: 4866681.9

YEAR: 1952

— = 500'





INQUIRY #: 4866681.9

YEAR: 1946

_____ = 500'





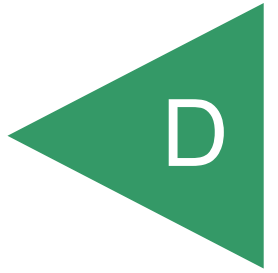
INQUIRY #: 4866681.9

YEAR: 1938

_____ = 500'



APPENDIX



Tustin Hills Racquet Club Phase I
11782 Simon Ranch Road
Santa Ana, CA 92705

Inquiry Number: 4866681.4

March 01, 2017

EDR Historical Topo Map Report

with QuadMatch™



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

03/01/17

Site Name:

Tustin Hills Racquet Club Phas
11782 Simon Ranch Road
Santa Ana, CA 92705
EDR Inquiry # 4866681.4

Client Name:

Geocon Geotechnical & Env
3303 North San Fernando Blvd.
Burbank, CA 91504
Contact: Mike Akoto



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Geocon Geotechnical & Env were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:**Coordinates:**

P.O.#	A9568-77-01	Latitude:	33.751557 33° 45' 6" North
Project:	Tustin Hills Club Phase I	Longitude:	-117.781543 -117° 46' 54" West
		UTM Zone:	Zone 11 North
		UTM X Meters:	427615.89
		UTM Y Meters:	3734883.96
		Elevation:	256.66' above sea level

Maps Provided:

2012	1932
1981	1902
1972	1901
1964, 1965	1898
1950	1896
1948, 1949	
1942	
1935	

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Topo Sheet Key

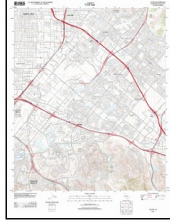
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Orange

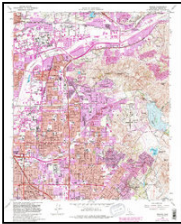
7.5-minute, 24000



Tustin

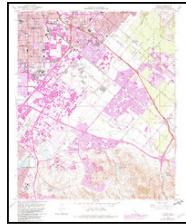
7.5-minute, 24000

1981 Source Sheets



Orange

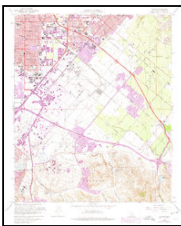
7.5-minute, 24000
Aerial Photo Revised 1978



Tustin

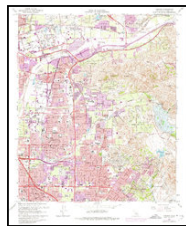
7.5-minute, 24000
Aerial Photo Revised 1978

1972 Source Sheets



Tustin

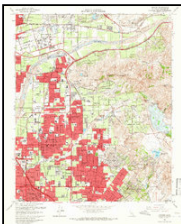
7.5-minute, 24000
Aerial Photo Revised 1972



Orange

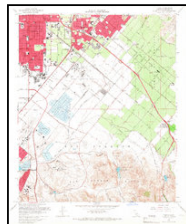
7.5-minute, 24000
Aerial Photo Revised 1972

1964, 1965 Source Sheets



Orange

7.5-minute, 24000
Aerial Photo Revised 1963



Tustin

7.5-minute, 24000
Aerial Photo Revised 1963

Topo Sheet Key

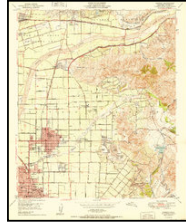
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1950 Source Sheets



Tustin

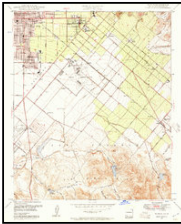
7.5-minute, 24000
Aerial Photo Revised 1946



Orange

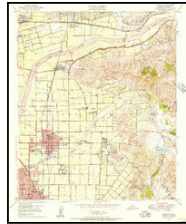
7.5-minute, 24000
Aerial Photo Revised 1946

1948, 1949 Source Sheets



Tustin

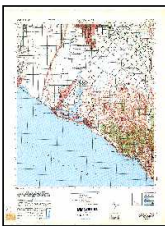
7.5-minute, 24000
Aerial Photo Revised 1946



Orange

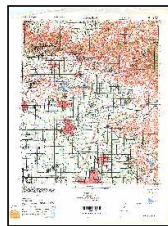
7.5-minute, 24000
Aerial Photo Revised 1946

1942 Source Sheets



SANTA ANA

15-minute, 50000



ANAHEIM

15-minute, 50000

1935 Source Sheets



Orange

7.5-minute, 31680



Tustin

7.5-minute, 31680

Topo Sheet Key

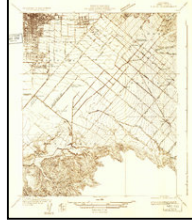
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1932 Source Sheets



Orange

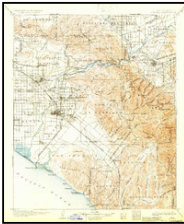
7.5-minute, 31680



Tustin

7.5-minute, 31680

1902 Source Sheets



Corona

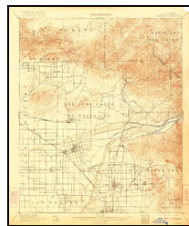
30-minute, 125000

1901 Source Sheets



Santa Ana

15-minute, 62500



Anaheim

15-minute, 62500

1898 Source Sheets



Anaheim

15-minute, 62500

Topo Sheet Key

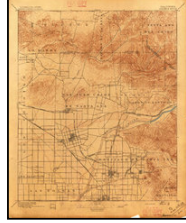
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1896 Source Sheets



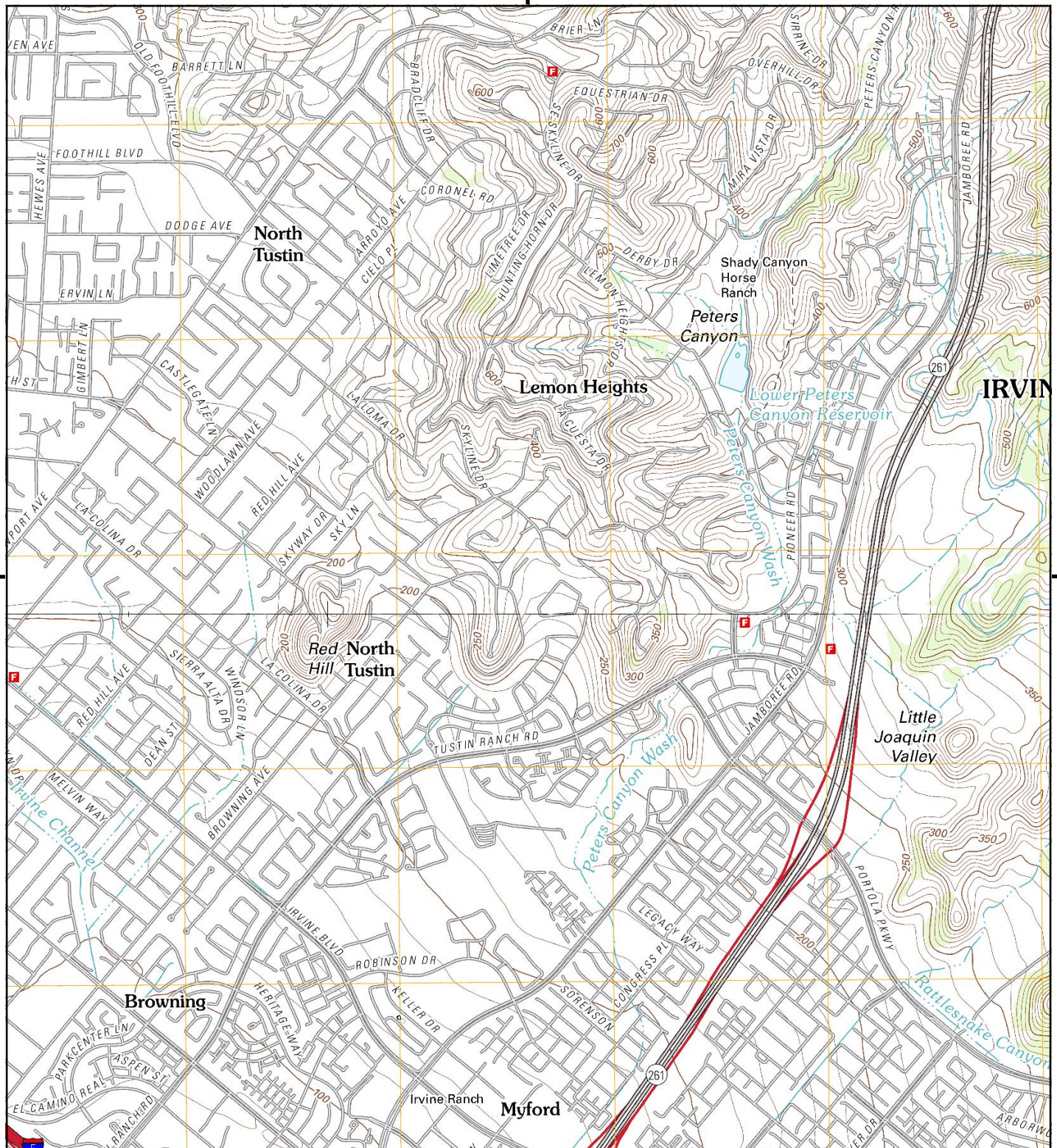
Santa Ana

15-minute, 62500

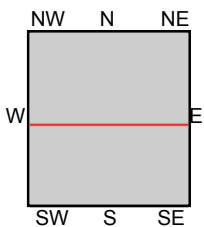
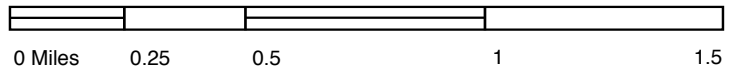


Anaheim

15-minute, 62500



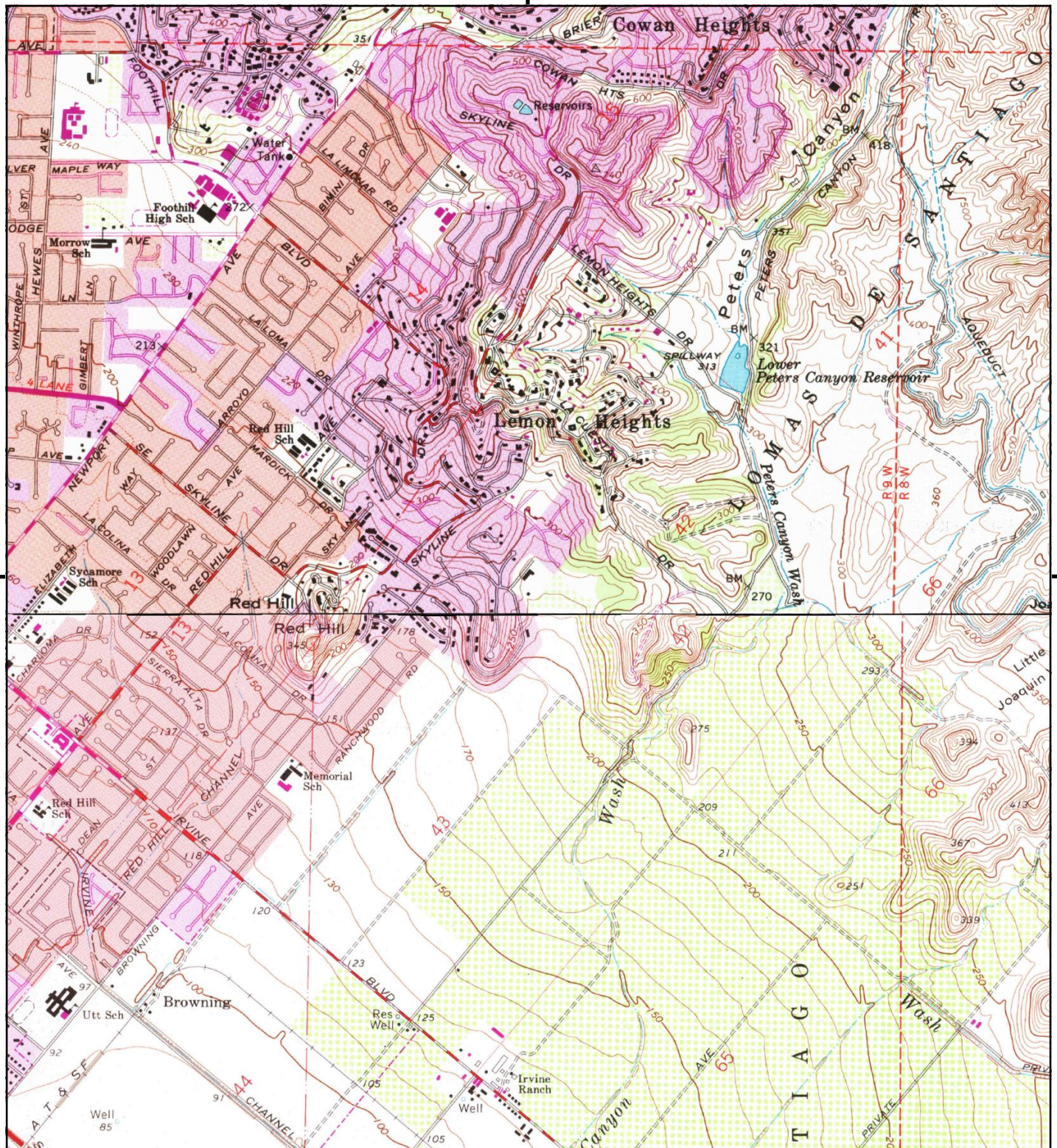
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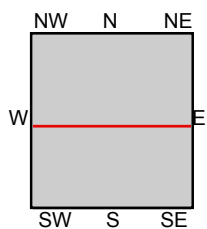
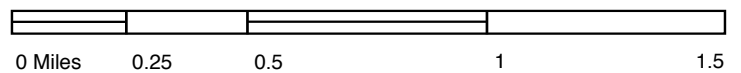
TP, Orange, 2012, 7.5-minute
S, Tustin, 2012, 7.5-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





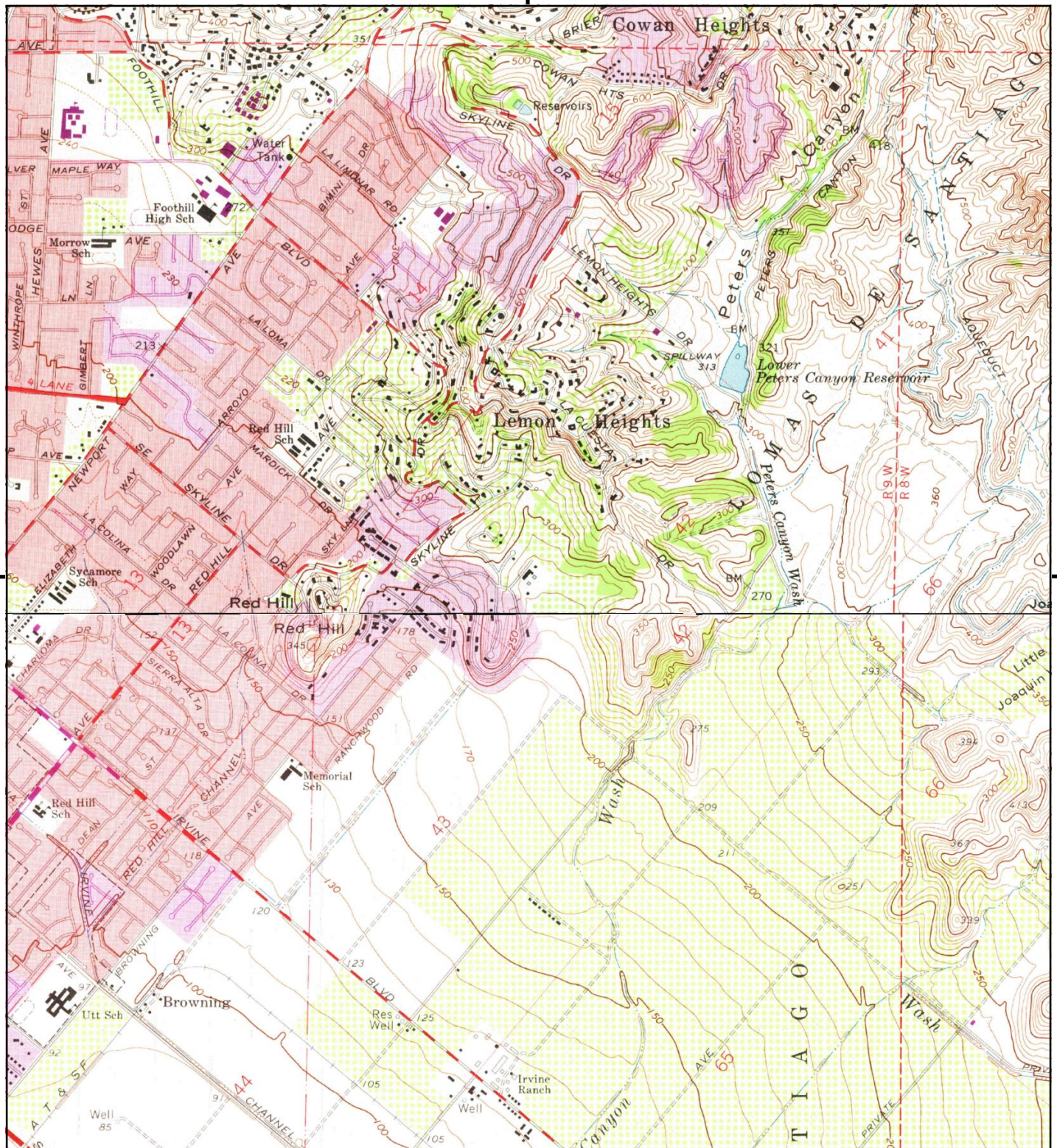
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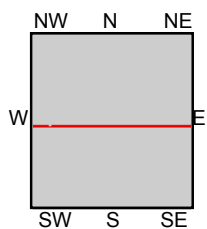
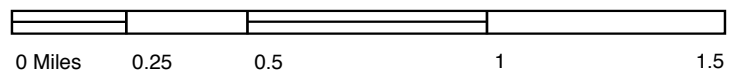
TP, Orange, 1981, 7.5-minute
S, Tustin, 1981, 7.5-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





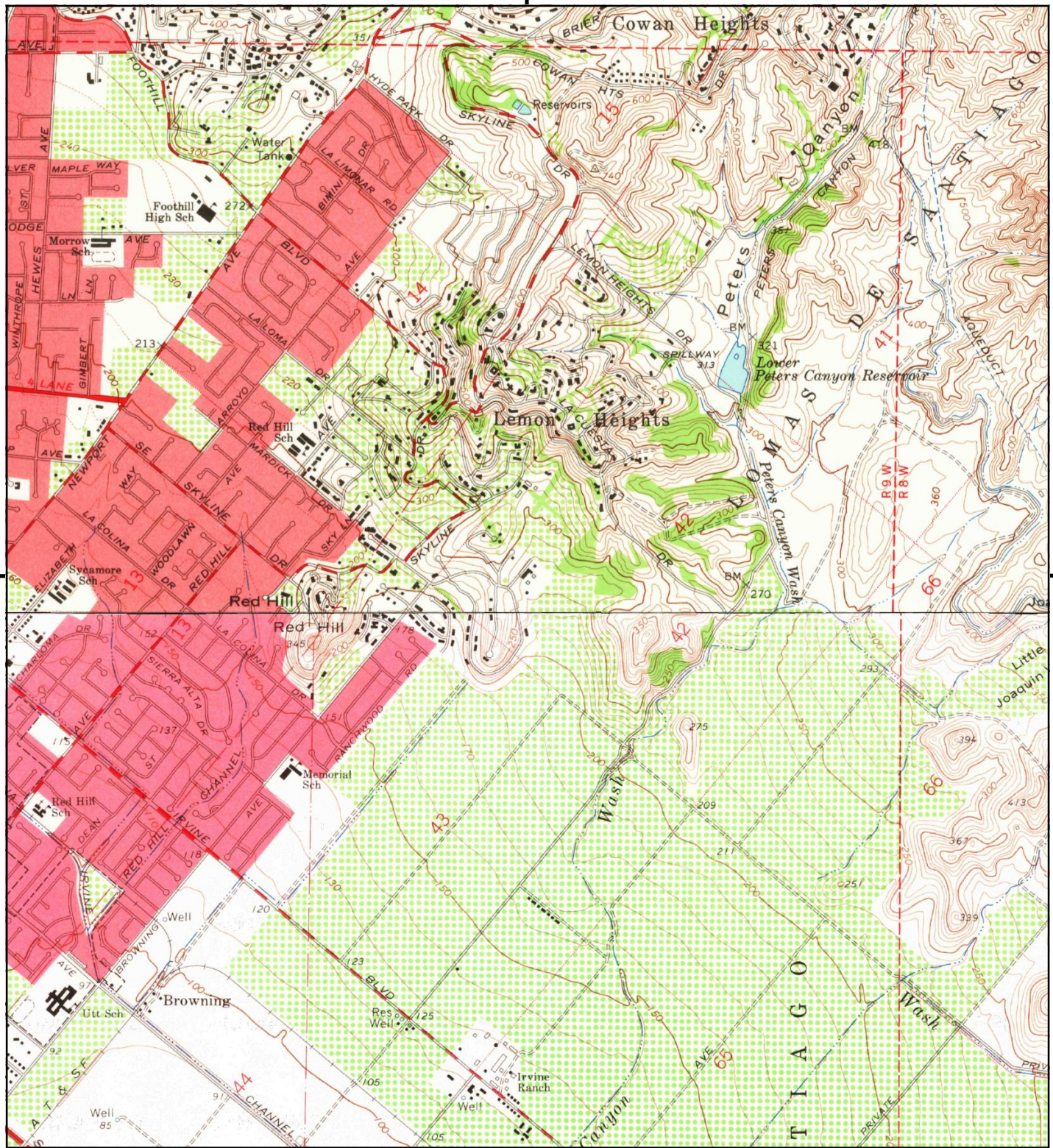
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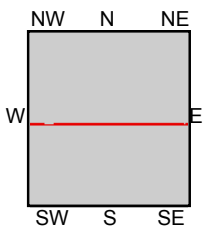
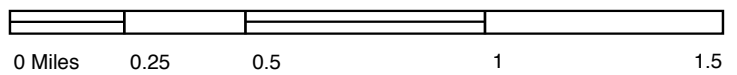
TP, Orange, 1972, 7.5-minute
 S, Tustin, 1972, 7.5-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
 Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





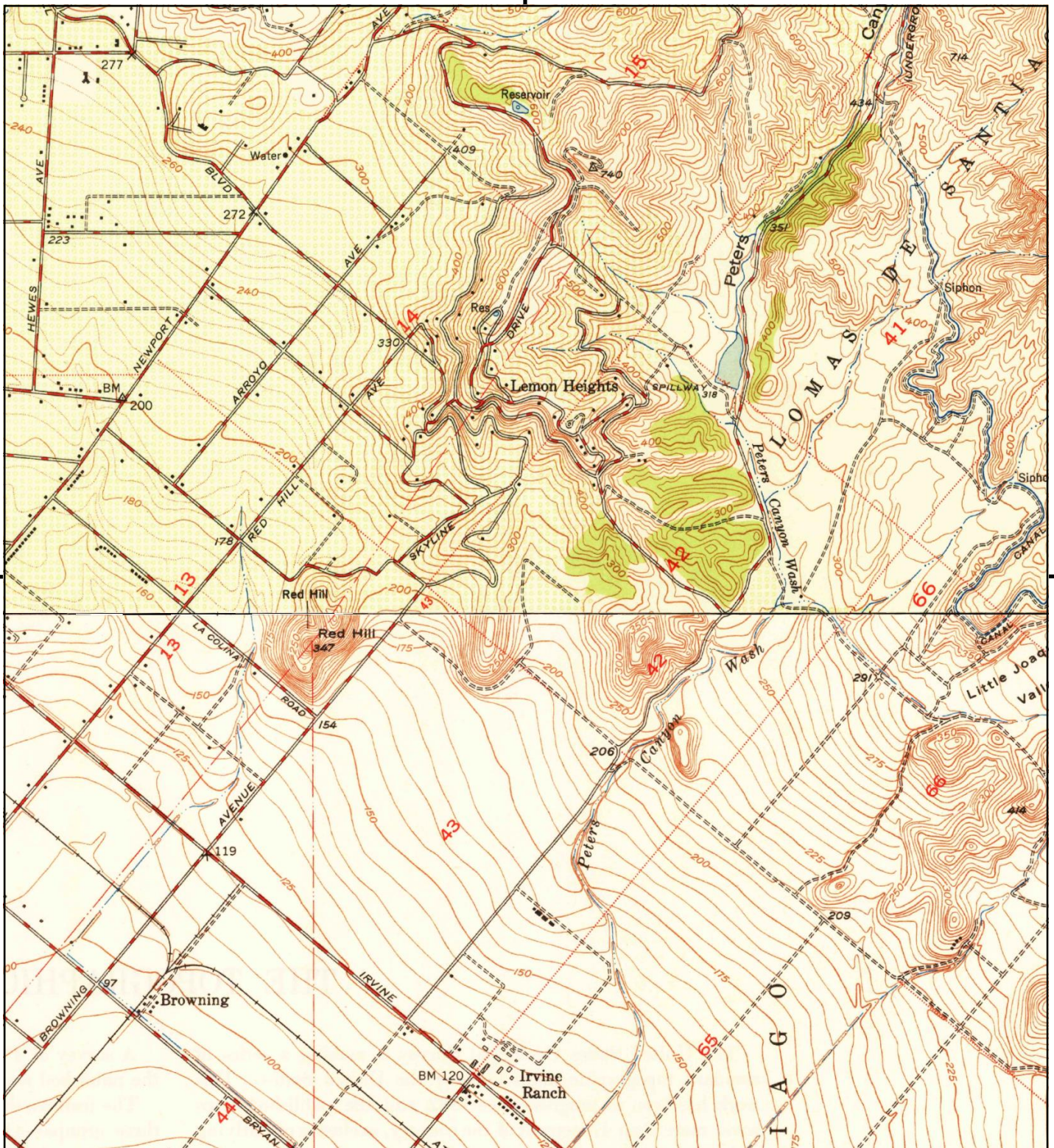
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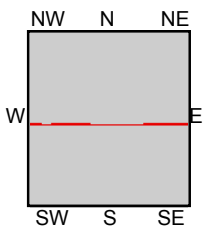
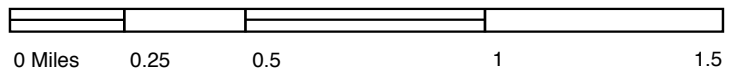
TP, Orange, 1964, 7.5-minute
S, Tustin, 1965, 7.5-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





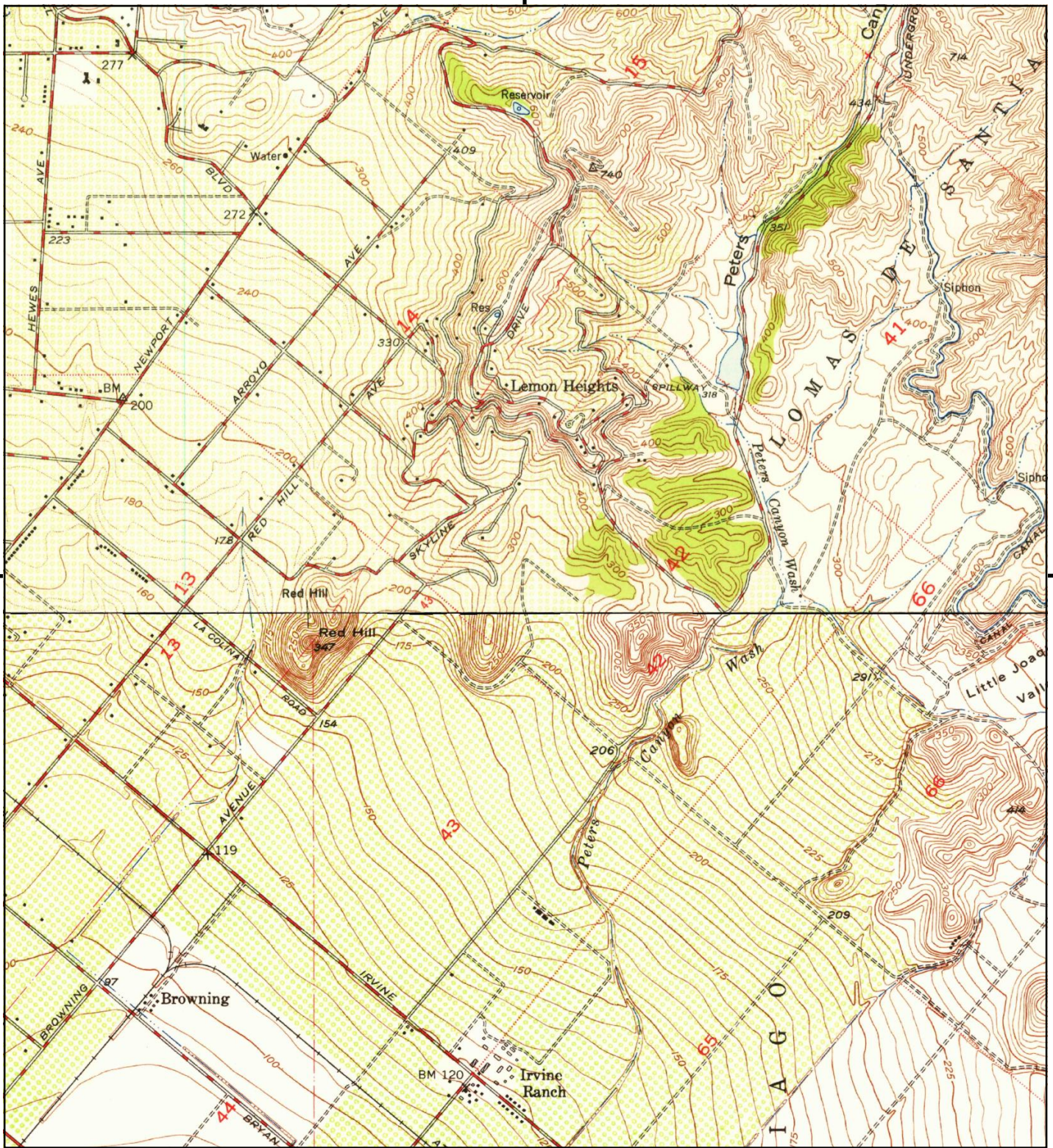
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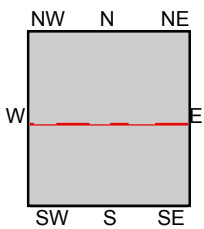
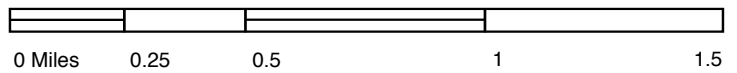
TP, Orange, 1950, 7.5-minute
S, Tustin, 1950, 7.5-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
 Santa Ana, CA 92705
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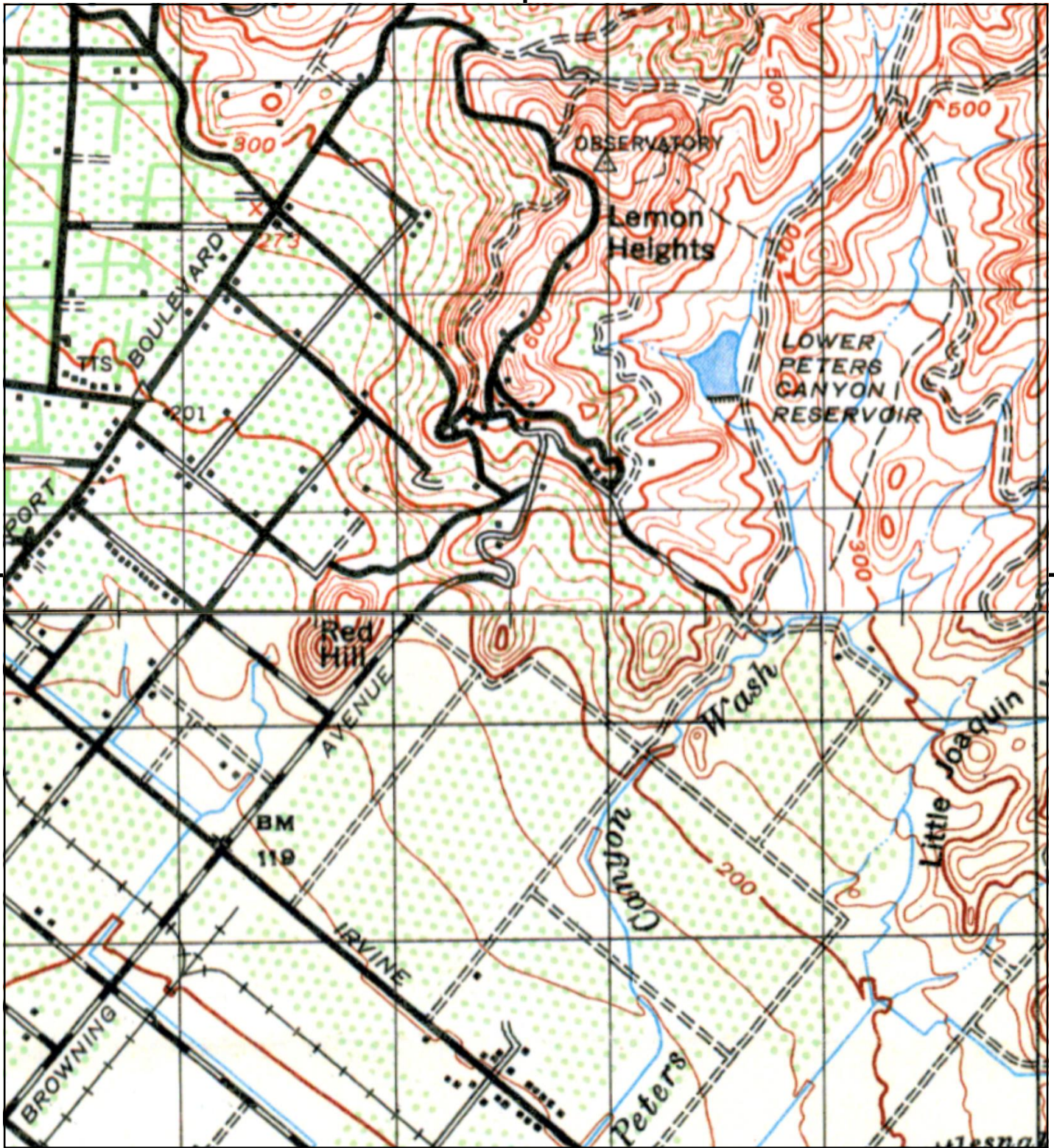
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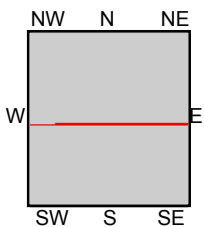
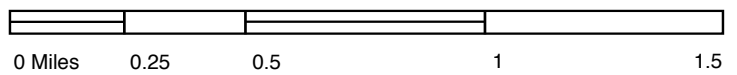
TP, Orange, 1949, 7.5-minute
S, Tustin, 1948, 7.5-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





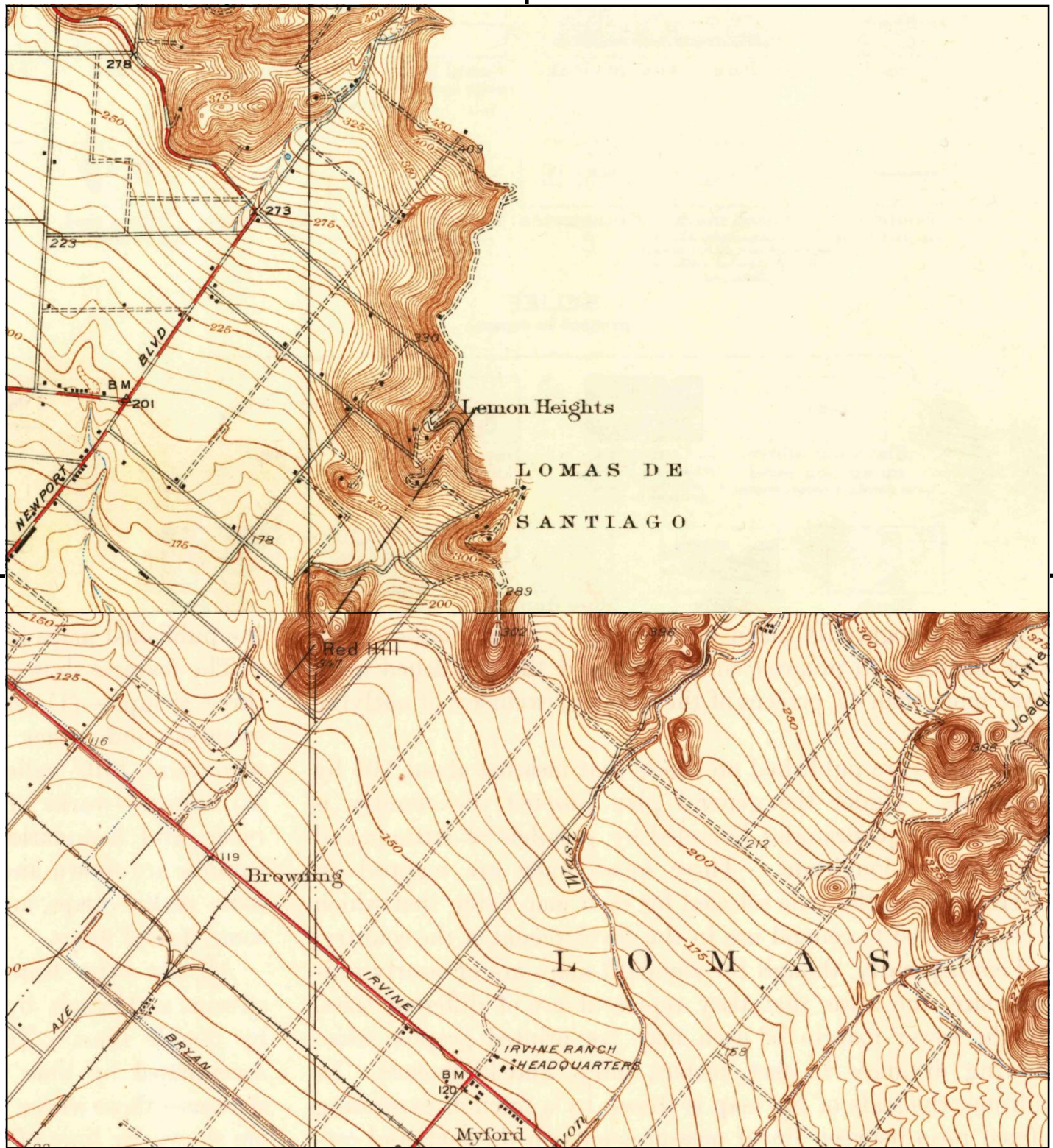
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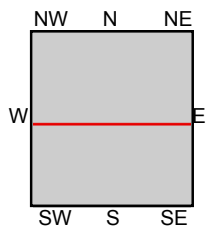
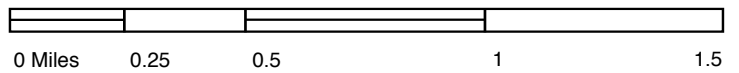
TP, ANAHEIM, 1942, 15-minute
SW, SANTA ANA, 1942, 15-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





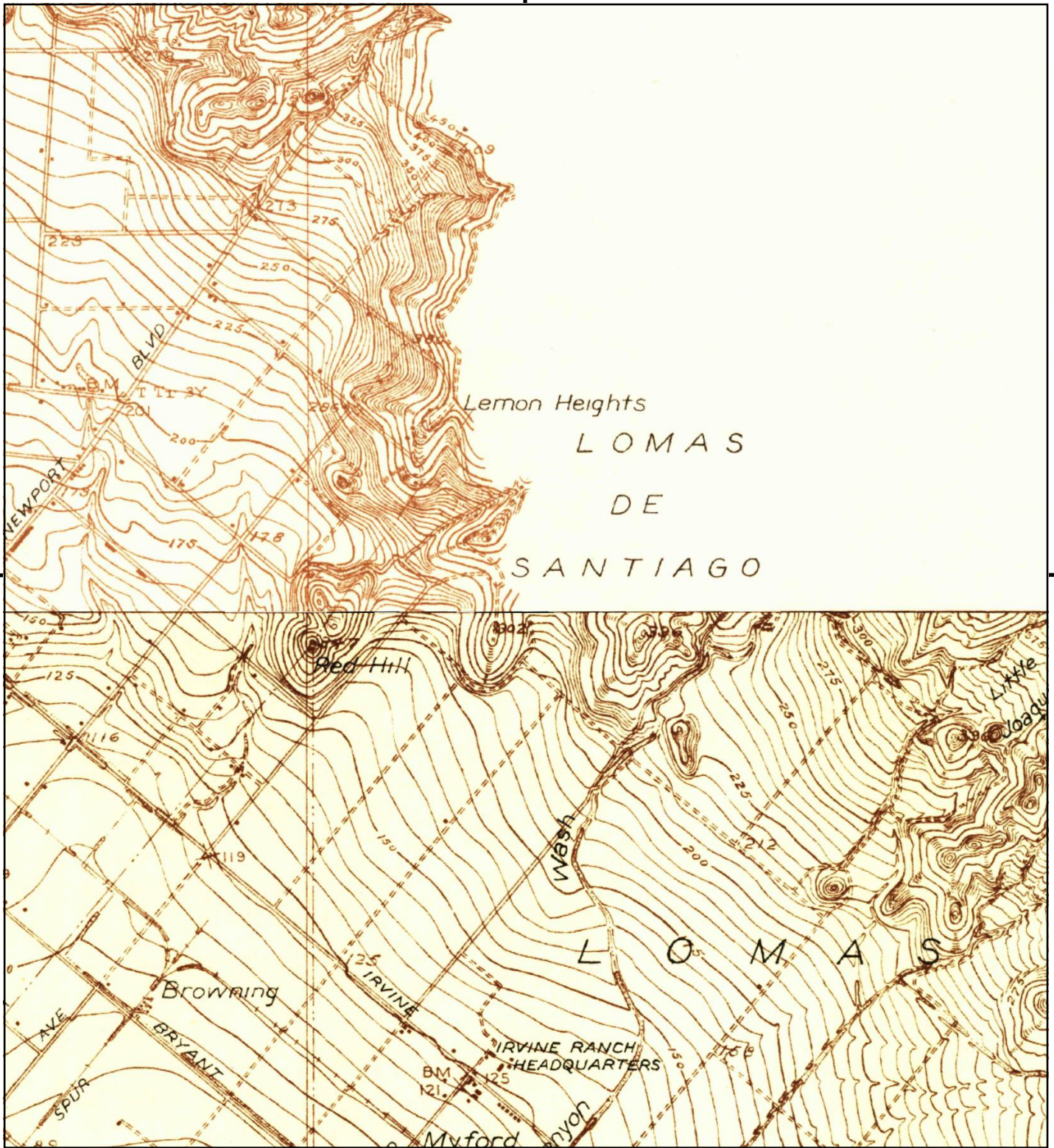
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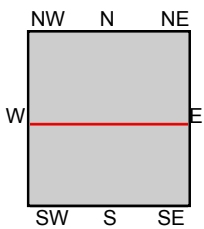
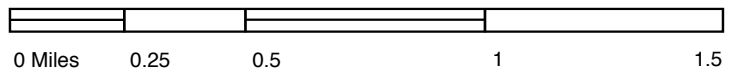
TP, Orange, 1935, 7.5-minute
S, Tustin, 1935, 7.5-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





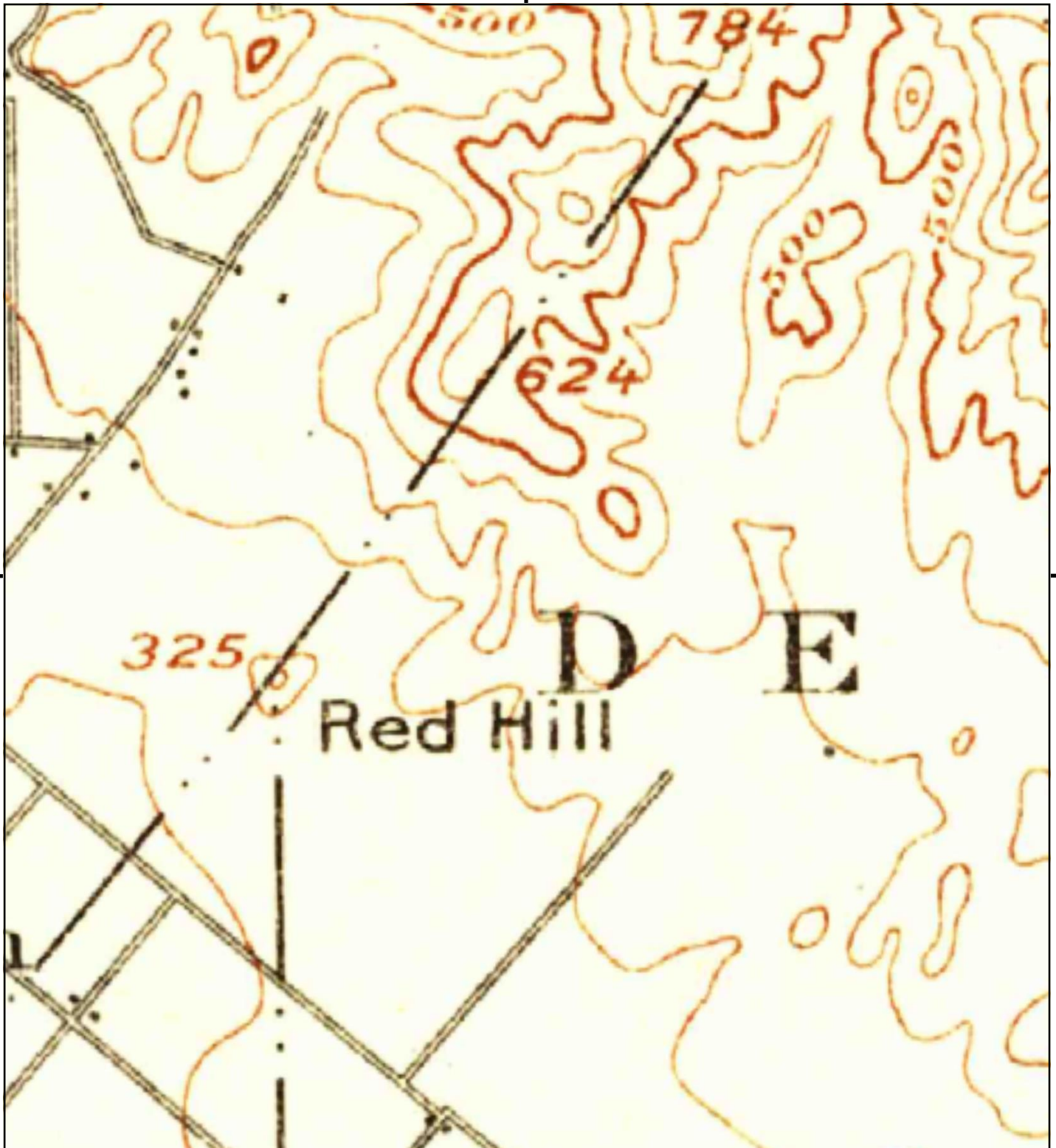
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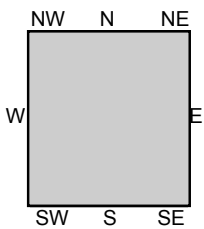
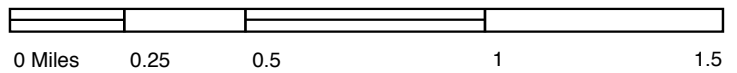
TP, Orange, 1932, 7.5-minute
S, Tustin, 1932, 7.5-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





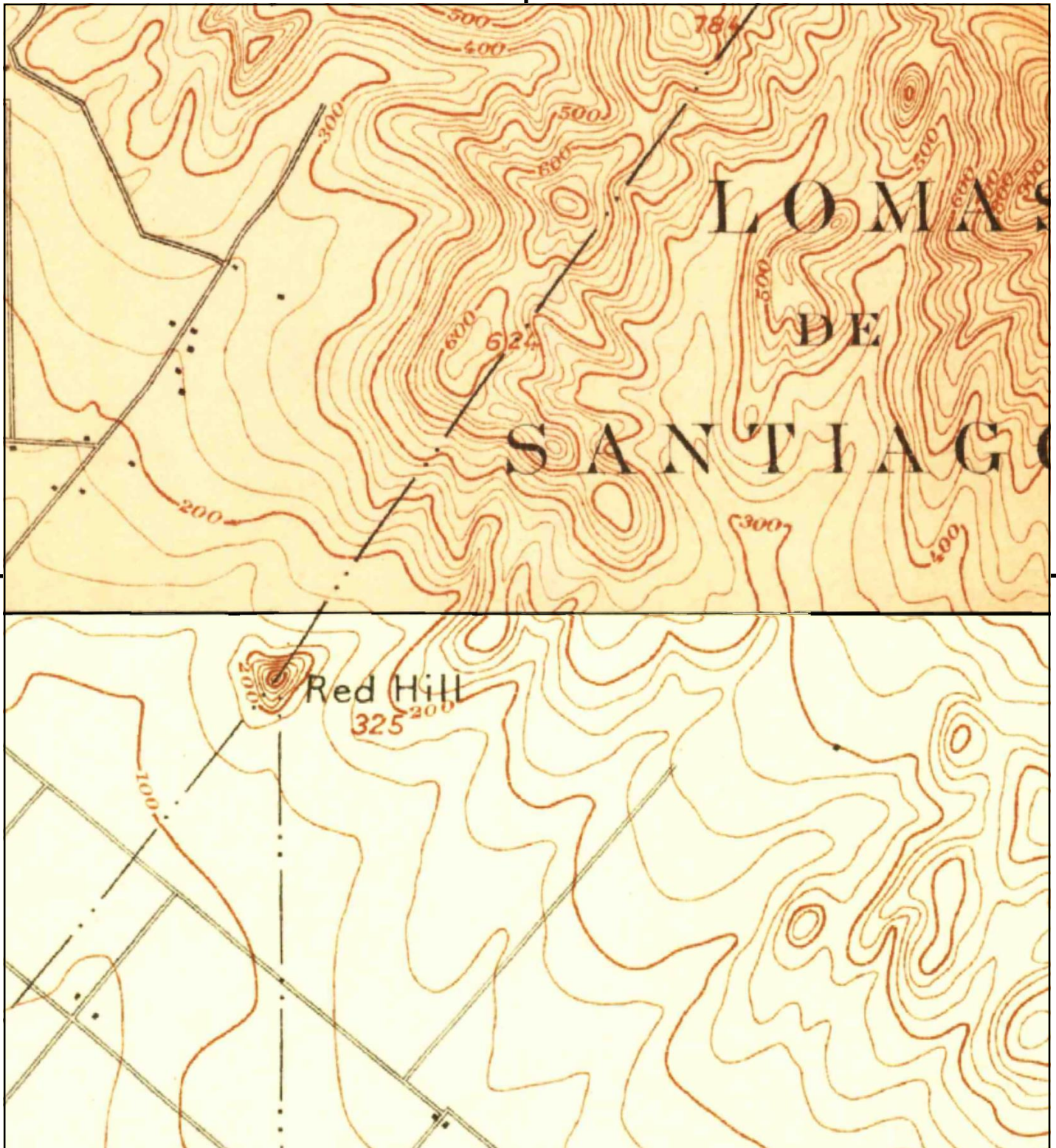
This report includes information from the following map sheet(s).



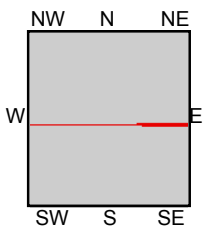
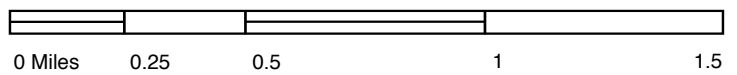
TP, Corona, 1902, 30-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





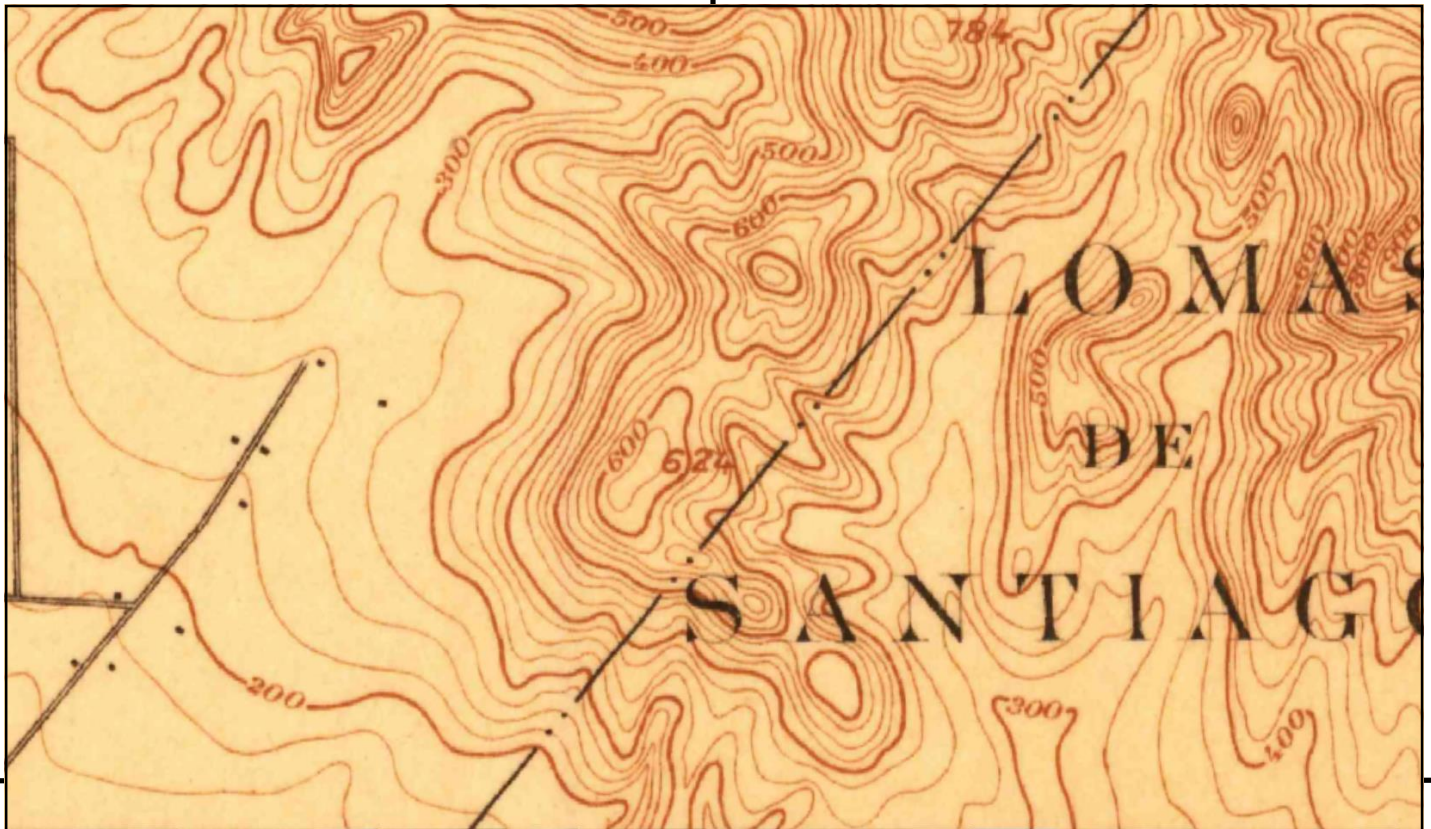
This report includes information from the following map sheet(s).



TP, Anaheim, 1901, 15-minute
SW, Santa Ana, 1901, 15-minute

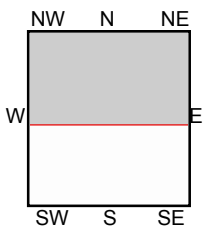
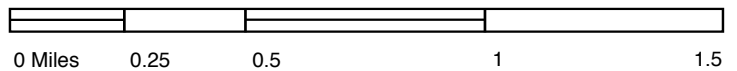
SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED
UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED
UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED
UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED
UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED
UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED	UNMAPPED

This report includes information from the following map sheet(s).



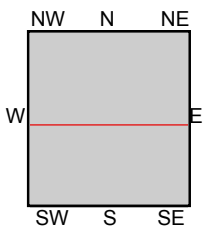
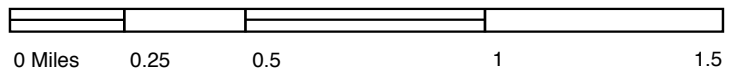
TP, Anaheim, 1898, 15-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env





This report includes information from the following map sheet(s).



TP, Anaheim, 1896, 15-minute
SW, Santa Ana, 1896, 15-minute

SITE NAME: Tustin Hills Racquet Club Phase I
ADDRESS: 11782 Simon Ranch Road
Santa Ana, CA 92705
CLIENT: Geocon Geotechnical & Env



APPENDIX



Tustin Hills Racquet Club Phase I

11782 Simon Ranch Road
Santa Ana, CA 92705

Inquiry Number: 4866681.5
March 01, 2017

The EDR-City Directory Abstract

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Executive Summary

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Thank you for your business.

Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1920 through 2013. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
2013	Cole Information Services	-	X	X	-
	Cole Information Services	X	X	X	-
2008	Cole Information Services	-	X	X	-
	Cole Information Services	X	X	X	-
2003	Cole Information Services	-	X	X	-
	Cole Information Services	X	X	X	-
2002	Haines Company	X	X	X	-
2001	Pacific Telephone	-	-	-	-
1997	Pacific Bell	-	-	-	-
1995	Pacific Bell	X	X	X	-
1992	Pacific Bell	-	-	-	-
1991	Pacific Bell	X	X	X	-
1986	Pacific Bell	X	X	X	-
1980	Pacific Telephone	-	X	X	-
1975	Luskey Brothers & Co., Inc.	X	X	X	-
1971	Luskey Brothers Co., Inc.	-	-	-	-
1970	General Telephone Co., of California	X	X	X	-
1966	Pacific Telephone	X	X	X	-
1965	Ross Publications, Inc.,	-	-	-	-
1961	Luskey Brothers & Co.,	-	-	-	-
1960	Unknown	-	-	-	-
1956	The Pacific Telephone and Telegraph Co.	-	-	-	-
1955	The Pacific Telephone and Telegraph Co.	-	-	-	-
1952	Luskeys Directory Service Co.	-	-	-	-
1950	West Directory Co.	-	-	-	-

EXECUTIVE SUMMARY

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
1946	Southern California Telephone Co.	-	-	-	-
1945	Western Directory Co.	-	-	-	-
1941	Southern California Telephone Co.	-	-	-	-
1936	Western Directory Co.	-	-	-	-
1930	Western Directory Co.	-	-	-	-
1926	Pacific Telephone	-	-	-	-
1925	Western Directory Co.	-	-	-	-
1922	Kaasen Directory Co.	-	-	-	-
1921	Western Directory Co.	-	-	-	-
1920	Santa Ana Directory Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

11782 Simon Ranch Road
Santa Ana, CA 92705

FINDINGS DETAIL

Target Property research detail.

SIMON RANCH RD

11782 SIMON RANCH RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2013	TUSTIN HILLS RACQUET CLUB	Cole Information Services
2008	TUSTIN HILLS RACQUET CLUB LP	Cole Information Services
2003	NOVA SWIM SCHOOL	Cole Information Services
	TUSTIN HILLS RACQUET CLUB	Cole Information Services
2002	FRENCHJohn	Haines Company
	RACQUETCLUB	Haines Company
	TUSTIN HILLS	Haines Company
1995	French John	Pacific Bell
1991	French John	Pacific Bell
	Tustin Hills Racquet Club	Pacific Bell
1986	French John	Pacific Bell
1975	TUSTIN HILLS RACQUET CLUB	Luskey Brothers & Co., Inc.
1970	Macro Systems Associates	General Telephone Co., of California
	San Mai ino Caterers	General Telephone Co., of California
1966	BROWNE STEWART C tennis pro	Pacific Telephone
	Ofc	Pacific Telephone
	Red Hill Tennis Club	Pacific Telephone
	Tennis Shop	Pacific Telephone

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

BORUM AVE

11912 BORUM AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	NGUYENDrep	Haines Company

11915 BORUM AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	LAMV 5h	Haines Company

LIANE LN

2141 LIANE LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	AMIRVANDNader	Haines Company

2142 LIANE LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2008	GOOD LAND INVESTMENT 2 A	Cole Information Services
	ATIA CO	Cole Information Services
2002	TINGOarwin	Haines Company
1975	Mitchell Doretha	Luskey Brothers & Co., Inc.

2152 LIANE LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	ENGLISHWIIIam	Haines Company
	WATSON Steve	Haines Company
	WATSON Steve	Haines Company
1995	Watson Steve	Pacific Bell
1991	Watson Steve	Pacific Bell
1966	Walker Robt	Pacific Telephone

2161 LIANE LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	OWEYMOUTHKay	Haines Company
	OWEYMOUTHJim	Haines Company
1995	Weymouth Jim & Key	Pacific Bell

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Anderson James H & Zelma	Pacific Bell
1975	Anderson Jas H	Luskey Brothers & Co., Inc.
1970	Davidson Donald B	General Telephone Co., of California

2172 LIANE LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2013	SHANNON REX B INSURANCE	Cole Information Services
2002	SHANNONRea B	Haines Company
1995	Shannon Rex B	Pacific Bell
1980	Bernhardt Patrick	Pacific Telephone
	Bernhardt Patrick	Pacific Telephone
1975	Shannon Rex B	Luskey Brothers & Co., Inc.
1970	Shannon Rex B	General Telephone Co., of California

2181 LIANE LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2008	GREGORY S TELSON DDS	Cole Information Services
2002	TELSON Gregory	Haines Company
1991	Triplett Deslyn	Pacific Bell
1975	Triplett Deslyn	Luskey Brothers & Co., Inc.
1970	Triplett Deslyn	General Telephone Co., of California

2192 LIANE LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	ABEDOR David	Haines Company
1966	Rowe Donald E	Pacific Telephone
	Robison Kathleen	Pacific Telephone
	Robison Gerald M	Pacific Telephone

OUTLOOK LN

11751 OUTLOOK LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	GREEN Nancy C	Haines Company
	GREENJohn L	Haines Company
1995	Green Nancy C	Pacific Bell
1991	Green John L	Pacific Bell
	Green Nancy C	Pacific Bell
1986	Green John L	Pacific Bell
1980	Green John L	Pacific Telephone

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	Green John L	Luskey Brothers & Co., Inc.

11752 OUTLOOK LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	KANNOJim	Haines Company
	KANNOJim	Haines Company
1995	Kanno Jim rl est brkr	Pacific Bell
	Kanno Jim	Pacific Bell
1991	Kanno Jim rl est brkr	Pacific Bell
	Kanno Jim	Pacific Bell
1986	Kanno Jim rl est brkr	Pacific Bell
	Kanno Jim	Pacific Bell
1975	Kanno Jim	Luskey Brothers & Co., Inc.
1970	Kanno Jim	General Telephone Co., of California

11781 OUTLOOK LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	SGAGLIOThomas	Haines Company
1995	Lu T Y	Pacific Bell
1991	Lu T Y	Pacific Bell
1980	Harper David	Pacific Telephone
1975	Jesman Milton L	Luskey Brothers & Co., Inc.

11782 OUTLOOK LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	SMITHGeorge	Haines Company
1986	Smith Geo W	Pacific Bell
1980	Smith Geo W	Pacific Telephone
1975	Smith Christine	Luskey Brothers & Co., Inc.
	Smith Geo W	Luskey Brothers & Co., Inc.
	Smith Robt Michael	Luskey Brothers & Co., Inc.
1970	Smith Christine	General Telephone Co., of California
	Smith Geo W	General Telephone Co., of California
	Smith Robt Michael	General Telephone Co., of California
1966	Smith Geo W	Pacific Telephone

11882 OUTLOOK LN

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	SBEAUVAISEarl	Haines Company
	BEAUVAI SEarl	Haines Company

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	BEAUVAISSozanne	Haines Company
	BEAUVAISSozanne	Haines Company
1995	Weaver Michael & Marlan	Pacific Bell
1991	Weaver Michael&Man an	Pacific Bell
	Weaver Michele A	Pacific Bell
1980	Karamardian Stephan	Pacific Telephone
	Rugs Intemational	Pacific Telephone
1975	Karamardian Stephan	Luskey Brothers & Co., Inc.
	Karamardian Stephan	Luskey Brothers & Co., Inc.

PAVILLION DR

2171 PAVILLION DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Klingensmith C H	Pacific Telephone

2202 PAVILLION DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	KENTRUPGall	Haines Company
1986	Snyder Bryan E	Pacific Bell
1966	Clark Geo D	Pacific Telephone

2211 PAVILLION DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	BRADSHAWAsh Se	Haines Company
1975	Crosby Sharon	Luskey Brothers & Co., Inc.

2222 PAVILLION DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	OMURET Richard	Haines Company
1991	Muret Richard N	Pacific Bell
1986	Muret Richard N	Pacific Bell
1980	Muret Richard N	Pacific Telephone
1975	Muret Richard N	Luskey Brothers & Co., Inc.
1970	Muret Richard N	General Telephone Co., of California

FINDINGS

SALT AIR CIR

2032 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	KATZAdam	Haines Company
	KATZJoshua	Haines Company
	KATZ Norman	Haines Company
	KATZNorman	Haines Company
1995	Katz Adam & Joshua	Pacific Bell
	Katz Norman & Pepita	Pacific Bell
1991	Katz Norman &Pepita	Pacific Bell

2051 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	Blatchford WL	Pacific Bell
1991	Blatchford W L	Pacific Bell
1980	Kiaune Kazimieras	Pacific Telephone
1975	Kiaune Kazimieras	Luskey Brothers & Co., Inc.

2062 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	W inokur H L	Pacific Telephone
	Winokur Arnold	Pacific Telephone

2072 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	FLORMAN Martin	Haines Company
1975	Del Bunch Corp	Luskey Brothers & Co., Inc.
	Bunch Del Jr	Luskey Brothers & Co., Inc.
	Bunch Del Corp	Luskey Brothers & Co., Inc.

2091 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	Niu Shi Un	Pacific Bell
1991	Niu William	Pacific Bell
	Niu Gary Shi Ln	Pacific Bell

2092 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	WALDMAN Michael	Haines Company
1995	Mackiddn JWLt Col USMC	Pacific Bell

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Mackin J W Lt Col USMC	Pacific Bell
1986	Mackn J W Lt Col US MC	Pacific Bell
1980	Mackin J W Lt Col US MC	Pacific Telephone
1975	Mackin J W Lt Col USMC	Luskey Brothers & Co., Inc.

2101 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	RENZI Michael	Haines Company

2111 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	SCHULTZEula	Haines Company

2112 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	NIVENLouos	Haines Company

2131 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	TORNAYPe ler	Haines Company

2132 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	ENDRESRob SF	Haines Company
1995	Endres Robt F	Pacific Bell
	Sanford Rose Associates Santa ANAHEIM	Pacific Bell
1991	Endres Robt F	Pacific Bell
1986	Endres Robt F	Pacific Bell
1980	Endres Robt F	Pacific Telephone
1975	Endres Robt F	Luskey Brothers & Co., Inc.
1970	BWen Jas D	General Telephone Co., of California
	Bowes Iresn	General Telephone Co., of California

2142 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	STARKJames	Haines Company
1986	Staniforth Alan	Pacific Bell

FINDINGS

2151 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	MOTZKUS Paul F	Haines Company
	MYERS Mar Ilyn	Haines Company
1995	Motzkus Paul F	Pacific Bell
1991	Motzkus Paul F	Pacific Bell
1986	Motzkus Paul F	Pacific Bell
1980	Motzkus Paul F	Pacific Telephone
	Motzkus Richard Jr	Pacific Telephone
1975	St Charles Dale	Luskey Brothers & Co., Inc.

2152 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	LKANEDavid	Haines Company
1975	Gayer Claude E	Luskey Brothers & Co., Inc.
1970	Dussault John	General Telephone Co., of California

2161 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	RUEHLTG	Haines Company
1995	Ruehl T G	Pacific Bell
1991	Ruehl T G	Pacific Bell
1986	Ruehl T G	Pacific Bell
1980	Ruehi T G	Pacific Telephone
1975	Ruehl T G	Luskey Brothers & Co., Inc.

2172 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	LAJSZOi Ph Slp	Haines Company

2181 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	OPAUDewi I	Haines Company
1995	Paul De Witt	Pacific Bell
1991	Paul De Witt	Pacific Bell
1986	Paul De Witt	Pacific Bell

2182 SALT AIR CIR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	ZOBEL Gilber L	Haines Company
1986	Nelson Shirley G	Pacific Bell

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Nelson R Battle	Pacific Bell
1980	Nelson R Battle	Pacific Telephone
	Nelson RC	Pacific Telephone
1975	Nelson R Battle	Luskey Brothers & Co., Inc.

SALT AIR DR

2052 SALT AIR DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2008	ENVIRONMENTAL DESIGN	Cole Information Services
2003	ENVIRONMENTAL DESIGN	Cole Information Services
1966	Brenneman R J	Pacific Telephone

2072 SALT AIR DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2008	RAA CAPITAL LLC	Cole Information Services
1966	Bunch Del Jr	Pacific Telephone

2091 SALT AIR DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2008	INTERGRATED ENGINEERING MANAGEMENT	Cole Information Services

2111 SALT AIR DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1966	Schultz Cleve	Pacific Telephone

2132 SALT AIR DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1966	Ruby H W	Pacific Telephone

2152 SALT AIR DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2008	PAGE GROUP	Cole Information Services
1966	Barletta Nicholas P	Pacific Telephone

2182 SALT AIR DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1966	Mc Cutchen John H	Pacific Telephone

FINDINGS

SIMON RANCH RD

11851 SIMON RANCH RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	CHOWSusan	Haines Company
	TESMERDanusz	Haines Company
1975	Weinberg Martin B	Luskey Brothers & Co., Inc.
	Weinberg Elaine Joseph	Luskey Brothers & Co., Inc.
1970	Weinberg Martin B	General Telephone Co., of California
1966	Weinberg Martin B	Pacific Telephone

11861 SIMON RANCH RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	SSIEMERSLarry D	Haines Company
1995	Siemers Larry D	Pacific Bell
1991	Siemers Larry D	Pacific Bell
1986	Siemers Larry D	Pacific Bell
1980	Lafferty Ralph F	Pacific Telephone
1975	Writer Carl P	Luskey Brothers & Co., Inc.
1970	Writer Carl P	General Telephone Co., of California
1966	Writer Carl P	Pacific Telephone

11862 SIMON RANCH RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	WEAVERTheodore	Haines Company
	OLBRICHTTh Omas	Haines Company
1991	Weaver Theodore	Pacific Bell
1980	Wtaver paw	Pacific Telephone

11871 SIMON RANCH RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	TOLLTheresa	Haines Company

11872 SIMON RANCH RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	HOSKINSCortez W	Haines Company
1995	Hoskins Cortez W	Pacific Bell
1991	Hoskins Cortez W	Pacific Bell
1986	Askin Allyson	Pacific Bell
	Gold Roy E	Pacific Bell
1980	Gold Roy E	Pacific Telephone

FINDINGS

11881 SIMON RANCH RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	NELSONGarry	Haines Company
1986	Markle David H DDS	Pacific Bell
	Nelson Garry & Tonm	Pacific Bell
1980	Markle David H DDS	Pacific Telephone
1975	Larsen Kent P	Luskey Brothers & Co., Inc.
1970	Stocker Lloyd H	General Telephone Co., of California

11882 SIMON RANCH RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2003	WILLIAM H WINTER PHD INC	Cole Information Services
2002	WINTERH	Haines Company
1970	Stutt Leslie	General Telephone Co., of California
1966	Clements David W	Pacific Telephone

VALHALLA DR

2022 VALHALLA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	Felman Richard	General Telephone Co., of California
1966	Felman Richard	Pacific Telephone

2031 VALHALLA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Bell John M	Pacific Bell
1986	Bell John M	Pacific Bell
1980	Bell John M	Pacific Telephone
1975	Bell John M	Luskey Brothers & Co., Inc.
1970	Moran Michael	General Telephone Co., of California

2121 VALHALLA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2008	ARTFUL DOG	Cole Information Services
1991	Morcos Anton F	Pacific Bell
	Morcos Tony F	Pacific Bell
1986	Morcos Anton F	Pacific Bell
	Morcos Tony F	Pacific Bell
1980	Morcos Tony F	Pacific Telephone
	Morcos Anton F	Pacific Telephone
1975	Morcos Anton F	Luskey Brothers & Co., Inc.

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	Morcos Tony F	Luskey Brothers & Co., Inc.

WILLARD AVE

2300 WILLARD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	SULLIVANTimo lhy	Haines Company

2308 WILLARD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	FRANKOErn	Haines Company

2316 WILLARD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	JOOMyong	Haines Company

2364 WILLARD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2002	0 YUYung	Haines Company

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched

11782 Simon Ranch Road

Address Not Identified in Research Source

2001, 1997, 1992, 1980, 1971, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched

11751 OUTLOOK LN

Address Not Identified in Research Source

2013, 2008, 2003, 2001, 1997, 1992, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11752 OUTLOOK LN

2013, 2008, 2003, 2001, 1997, 1992, 1980, 1971, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11781 OUTLOOK LN

2013, 2008, 2003, 2001, 1997, 1992, 1986, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11782 OUTLOOK LN

2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1971, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11851 SIMON RANCH RD

2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1971, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11861 SIMON RANCH RD

2013, 2008, 2003, 2001, 1997, 1992, 1971, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11862 SIMON RANCH RD

2013, 2008, 2003, 2001, 1997, 1995, 1992, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11871 SIMON RANCH RD

2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11872 SIMON RANCH RD

2013, 2008, 2003, 2001, 1997, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11881 SIMON RANCH RD

2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1971, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11882 OUTLOOK LN

2013, 2008, 2003, 2001, 1997, 1992, 1986, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11882 SIMON RANCH RD

2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

11882 SIMON RANCH RD

2013, 2008, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

FINDINGS

Address Researched

Address Not Identified in Research Source

2171 PAVILLION DR	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2172 LIANE LN	2013, 2008, 2003, 2001, 1997, 1992, 1991, 1986, 1971, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2172 LIANE LN	2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2172 SALT AIR CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2181 LIANE LN	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1986, 1980, 1971, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2181 LIANE LN	2013, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2181 SALT AIR CIR	2013, 2008, 2003, 2001, 1997, 1992, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2182 SALT AIR CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2182 SALT AIR DR	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2192 LIANE LN	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2202 PAVILLION DR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1980, 1975, 1971, 1970, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2211 PAVILLION DR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2222 PAVILLION DR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1971, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2300 WILLARD AVE	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2308 WILLARD AVE	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2316 WILLARD AVE	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
2364 WILLARD AVE	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

Appendix I

EDR Radius Map Report

Tustin Hills Single Family Residential Development

11782 Simon Ranch Road
SANTA ANA, CA 92705

Inquiry Number: 5100798.2s
November 07, 2017

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
 Please contact EDR at 1-800-352-0050
 with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

11782 SIMON RANCH ROAD
SANTA ANA, CA 92705

COORDINATES

Latitude (North): 33.7515570 - 33° 45' 5.60"
Longitude (West): 117.7815430 - 117° 46' 53.55"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 427614.3
UTM Y (Meters): 3734690.2
Elevation: 256 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5641308 ORANGE, CA
Version Date: 2012

South Map: 5640942 TUSTIN, CA
Version Date: 2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20140514, 20140515
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:
 11782 SIMON RANCH ROAD
 SANTA ANA, CA 92705

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	RED HILL MINE	BETWEEN RANCHVIEW DR	RESPONSE, ENVIROSTOR	Higher	3152, 0.597, WSW
A2	CAMP COMMANDER		FUDS	Higher	4893, 0.927, NE
A3	CAMP COMMANDER	LOWER PETERS CANYON	ENVIROSTOR	Higher	4899, 0.928, NE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing
SEMS..... Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System
US ENG CONTROLS..... Engineering Controls Sites List

EXECUTIVE SUMMARY

US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

SLIC..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing

UST..... Active UST Facilities

AST..... Aboveground Petroleum Storage Tank Facilities

INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database

SWRCY..... Recycler Database

HAULERS..... Registered Waste Tire Haulers Listing

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

ODI..... Open Dump Inventory

IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register

HIST Cal-Sites..... Historical Calsites Database

SCH..... School Property Evaluation Program

CDL..... Clandestine Drug Labs

EXECUTIVE SUMMARY

Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing
HIST UST..... Hazardous Substance Storage Container Database
CA FID UST..... Facility Inventory Database

Local Land Records

LIENS..... Environmental Liens Listing
LIENS 2..... CERCLA Lien Information
DEED..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
CHMIRS..... California Hazardous Material Incident Report System
LDS..... Land Disposal Sites Listing
MCS..... Military Cleanup Sites Listing
Orange Co. Industrial Site..... List of Industrial Site Cleanups
SPILLS 90..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated
DOD..... Department of Defense Sites
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR..... Financial Assurance Information
EPA WATCH LIST..... EPA WATCH LIST
2020 COR ACTION..... 2020 Corrective Action Program List
TSCA..... Toxic Substances Control Act
TRIS..... Toxic Chemical Release Inventory System
SSTS..... Section 7 Tracking Systems
ROD..... Records Of Decision
RMP..... Risk Management Plans
RAATS..... RCRA Administrative Action Tracking System
PRP..... Potentially Responsible Parties
PADS..... PCB Activity Database System
ICIS..... Integrated Compliance Information System
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS..... Material Licensing Tracking System
COAL ASH DOE..... Steam-Electric Plant Operation Data
COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER..... PCB Transformer Registration Database
RADINFO..... Radiation Information Database
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS..... Incident and Accident Data
CONSENT..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV..... Indian Reservations
FUSRAP..... Formerly Utilized Sites Remedial Action Program
UMTRA..... Uranium Mill Tailings Sites
LEAD SMELTERS..... Lead Smelter Sites

EXECUTIVE SUMMARY

US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
US MINES.....	Mines Master Index File
ABANDONED MINES.....	Abandoned Mines
FINDS.....	Facility Index System/Facility Registry System
UXO.....	Unexploded Ordnance Sites
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
ECHO.....	Enforcement & Compliance History Information
FUELS PROGRAM.....	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN.....	Bond Expenditure Plan
Cortese.....	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings.....	CUPA Resources List
DRYCLEANERS.....	Cleaner Facilities
EML.....	Emissions Inventory Data
ENF.....	Enforcement Action Listing
Financial Assurance.....	Financial Assurance Information Listing
HAZNET.....	Facility and Manifest Data
ICE.....	ICE
HIST CORTESE.....	Hazardous Waste & Substance Site List
HWP.....	EnviroStor Permitted Facilities Listing
HWT.....	Registered Hazardous Waste Transporter Database
MINES.....	Mines Site Location Listing
MWMP.....	Medical Waste Management Program Listing
NPDES.....	NPDES Permits Listing
PEST LIC.....	Pesticide Regulation Licenses Listing
PROC.....	Certified Processors Database
Notify 65.....	Proposition 65 Records
UIC.....	UIC Listing
WASTEWATER PITS.....	Oil Wastewater Pits Listing
WDS.....	Waste Discharge System
WIP.....	Well Investigation Program Case List

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto.....	EDR Exclusive Historic Auto Stations
EDR Hist Cleaner.....	EDR Exclusive Historic Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF.....	Recovered Government Archive Solid Waste Facilities List
RGA LUST.....	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent NPL

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, has revealed that there is 1 RESPONSE site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
RED HILL MINE Database: RESPONSE, Date of Government Version: 07/31/2017 Status: No Further Action Facility Id: 60001226	BETWEEN RANCHVIEW DR	WSW 1/2 - 1 (0.597 mi.)	1	8

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 07/31/2017 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
RED HILL MINE Facility Id: 60001226 Status: No Further Action	BETWEEN RANCHVIEW DR	WSW 1/2 - 1 (0.597 mi.)	1	8
CAMP COMMANDER Facility Id: 80001098 Status: Inactive - Action Required	LOWER PETERS CANYON	NE 1/2 - 1 (0.928 mi.)	A3	11

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/31/2015 has revealed that there is 1 FUDS

EXECUTIVE SUMMARY

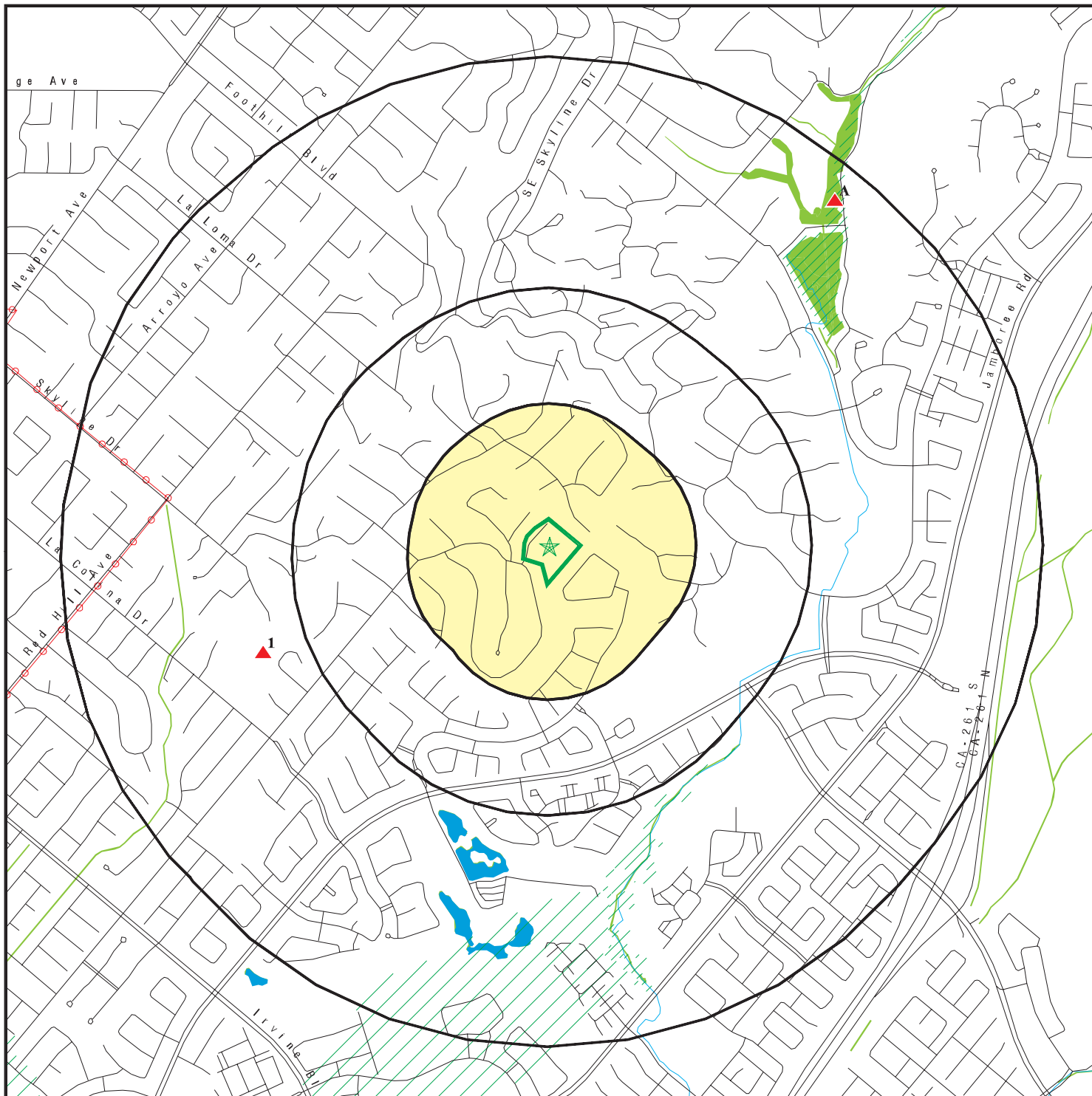
site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CAMP COMMANDER		NE 1/2 - 1 (0.927 mi.)	A2	10


EXECUTIVE SUMMARY


There were no unmapped sites in this report.

OVERVIEW MAP - 5100798.2S



 Target Property

 Sites at elevations higher than or equal to the target property

 Sites at elevations lower than the target property

 Manufactured Gas Plants

 National Priority List Sites

 Dept. Defense Sites

 Indian Reservations BIA

 Power transmission lines


 100-year flood zone

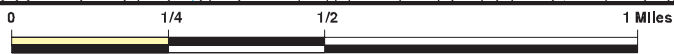
 500-year flood zone

 National Wetland Inventory

 State Wetlands

 Upgradient Area

 Areas of Concern

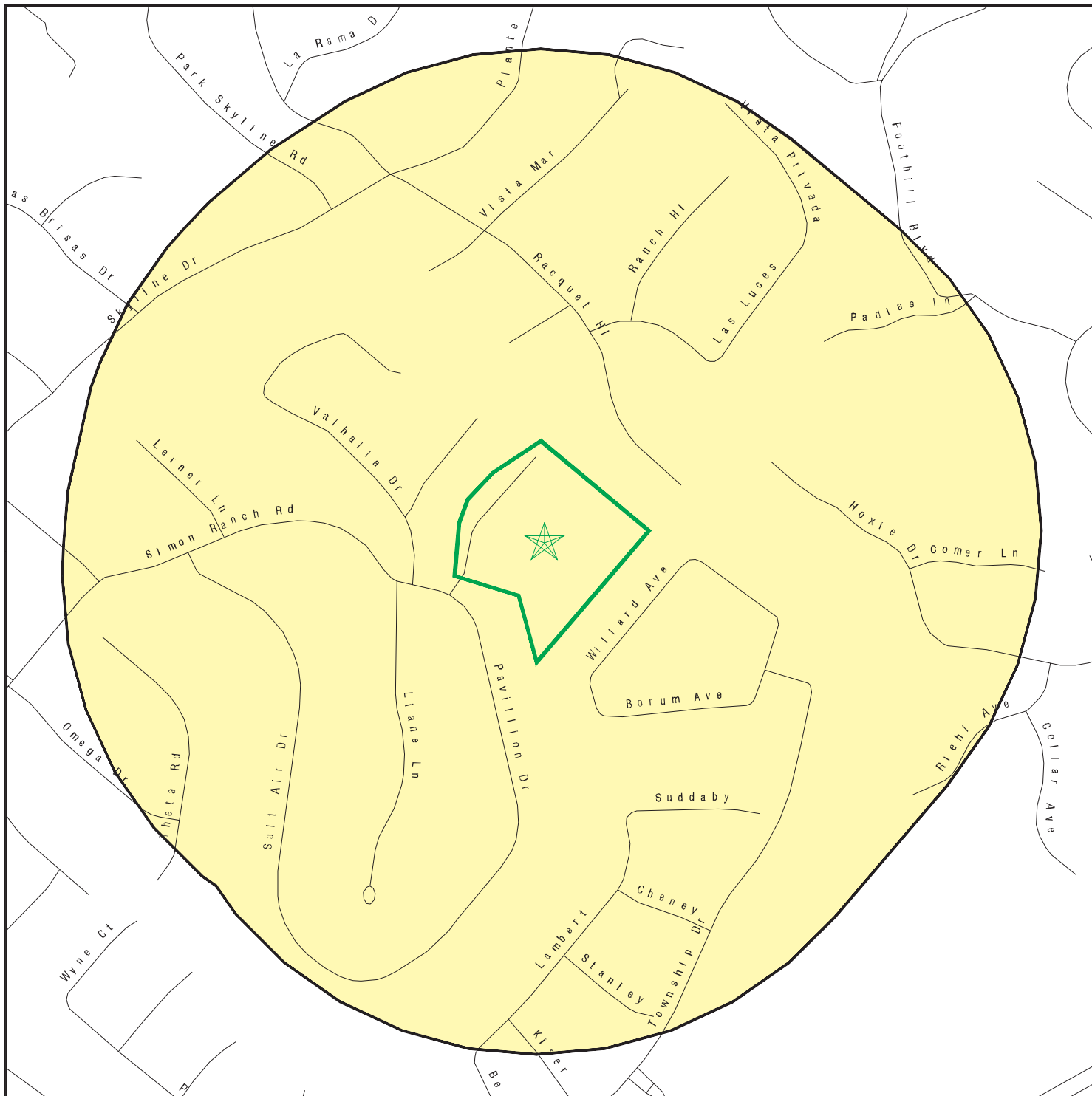







This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.





SITE NAME: Tustin Hills Single Family Residential Development
 ADDRESS: 11782 Simon Ranch Road
 SANTA ANA CA 92705
 LAT/LONG: 33.751557 / 117.781543

CLIENT: Psomas
 CONTACT: Agnieszka Napiatek
 INQUIRY #: 5100798.2s
 DATE: November 07, 2017 7:36 pm

DETAIL MAP - 5100798.2S



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  Sensitive Receptors
-  National Priority List Sites
-  Dept. Defense Sites

-  Indian Reservations BIA
-  100-year flood zone
-  500-year flood zone
-  Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Tustin Hills Single Family Residential Development
 ADDRESS: 11782 Simon Ranch Road
 SANTA ANA CA 92705
 LAT/LONG: 33.751557 / 117.781543

CLIENT: Psomas
 CONTACT: Agnieszka Napiatek
 INQUIRY #: 5100798.2s
 DATE: November 07, 2017 7:37 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	0.001		0	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL</i>								
RESPONSE	1.000		0	0	0	1	NR	1
<i>State- and tribal - equivalent CERCLIS</i>								
ENVIROSTOR	1.000		0	0	0	2	NR	2
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SLIC	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal voluntary cleanup sites</i>								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
<i>State and tribal Brownfields sites</i>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
<i>Local Lists of Registered Storage Tanks</i>								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
<i>Local Land Records</i>								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
<i>Records of Emergency Release Reports</i>								
HMIRS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
Orange Co. Industrial Site	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	1	NR	1
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0

- Totals --		0	0	0	0	4	0	4
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NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

1
WSW
1/2-1
0.597 mi.
3152 ft.

RED HILL MINE
BETWEEN RANCHVIEW DRIVE & MCLEAN DR
TUSTIN, CA 92780

RESPONSE S110121727
ENVIROSTOR N/A

Relative:
Higher

RESPONSE:

Actual:
272 ft.

Facility ID: 60001226
Site Type: State Response
Site Type Detail: State Response or NPL
Acres: 0
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Not reported
Supervisor: Manny Alonzo
Division Branch: Cleanup Cypress
Site Code: 401515
Site Mgmt. Req.: NONE SPECIFIED
Assembly: 68
Senate: 37
Special Program Status: EPA - PASI
Status: No Further Action
Status Date: 08/08/2016
Restricted Use: NO
Funding: EPA Grant
Latitude: 33.74735
Longitude: -117.7929
APN: NONE SPECIFIED
Past Use: MINE
Potential COC : Arsenic Mercury (elemental)
Confirmed COC: Arsenic Mercury (elemental)
Potential Description: NONE SPECIFIED
Alias Name: 401515
Alias Type: Project Code (Site Code)
Alias Name: 60001226
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/26/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: PA/SI Site Screening
Completed Date: 01/10/2011
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RED HILL MINE (Continued)

S110121727

ENVIROSTOR:

Facility ID: 60001226
Status: No Further Action
Status Date: 08/08/2016
Site Code: 401515
Site Type: State Response
Site Type Detailed: State Response or NPL
Acres: 0
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Manny Alonzo
Division Branch: Cleanup Cypress
Assembly: 68
Senate: 37
Special Program: EPA - PASI
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: EPA Grant
Latitude: 33.74735
Longitude: -117.7929
APN: NONE SPECIFIED
Past Use: MINE
Potential COC: Arsenic Mercury (elemental)
Confirmed COC: Arsenic Mercury (elemental)
Potential Description: NONE SPECIFIED
Alias Name: 401515
Alias Type: Project Code (Site Code)
Alias Name: 60001226
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/26/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: PA/SI Site Screening
Completed Date: 01/10/2011
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

A2
NE
1/2-1
0.927 mi.
4893 ft.

CAMP COMMANDER
TUSTIN, CA
Site 1 of 2 in cluster A

FUDS 1011813671
N/A

Relative:
Higher

FUDS:

Actual:
322 ft.

EPA Region: 09
Congressional District: 45
FUDS Number: J09CA7347
State: CA
Facility Name: CAMP COMMANDER
Fiscal Year: 2013
City: TUSTIN
Federal Facility ID: CA9799FA375
Telephone: 213-452-3920
INST ID: 63083
County: ORANGE
RAB: Not reported
****CORPS_DIST**:** Los Angeles District (SPL)
NPL Status: Not Listed
CTC: 9.5
Current Owner: Local Government
Future Prog: Not reported
Description: The U.S. Army leased land from private owner before or during 1944 for establishment of the area known as Camp Commander near Little Peters Lake, California. The number of acres leased is unknown. Real estate records were neither specific, nor complete. The site of the former Camp Commander is adjacent to Little Peters Lake, now known as Lower Peters Canyon Retarding Basin, in Peters Canyon Regional Park, Orange County, California. It is located at the eastern boundary of the City of Tustin. The Army disposed of the site before or during 1946. The land was returned to private ownership. Records were neither complete, nor specific. The site is currently owned by Orange County, and, as part of Peters Canyon Regional Park, is used by the public for recreation. The site is part of a recreational area, Peters Canyon Regional Park, used by the general public. The land surrounding the park is either highly developed as a residential area or is undergoing development as a residential area. The Army did not erect permanent structures at the site, which today is without evidence of an Army camp. This property is known or suspected to contain military munitions and explosives of concern (e.g., unexploded ordnance) and therefore may present an explosive hazard.

Current Program:

History:

Not reported
The Army acquired the site, estimated as 10 acres, before or during 1944. A tent camp was established on the eastern shore of Little Peters Lake, in a eucalyptus grove. The Army used the camp to train infantry troops in field exercises. Mock battles were staged with Camp Rathke, another Army post 2 miles north. The Army left Camp Commander before or during 1946, when it also left Camp Rathke. The site was returned to private ownership. In 1952 it was renamed Camp Myford. The Boy Scouts of America starting using the site in 1957, and it was used as a youth site until 1986. In 1992, the Irvine Company donated 354 acres of Peters Canyon, including the site, to the County of Orange. The County created Peters Canyon Regional Park for public recreation.

Latitude Degree: 33
Latitude Minute: 46
Latitude Second: 38
Latitude Direction: N

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

CAMP COMMANDER (Continued)

1011813671

Longitude Degree: -117
 Longitude Minute: 46
 Longitude Second: 8
 Longitude Direction: E

**A3
 NE
 1/2-1
 0.928 mi.
 4899 ft.**

**CAMP COMMANDER
 LOWER PETERS CANYON RETARDING BASIN
 ORANGE, CA 92869**

**ENVIROSTOR S118757500
 N/A**

Site 2 of 2 in cluster A

**Relative:
 Higher**

ENVIROSTOR:
 Facility ID: 80001098
 Status: Inactive - Action Required
 Status Date: 09/15/2016
 Site Code: Not reported
 Site Type: Military Evaluation
 Site Type Detailed: FUDS
 Acres: 10
 NPL: NO
 Regulatory Agencies: SMBRP
 Lead Agency: SMBRP
 Program Manager: Not reported
 Supervisor: Noel Shrum
 Division Branch: Cleanup Sacramento
 Assembly: 68
 Senate: 37
 Special Program: Not reported
 Restricted Use: NO
 Site Mgmt Req: NONE SPECIFIED
 Funding: DERA
 Latitude: 33.7625
 Longitude: -117.7708
 APN: NONE SPECIFIED
 Past Use: NONE SPECIFIED
 Potential COC: Explosives (UXO, MEC)
 Confirmed COC: NONE SPECIFIED
 Potential Description: NONE SPECIFIED
 Alias Name: CA99799FA37500
 Alias Type: Federal Facility ID
 Alias Name: J09CA7347
 Alias Type: INPR
 Alias Name: 80001098
 Alias Type: Envirostor ID Number

**Actual:
 322 ft.**

Completed Info:

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Inventory Project Report (INPR)
 Completed Date: 09/28/1999
 Comments: Not reported

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Site Screening
 Completed Date: 11/03/2015
 Comments: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CAMP COMMANDER (Continued)

S118757500

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Count: 0 records.

ORPHAN SUMMARY

<u>City</u>	<u>EDR ID</u>	<u>Site Name</u>	<u>Site Address</u>	<u>Zip</u>	<u>Database(s)</u>
NO SITES FOUND					

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/30/2017	Source: EPA
Date Data Arrived at EDR: 06/08/2017	Telephone: N/A
Date Made Active in Reports: 09/15/2017	Last EDR Contact: 11/03/2017
Number of Days to Update: 99	Next Scheduled EDR Contact: 01/15/2018
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/30/2017	Source: EPA
Date Data Arrived at EDR: 06/09/2017	Telephone: N/A
Date Made Active in Reports: 09/15/2017	Last EDR Contact: 11/03/2017
Number of Days to Update: 98	Next Scheduled EDR Contact: 01/15/2018
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 08/15/2011
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/30/2017	Source: EPA
Date Data Arrived at EDR: 06/09/2017	Telephone: N/A
Date Made Active in Reports: 09/15/2017	Last EDR Contact: 11/03/2017
Number of Days to Update: 98	Next Scheduled EDR Contact: 01/15/2018
	Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/05/2017	Telephone: 703-603-8704
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/06/2017
Number of Days to Update: 92	Next Scheduled EDR Contact: 01/15/2018
	Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/11/2017	Source: EPA
Date Data Arrived at EDR: 07/21/2017	Telephone: 800-424-9346
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 11/03/2017
Number of Days to Update: 77	Next Scheduled EDR Contact: 01/29/2018
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/11/2017	Source: EPA
Date Data Arrived at EDR: 07/28/2017	Telephone: 800-424-9346
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 11/03/2017
Number of Days to Update: 70	Next Scheduled EDR Contact: 01/29/2018
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/13/2017	Source: EPA
Date Data Arrived at EDR: 09/26/2017	Telephone: 800-424-9346
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 09/26/2017
Number of Days to Update: 10	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/13/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/26/2017	Telephone: (415) 495-8895
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 09/26/2017
Number of Days to Update: 10	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/26/2017	Telephone: (415) 495-8895
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 09/26/2017
Number of Days to Update: 10	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/13/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/26/2017	Telephone: (415) 495-8895
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 09/26/2017
Number of Days to Update: 10	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/26/2017	Telephone: (415) 495-8895
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 09/26/2017
Number of Days to Update: 10	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/22/2017	Source: Department of the Navy
Date Data Arrived at EDR: 06/13/2017	Telephone: 843-820-7326
Date Made Active in Reports: 09/15/2017	Last EDR Contact: 08/10/2017
Number of Days to Update: 94	Next Scheduled EDR Contact: 11/27/2017
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/10/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/30/2017	Telephone: 703-603-0695
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 08/30/2017
Number of Days to Update: 44	Next Scheduled EDR Contact: 12/11/2017
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/10/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/30/2017	Telephone: 703-603-0695
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 08/30/2017
Number of Days to Update: 44	Next Scheduled EDR Contact: 12/11/2017
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2017

Date Data Arrived at EDR: 09/21/2017

Date Made Active in Reports: 10/13/2017

Number of Days to Update: 22

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180

Last EDR Contact: 09/21/2017

Next Scheduled EDR Contact: 01/08/2018

Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 07/31/2017

Date Data Arrived at EDR: 08/01/2017

Date Made Active in Reports: 08/15/2017

Number of Days to Update: 14

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 10/31/2017

Next Scheduled EDR Contact: 02/12/2018

Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 07/31/2017

Date Data Arrived at EDR: 08/01/2017

Date Made Active in Reports: 08/15/2017

Number of Days to Update: 14

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 10/31/2017

Next Scheduled EDR Contact: 02/12/2018

Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/14/2017

Date Data Arrived at EDR: 08/17/2017

Date Made Active in Reports: 09/21/2017

Number of Days to Update: 35

Source: Department of Resources Recycling and Recovery

Telephone: 916-341-6320

Last EDR Contact: 08/17/2017

Next Scheduled EDR Contact: 11/27/2017

Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/12/2017	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/14/2017	Telephone: see region list
Date Made Active in Reports: 08/22/2017	Last EDR Contact: 09/12/2017
Number of Days to Update: 69	Next Scheduled EDR Contact: 12/25/2017
	Data Release Frequency: Quarterly

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/01/2017	Source: EPA Region 8
Date Data Arrived at EDR: 07/27/2017	Telephone: 303-312-6271
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/13/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/27/2017	Telephone: 415-972-3372
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016	Source: EPA Region 10
Date Data Arrived at EDR: 01/26/2017	Telephone: 206-553-2857
Date Made Active in Reports: 05/05/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 99	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/14/2017	Source: EPA Region 1
Date Data Arrived at EDR: 07/27/2017	Telephone: 617-918-1313
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 71	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/26/2017	Source: EPA, Region 5
Date Data Arrived at EDR: 07/27/2017	Telephone: 312-886-7439
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016	Source: EPA Region 4
Date Data Arrived at EDR: 01/27/2017	Telephone: 404-562-8677
Date Made Active in Reports: 05/05/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 98	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Semi-Annually

SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/12/2017	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/14/2017	Telephone: 866-480-1028
Date Made Active in Reports: 08/23/2017	Last EDR Contact: 09/12/2017
Number of Days to Update: 70	Next Scheduled EDR Contact: 12/25/2017
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 70

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/12/2016	Telephone: 916-327-5092
Date Made Active in Reports: 09/19/2016	Last EDR Contact: 09/25/2017
Number of Days to Update: 69	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/26/2017	Source: EPA Region 5
Date Data Arrived at EDR: 07/27/2017	Telephone: 312-886-6136
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 71	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2016	Source: EPA Region 4
Date Data Arrived at EDR: 01/27/2017	Telephone: 404-562-9424
Date Made Active in Reports: 05/05/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 98	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/02/2017	Source: EPA Region 7
Date Data Arrived at EDR: 07/27/2017	Telephone: 913-551-7003
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 71	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/25/2017	Source: EPA Region 10
Date Data Arrived at EDR: 07/27/2017	Telephone: 206-553-2857
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/13/2017	Source: EPA Region 9
Date Data Arrived at EDR: 07/27/2017	Telephone: 415-972-3368
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/01/2017	Source: EPA Region 8
Date Data Arrived at EDR: 07/27/2017	Telephone: 303-312-6137
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/01/2016	Source: EPA Region 6
Date Data Arrived at EDR: 01/26/2017	Telephone: 214-665-7591
Date Made Active in Reports: 05/05/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 99	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/14/2017	Source: EPA, Region 1
Date Data Arrived at EDR: 07/27/2017	Telephone: 617-918-1313
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 71	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 07/31/2017	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/01/2017	Telephone: 916-323-3400
Date Made Active in Reports: 08/15/2017	Last EDR Contact: 10/31/2017
Number of Days to Update: 14	Next Scheduled EDR Contact: 02/12/2018
	Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 09/25/2017
Number of Days to Update: 142	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfields Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 06/27/2017
Date Data Arrived at EDR: 06/28/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/19/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/20/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 9

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 05/31/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 76

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/20/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 07/13/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 30

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/31/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/13/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 30

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 80

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/26/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/05/2017	Source: DTSC and SWRCB
Date Data Arrived at EDR: 06/06/2017	Telephone: 916-323-3400
Date Made Active in Reports: 08/10/2017	Last EDR Contact: 09/06/2017
Number of Days to Update: 65	Next Scheduled EDR Contact: 12/18/2017
	Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/21/2017	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 09/21/2017	Telephone: 202-366-4555
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 09/21/2017
Number of Days to Update: 22	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 05/09/2017	Source: Office of Emergency Services
Date Data Arrived at EDR: 07/26/2017	Telephone: 916-845-8400
Date Made Active in Reports: 09/21/2017	Last EDR Contact: 10/27/2017
Number of Days to Update: 57	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/12/2017	Source: State Water Quality Control Board
Date Data Arrived at EDR: 06/14/2017	Telephone: 866-480-1028
Date Made Active in Reports: 08/18/2017	Last EDR Contact: 09/12/2017
Number of Days to Update: 65	Next Scheduled EDR Contact: 12/25/2017
	Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/12/2017	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/14/2017	Telephone: 866-480-1028
Date Made Active in Reports: 08/22/2017	Last EDR Contact: 09/12/2017
Number of Days to Update: 69	Next Scheduled EDR Contact: 12/25/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/13/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/26/2017	Telephone: (415) 495-8895
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 09/26/2017
Number of Days to Update: 10	Next Scheduled EDR Contact: 01/08/2018
	Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 07/08/2015	Telephone: 202-528-4285
Date Made Active in Reports: 10/13/2015	Last EDR Contact: 08/25/2017
Number of Days to Update: 97	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/13/2017
Number of Days to Update: 62	Next Scheduled EDR Contact: 01/22/2018
	Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005	Source: U.S. Geological Survey
Date Data Arrived at EDR: 02/06/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/11/2017
Number of Days to Update: 339	Next Scheduled EDR Contact: 01/22/2018
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 05/10/2017
Date Data Arrived at EDR: 05/17/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 121

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/23/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 8

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2017
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 10/17/2014	Telephone: 202-564-6023
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 11/03/2017
Number of Days to Update: 3	Next Scheduled EDR Contact: 11/20/2017
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017	Source: EPA
Date Data Arrived at EDR: 06/09/2017	Telephone: 202-566-0500
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/13/2017
Number of Days to Update: 126	Next Scheduled EDR Contact: 01/22/2018
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 10/11/2017
Number of Days to Update: 79	Next Scheduled EDR Contact: 01/22/2018
	Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 09/08/2016	Telephone: 301-415-7169
Date Made Active in Reports: 10/21/2016	Last EDR Contact: 10/16/2017
Number of Days to Update: 43	Next Scheduled EDR Contact: 11/20/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/03/2017
Number of Days to Update: 76	Next Scheduled EDR Contact: 12/18/2017
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2014	Telephone: N/A
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 09/08/2017
Number of Days to Update: 40	Next Scheduled EDR Contact: 12/18/2017
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/19/2011	Telephone: 202-566-0517
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 10/26/2017
Number of Days to Update: 83	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/05/2017	Telephone: 202-343-9775
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/05/2017
Number of Days to Update: 8	Next Scheduled EDR Contact: 01/15/2018
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/31/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 78

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/11/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/02/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 44

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/25/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 24

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/23/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 9

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2016
Date Data Arrived at EDR: 06/02/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 133

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 02/13/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/15/2017	Telephone: 202-564-0527
Date Made Active in Reports: 11/03/2017	Last EDR Contact: 09/21/2017
Number of Days to Update: 261	Next Scheduled EDR Contact: 12/11/2017
	Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/17/2017	Source: EPA
Date Data Arrived at EDR: 08/17/2017	Telephone: 800-385-6164
Date Made Active in Reports: 09/15/2017	Last EDR Contact: 08/17/2017
Number of Days to Update: 29	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989	Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994	Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994	Last EDR Contact: 05/31/1994
Number of Days to Update: 6	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/21/2017	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 09/21/2017	Telephone: 916-323-3400
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 09/21/2017
Number of Days to Update: 22	Next Scheduled EDR Contact: 01/01/2018
	Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/02/2017	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/08/2017	Telephone: 916-327-4498
Date Made Active in Reports: 10/16/2017	Last EDR Contact: 08/08/2017
Number of Days to Update: 69	Next Scheduled EDR Contact: 12/18/2017
	Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015	Source: California Air Resources Board
Date Data Arrived at EDR: 03/21/2017	Telephone: 916-322-2990
Date Made Active in Reports: 08/15/2017	Last EDR Contact: 09/22/2017
Number of Days to Update: 147	Next Scheduled EDR Contact: 01/01/2018
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/18/2017	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/22/2017	Telephone: 916-445-9379
Date Made Active in Reports: 10/24/2017	Last EDR Contact: 11/01/2017
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/21/2017	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/25/2017	Telephone: 916-255-3628
Date Made Active in Reports: 10/17/2017	Last EDR Contact: 10/23/2017
Number of Days to Update: 84	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/15/2017	Source: California Integrated Waste Management Board
Date Data Arrived at EDR: 08/22/2017	Telephone: 916-341-6066
Date Made Active in Reports: 10/25/2017	Last EDR Contact: 08/10/2017
Number of Days to Update: 64	Next Scheduled EDR Contact: 11/27/2017
	Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/12/2017	Telephone: 916-255-1136
Date Made Active in Reports: 10/17/2017	Last EDR Contact: 10/10/2017
Number of Days to Update: 97	Next Scheduled EDR Contact: 01/22/2018
	Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/21/2017	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/22/2017	Telephone: 877-786-9427
Date Made Active in Reports: 10/25/2017	Last EDR Contact: 08/22/2017
Number of Days to Update: 64	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/22/2009	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2009	Last EDR Contact: 01/22/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/21/2017	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/22/2017	Telephone: 916-323-3400
Date Made Active in Reports: 10/25/2017	Last EDR Contact: 08/22/2017
Number of Days to Update: 64	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/10/2017	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 10/10/2017	Telephone: 916-440-7145
Date Made Active in Reports: 10/17/2017	Last EDR Contact: 10/10/2017
Number of Days to Update: 7	Next Scheduled EDR Contact: 01/22/2018
	Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/11/2017	Source: Department of Conservation
Date Data Arrived at EDR: 09/12/2017	Telephone: 916-322-1080
Date Made Active in Reports: 11/01/2017	Last EDR Contact: 09/12/2017
Number of Days to Update: 50	Next Scheduled EDR Contact: 12/25/2017
	Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/25/2017	Source: Department of Public Health
Date Data Arrived at EDR: 06/06/2017	Telephone: 916-558-1784
Date Made Active in Reports: 08/23/2017	Last EDR Contact: 09/06/2017
Number of Days to Update: 78	Next Scheduled EDR Contact: 12/18/2017
	Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/14/2017	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/17/2017	Telephone: 916-445-9379
Date Made Active in Reports: 10/17/2017	Last EDR Contact: 08/17/2017
Number of Days to Update: 61	Next Scheduled EDR Contact: 11/27/2017
	Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/05/2017	Source: Department of Pesticide Regulation
Date Data Arrived at EDR: 06/07/2017	Telephone: 916-445-4038
Date Made Active in Reports: 08/25/2017	Last EDR Contact: 09/06/2017
Number of Days to Update: 79	Next Scheduled EDR Contact: 12/18/2017
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 10/18/2017
Number of Days to Update: 36

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 06/16/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 119

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 01/20/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50

Source: Department of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board's review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 09/22/2017
Date Data Arrived at EDR: 09/22/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 18

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/07/2017
Date Data Arrived at EDR: 07/11/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 43

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 06/20/2017
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 49

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing Cupa Facility Listing

Date of Government Version: 04/25/2017
Date Data Arrived at EDR: 04/27/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 104

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/05/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List Cupa facility list.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/17/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List Cupa Facility list

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 66

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/25/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List CUPA facility list.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/18/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/24/2017
Number of Days to Update: 63

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 07/05/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 30

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 07/26/2017
Date Data Arrived at EDR: 07/28/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 77

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/03/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 07/21/2017
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 83

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INYO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

Cupa facility list.

Date of Government Version: 06/08/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 56

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 44

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 09/22/2017
Date Data Arrived at EDR: 09/22/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 24

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 08/03/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 74

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 07/24/2017
Date Data Arrived at EDR: 07/26/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 82

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/11/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 5

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/17/2017
Date Data Arrived at EDR: 07/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 65

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/17/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 10/09/2017
Number of Days to Update: 171

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 06/21/2017
Date Data Arrived at EDR: 06/23/2017
Date Made Active in Reports: 10/30/2017
Number of Days to Update: 129

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/24/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/14/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 69

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 10/26/2017
Date Data Arrived at EDR: 10/27/2017
Date Made Active in Reports: 11/06/2017
Number of Days to Update: 10

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 10/26/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 07/03/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 15

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 10/02/2017
Date Data Arrived at EDR: 10/03/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 14

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List

CUPA Facility List

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 40

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/08/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

MONTEREY COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/22/2017
Date Data Arrived at EDR: 06/23/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 47

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 08/24/2017
Date Data Arrived at EDR: 08/25/2017
Date Made Active in Reports: 10/27/2017
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/04/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/25/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 10/11/2017
Number of Days to Update: 61

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 41

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/07/2017	Source: Health Care Agency
Date Data Arrived at EDR: 08/09/2017	Telephone: 714-834-3446
Date Made Active in Reports: 09/21/2017	Last EDR Contact: 08/09/2017
Number of Days to Update: 43	Next Scheduled EDR Contact: 11/20/2017
	Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/02/2017	Source: Placer County Health and Human Services
Date Data Arrived at EDR: 06/06/2017	Telephone: 530-745-2363
Date Made Active in Reports: 08/22/2017	Last EDR Contact: 08/31/2017
Number of Days to Update: 77	Next Scheduled EDR Contact: 12/18/2017
	Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List

Plumas County CUPA Program facilities.

Date of Government Version: 06/19/2017	Source: Plumas County Environmental Health
Date Data Arrived at EDR: 07/05/2017	Telephone: 530-283-6355
Date Made Active in Reports: 08/09/2017	Last EDR Contact: 11/01/2017
Number of Days to Update: 35	Next Scheduled EDR Contact: 02/05/2018
	Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/11/2017	Source: Department of Environmental Health
Date Data Arrived at EDR: 07/14/2017	Telephone: 951-358-5055
Date Made Active in Reports: 09/21/2017	Last EDR Contact: 09/18/2017
Number of Days to Update: 69	Next Scheduled EDR Contact: 01/01/2018
	Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 07/11/2017	Source: Department of Environmental Health
Date Data Arrived at EDR: 07/14/2017	Telephone: 951-358-5055
Date Made Active in Reports: 09/21/2017	Last EDR Contact: 09/18/2017
Number of Days to Update: 69	Next Scheduled EDR Contact: 01/01/2018
	Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 10/03/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 3

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/03/2017
Date Data Arrived at EDR: 07/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 47

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 66

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/01/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 85

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/06/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/05/2017
Date Data Arrived at EDR: 06/07/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 69

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/03/2017
Date Data Arrived at EDR: 05/08/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 109

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 10/03/2017
Date Data Arrived at EDR: 10/06/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 4

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 08/28/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 08/18/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SAN MATEO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 09/15/2017
Date Data Arrived at EDR: 09/19/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 28

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/07/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/07/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/10/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 67

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/15/2017
Date Made Active in Reports: 10/24/2017
Number of Days to Update: 90

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List

CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 63

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 08/29/2017
Number of Days to Update: 69

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List

Cupa Facility list

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 06/27/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 43

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/05/2017
Date Data Arrived at EDR: 07/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 47

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 08/17/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Stanislaus County Department of Environmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 80

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List

Cupa facilities

Date of Government Version: 07/19/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 66

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/19/2018
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 07/21/2017
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

TULARE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

Cupa program facilities

Date of Government Version: 09/27/2017

Date Data Arrived at EDR: 09/28/2017

Date Made Active in Reports: 10/16/2017

Number of Days to Update: 18

Source: Tulare County Environmental Health Services Division

Telephone: 559-624-7400

Last EDR Contact: 11/01/2017

Next Scheduled EDR Contact: 02/19/2018

Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 08/21/2017

Date Data Arrived at EDR: 08/22/2017

Date Made Active in Reports: 10/25/2017

Number of Days to Update: 64

Source: Divison of Environmental Health

Telephone: 209-533-5633

Last EDR Contact: 10/23/2017

Next Scheduled EDR Contact: 02/05/2018

Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 06/26/2017

Date Data Arrived at EDR: 08/03/2017

Date Made Active in Reports: 10/16/2017

Number of Days to Update: 74

Source: Ventura County Environmental Health Division

Telephone: 805-654-2813

Last EDR Contact: 10/23/2017

Next Scheduled EDR Contact: 02/05/2018

Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011

Date Data Arrived at EDR: 12/01/2011

Date Made Active in Reports: 01/19/2012

Number of Days to Update: 49

Source: Environmental Health Division

Telephone: 805-654-2813

Last EDR Contact: 09/27/2017

Next Scheduled EDR Contact: 01/15/2018

Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008

Date Data Arrived at EDR: 06/24/2008

Date Made Active in Reports: 07/31/2008

Number of Days to Update: 37

Source: Environmental Health Division

Telephone: 805-654-2813

Last EDR Contact: 08/10/2017

Next Scheduled EDR Contact: 11/27/2017

Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 06/26/2017

Date Data Arrived at EDR: 08/03/2017

Date Made Active in Reports: 10/17/2017

Number of Days to Update: 75

Source: Ventura County Resource Management Agency

Telephone: 805-654-2813

Last EDR Contact: 10/23/2017

Next Scheduled EDR Contact: 02/05/2018

Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/28/2017	Source: Environmental Health Division
Date Data Arrived at EDR: 09/12/2017	Telephone: 805-654-2813
Date Made Active in Reports: 09/21/2017	Last EDR Contact: 09/12/2017
Number of Days to Update: 9	Next Scheduled EDR Contact: 12/25/2017
	Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 06/29/2017	Source: Yolo County Department of Health
Date Data Arrived at EDR: 07/05/2017	Telephone: 530-666-8646
Date Made Active in Reports: 08/25/2017	Last EDR Contact: 09/27/2017
Number of Days to Update: 51	Next Scheduled EDR Contact: 01/15/2018
	Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 07/31/2017	Source: Yuba County Environmental Health Department
Date Data Arrived at EDR: 08/03/2017	Telephone: 530-749-7523
Date Made Active in Reports: 10/16/2017	Last EDR Contact: 10/25/2017
Number of Days to Update: 74	Next Scheduled EDR Contact: 02/12/2018
	Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 08/19/2013	Telephone: 860-424-3375
Date Made Active in Reports: 10/03/2013	Last EDR Contact: 08/18/2017
Number of Days to Update: 45	Next Scheduled EDR Contact: 11/27/2017
	Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016	Source: Department of Environmental Protection
Date Data Arrived at EDR: 04/11/2017	Telephone: N/A
Date Made Active in Reports: 07/27/2017	Last EDR Contact: 10/05/2017
Number of Days to Update: 107	Next Scheduled EDR Contact: 01/22/2018
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/12/2017
Number of Days to Update: 70

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/01/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/11/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish & Game

Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TUSTIN HILLS SINGLE FAMILY RESIDENTIAL DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CA 92705

TARGET PROPERTY COORDINATES

Latitude (North):	33.751557 - 33° 45' 5.61"
Longitude (West):	117.781543 - 117° 46' 53.55"
Universal Transverse Mercator:	Zone 11
UTM X (Meters):	427614.3
UTM Y (Meters):	3734690.2
Elevation:	256 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5641308 ORANGE, CA
Version Date:	2012

South Map:	5640942 TUSTIN, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

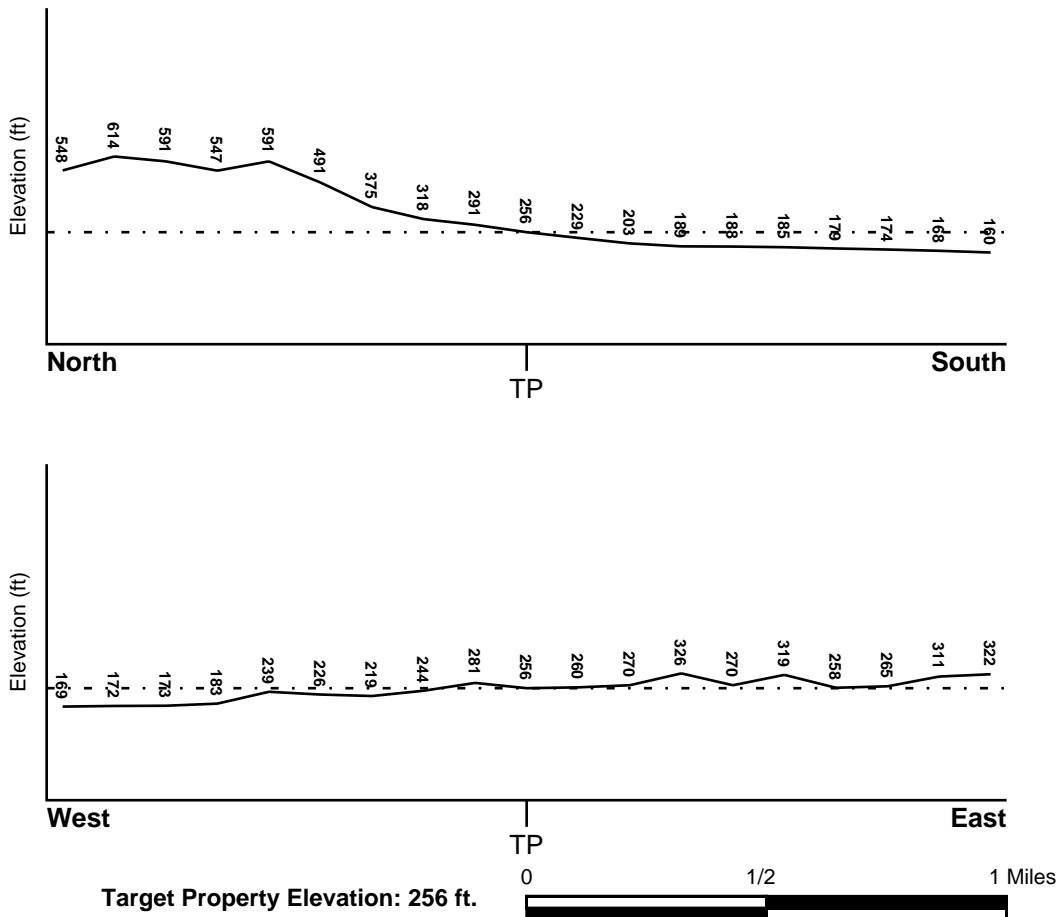
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
06059C0168J	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
06059C0169J	FEMA FIRM Flood data
06059C0281J	FEMA FIRM Flood data
06059C0282J	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
ORANGE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

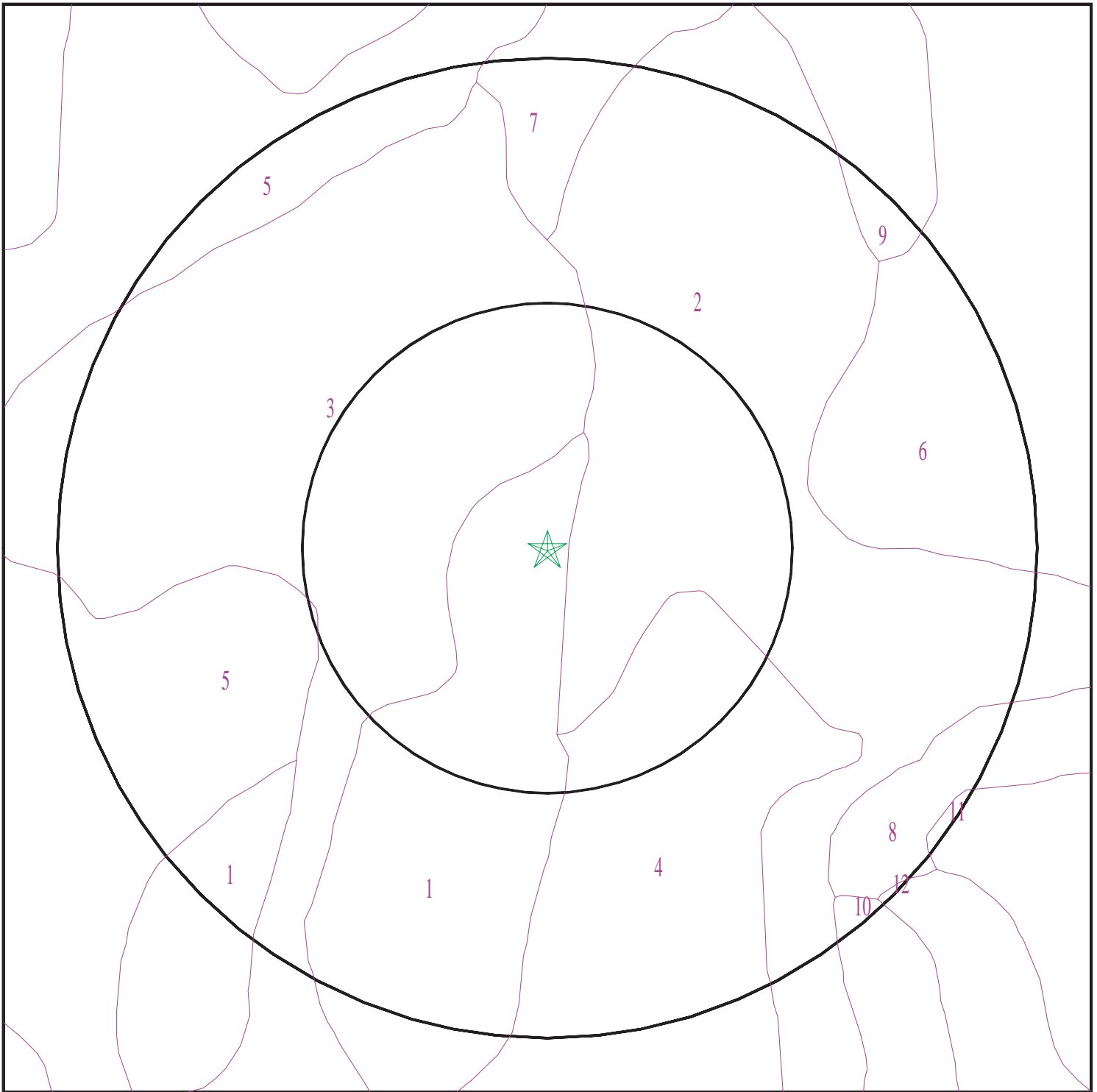
Era:	Cenozoic
System:	Tertiary
Series:	Eocene
Code:	Te (<i>decoded above as Era, System & Series</i>)

GEOLOGIC AGE IDENTIFICATION

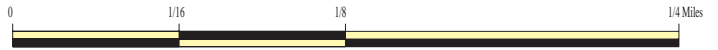
Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5100798.2s



- ★ Target Property
- SSURGO Soil
- Water



SITE NAME: Tustin Hills Single Family Residential Development
ADDRESS: 11782 Simon Ranch Road
SANTA ANA CA 92705
LAT/LONG: 33.751557 / 117.781543

CLIENT: Psomas
CONTACT: Agnieszka Napiatek
INQUIRY #: 5100798.2s
DATE: November 07, 2017 7:38 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: BALCOM

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	29 inches	clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	29 inches	33 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 2

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6 Min: 5.1
2	11 inches	18 inches	sandy clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
3	18 inches	27 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
4	27 inches	70 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 0.42 Min: 0.01	Max: 8.4 Min: 6.1
5	70 inches	79 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 3

Soil Component Name: BALCOM

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	33 inches	clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	33 inches	38 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 4

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	22 inches	sandy loam	Not reported	Not reported	Max: 42 Min: 14	Max: 6 Min: 5.1
2	22 inches	27 inches	sandy clay	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
3	27 inches	38 inches	sandy clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
4	38 inches	70 inches	sandy clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 6.1
5	70 inches	79 inches	sandy loam	Not reported	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 6.1

Soil Map ID: 5

Soil Component Name: BOTELLA

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 5.6
2	7 inches	35 inches	silty clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 5.6
3	35 inches	66 inches	sandy clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 6

Soil Component Name: SOPER

Soil Surface Texture: cobbly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	cobbly loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 6.1
2	9 inches	29 inches	cobbly clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1
3	29 inches	33 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 7

Soil Component Name: BALCOM

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	33 inches	clay loam	Not reported	Not reported	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	33 inches	38 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 8

Soil Component Name: ALO VARIANT

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	25 inches	clay	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
2	25 inches	38 inches	clay	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.9
3	38 inches	42 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 9

Soil Component Name: CIENEBA

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 7.3 Min: 5.6
2	7 inches	11 inches	weathered bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 10

Soil Component Name: CALLEGUAS

Soil Surface Texture: clay loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
2	14 inches	18 inches	weathered bedrock	Not reported	Not reported	Max: 1.4 Min: 0	Max: Min:

Soil Map ID: 11

Soil Component Name: SOPER

Soil Surface Texture: gravelly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 7.3 Min: 6.1
2	9 inches	29 inches	gravelly clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
3	29 inches	33 inches	weathered bedrock	Not reported	Not reported	Max: 4 Min: 1.4	Max: Min:

Soil Map ID: 12

Soil Component Name: ANAHEIM

Soil Surface Texture: loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	25 inches	loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.8 Min: 6.1
2	25 inches	29 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	USGS40000137851	1/4 - 1/2 Mile WSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

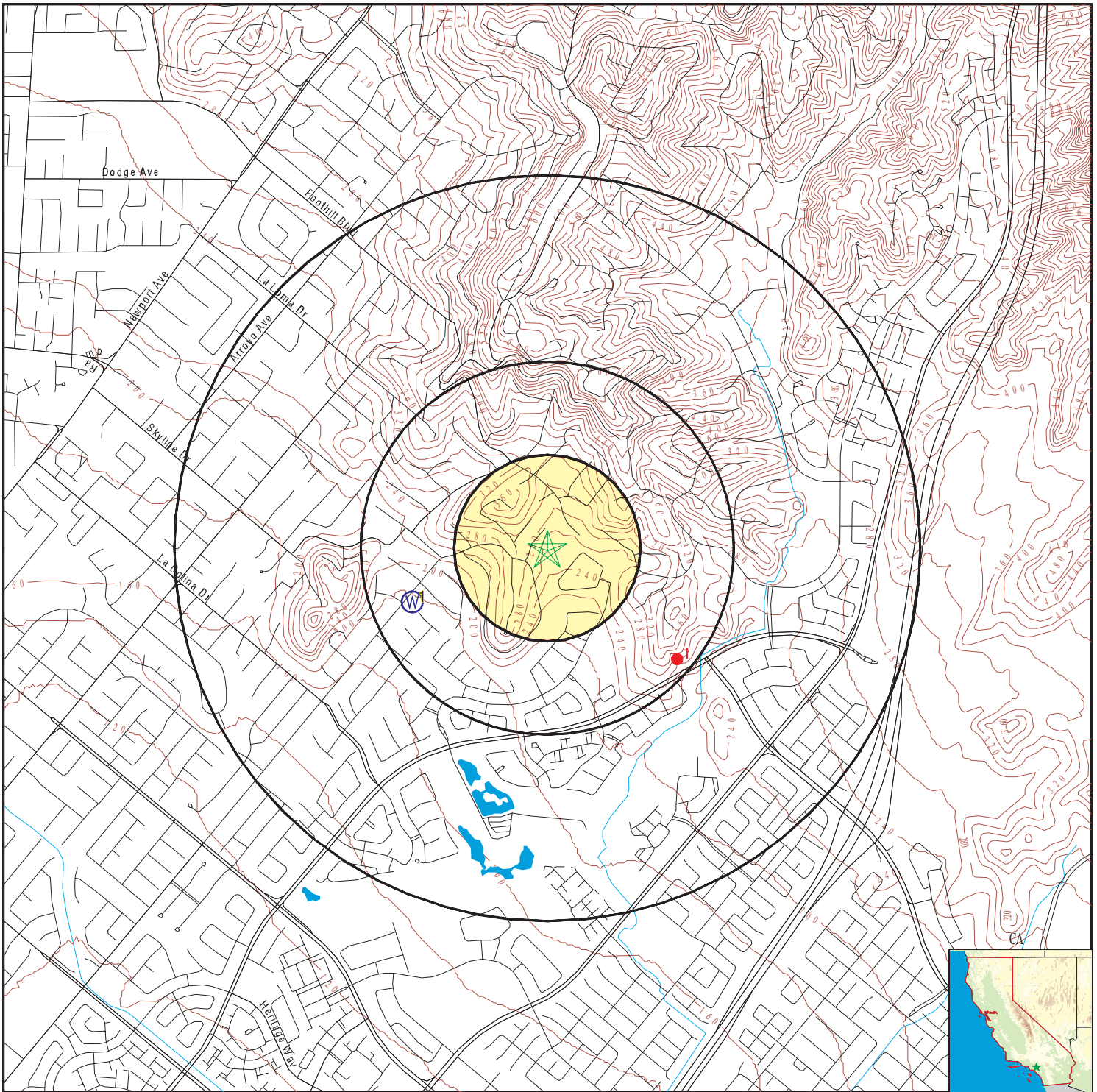
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		









OTHER STATE DATABASE INFORMATION






STATE OIL/GAS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	CAOG11000217997	1/4 - 1/2 Mile SE

PHYSICAL SETTING SOURCE MAP - 5100798.2s



-  County Boundary
-  Major Roads
-  Contour Lines
-  Earthquake Fault Lines
-  Earthquake epicenter, Richter 5 or greater
-  Water Wells
-  Public Water Supply Wells
-  Cluster of Multiple Icons

-  Groundwater Flow Direction
-  Indeterminate Groundwater Flow at Location
-  Groundwater Flow Varies at Location
-  Closest Hydrogeological Data
-  Oil, gas or related wells



SITE NAME: Tustin Hills Single Family Residential Development
 ADDRESS: 11782 Simon Ranch Road
 SANTA ANA CA 92705
 LAT/LONG: 33.751557 / 117.781543

CLIENT: Psomas
 CONTACT: Agnieszka Napiatek
 INQUIRY #: 5100798.2s
 DATE: November 07, 2017 7:38 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

1
WSW **FED USGS** **USGS40000137851**
1/4 - 1/2 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334458117471301		
Monloc name:	005S009W14Q002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070204	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.7494624
Longitude:	-117.7878315	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	124.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 26

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1986-08-15	128.09		1986-04-30	109.22	
1986-02-20	77.98		1985-11-05	126.15	
1985-08-16	125.45		1985-05-06	123.70	
1985-02-12	66.90		1984-10-26	125.03	
1984-08-13	84.68		1984-05-09	92.07	
1984-02-07	57.17		1983-11-03	72.03	
1983-08-09	84.77		1983-05-16	52.60	
1983-02-14	51.56		1982-11-05	74.69	
1982-08-02	83.60				
Note: A nearby site that taps the same aquifer had been pumped recently.					
1982-04-30	56.98		1982-01-28	49.39	
1981-11-05	77.25		1981-07-28	78.44	
1981-05-05	66.58		1981-02-06	48.22	
1980-10-31	60.20		1980-08-27	75.08	
1980-06-19	75.37				

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1

SE

1/4 - 1/2 Mile

OIL_GAS

CAOG11000217997

District nun:	1	Api number:	05901219
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Orange	Fieldname:	Any Field
Area name:	Any Area	Section:	12
Township:	05S	Range:	09W
Base meridian:	SB	Elevation:	Not Reported
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Irvine Core Hole	Wellnumber:	5-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000217997		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92705	64	5

Federal EPA Radon Zone for ORANGE County: 3

- Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for ORANGE COUNTY, CA

Number of sites tested: 30

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.763 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish & Game

Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations

Source: Department of Conservation

Telephone: 916-323-1779

Oil and Gas well locations in the state.

RADON

State Database: CA Radon

Source: Department of Health Services

Telephone: 916-324-2208

Radon Database for California

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Appendix J

Preliminary Priority Project Water Quality Management Plan

PA180034

**County of Orange/Santa Ana Region
Preliminary Priority Project
Water Quality Management Plan
(WQMP)**

TRACT NO. 18119

11782 SIMON RANCH ROAD, TUSTIN, CA

POR. BLK 42 OF IRVINE'S SUBDIVISION, MM 1/88

APN: 104-321-01

Prepared for:

Ranch Hill Partners LP.

2454 Alton Pkwy.

Irvine, California 92606

(949) 230-5426

Prepared by:

Robin B. Hamers & Associates, Inc.

234 E. 17th Street, Suite 205

Costa Mesa, CA 92627

Telephone: (949) 548-1192

Email: mlbenesh@robhamers.com



Final WQMP date: April 15, 2020

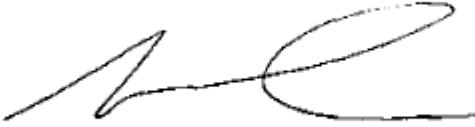

Project Owner's Certification			
Planning Application No. (If applicable)	PA180034, Tentative Tract No. 18119	Grading Permit No.	
Tract/Parcel Map and Lot(s) No.	POR. BLK 42 OF IRVINE'S SUBDIVISION, MM 1/88	Building Permit No.	
Address of Project Site and APN (If no address, specify Tract/Parcel Map and Lot Numbers)			11782 SIMON RANCH ROAD, TUSTIN, CA APN: 104-321-01

This Preliminary Water Quality Management Plan (WQMP) has been prepared for RANCH HILL PARTNERS LP. by Robin B. Hamers & Associates, Inc. The WQMP is intended to comply with the requirements of the County of Orange NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan, including the ongoing operation and maintenance of all best management practices (BMPs), and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Owner:			
Title			
Company	RANCH HILL PARTNERS LP.		
Address	2454 ALTON PKWY. , IRVINE, CALIFORNIA 92606		
Email			
Telephone #	(949) 230-5426		
I understand my responsibility to implement the provisions of this WQMP including the ongoing operation and maintenance of the best management practices (BMPs) described herein.			
Owner Signature		Date	

Water Quality Management Plan (WQMP)
TRACT NO. 18119

Preparer (Engineer):			
Title	Michael Benesh	PE Registration #	RCE 37893
Company	ROBIN B. HAMERS & ASSOCIATES, INC.		
Address	234 E. 17th Street, Suite 205, COSTA MESA, CA 92627		
Email	Email: mlbenesh@robhamers.com		
Telephone #	Telephone: (949) 548-1192		
I hereby certify that this Water Quality Management Plan is in compliance with, and meets the requirements set forth in, Order No. R8-2009-0030/NPDES No. CAS618030, of the Santa Ana Regional Water Quality Control Board.			
Preparer Signature			Date 4/15/20
Place Stamp Here			

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Section I Discretionary Permit(s) and Water Quality Conditions

Provide discretionary or grading/building permit information and water quality conditions of approval, or permit issuance, applied to the project. If conditions are unknown, please request applicable conditions from staff. Refer to Section 2.1 in the Technical Guidance Document (TGD) available on the OC Planning website (ocplanning.net).

Project Information	
Permit/Application No. (If applicable)	PA180034, Tentative Tract No. 18119
Grading or Building Permit No. (If applicable)	
Address of Project Site (or Tract Map and Lot Number if no address) and APN	11782 SIMON RANCH ROAD, TUSTIN, CA APN: 104-321-01
Water Quality Conditions	
Water Quality Conditions of Approval or Issuance applied to this project. (Please list verbatim.)	N/A – Preliminary WQMP
Watershed-Based Plan Conditions	
Provide applicable conditions from watershed - based plans including WIHMPs and TMDLS.	None

Section II Project Description

II.1 Project Description

Provide a detailed project description including:

- Project areas;
- Land uses;
- Land cover;
- Design elements;
- A general description not broken down by drainage management areas (DMAs).

Include attributes relevant to determining applicable source controls. *Refer to Section 2.2 in the Technical Guidance Document (TGD) for information that must be included in the project description.*

Description of Proposed Project	
Development Category (From Model WQMP, Table 7.11-2):	<p>The project qualifies as a priority project as per the following development category:</p> <p>8. All significant redevelopment projects, where significant redevelopment is defined as the addition of 5,000 or more square feet of impervious surface on an already developed site, and the existing development or redevelopment project falls under another Priority Project Category.</p> <p>If the redevelopment results in the addition or replacement of less than 50 percent of the impervious area on-site and the existing development was not subject to WQMP requirement, the numeric sizing criteria discuss below only applies to the addition or replacement area. If the addition or replacement accounts for 50 percent or more of the impervious area, the Project WQMP requirements apply to the entire development.</p>
Project Area (ft ²): 256,217	<p>Number of Dwelling Units: <u>37</u> SIC Code: <u>NONE</u></p>
Narrative Project Description: (Use as much space as necessary.)	<p>Located at the easterly end of Simon Ranch Road near the intersection with Pavilion Drive, in the Unincorporated Territory of the County of Orange, CA. The project is a one lot residential condominium subdivision that includes construction of 37 single family condominium units. There will be 17 duplex buildings and 3 single unit buildings with a combined footprint of approximately 72,810 s.f.</p> <p>The work will include demolition of the existing tennis club, including parking lots, clubhouse, tennis courts and appurtenances; grading of the site for building pads and private streets; and construction of on-site utilities, storm drains, private streets and residences.</p> <p>There will be some minor improvements constructed in Simon Ranch Road and Pavillion Drive to extend the utilities into the site.</p>

	<p>The new impervious surfaces will include approximately 72,810 sf of building footprints, 3700 s.f. of private patios/walkways, 10,700 s.f. of private driveways, 51,700 s.f. of common driveway/street, 8,500 sf of sidewalk, and 5,560 sf of rec. area. There will be approximately 103,247 sf of typical residential landscaping. There will be some minor trenching constructed in the adjoining streets to extend the utilities to the site.</p>			
	Pervious		Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
Pre-Project Conditions	83,417 SF	32.6%	172,800 SF	67.4%
Post-Project Conditions	103,247 SF	40.3%	152,970 SF	59.7%
Drainage Patterns/Connections	<p><u>Prior to Development</u></p> <p>The site is graded and developed as a tennis club. The surface of the land slopes generally down to the southeast. The lowest point on the site, around elevation 226, is near the most southerly corner where stormwater runoff leaves the site in a concrete drainage ditch. The highpoint on the site is near the most westerly corner of the site around elevation 279. The site is currently terraced for the construction of the tennis courts and clubhouse. The average slope of the site is approximately 7.5 percent, dropping 40 feet in 540 feet of length. The storm runoff from the site currently drains by surface flows along a concrete drainage ditch southerly approximately 200 feet to a city storm drain system, eventually draining to the San Diego Creek and the Upper Newport Bay, 8.5 miles southwest of the project site.</p> <p><u>After Development</u></p> <p>After construction, the storm runoff from the site will be collected in the on-site common driveway/street and be directed to an inlet at the end of the common driveway in the southwest portion of the site. A private on-site storm drain system will convey the flows to the southerly corner of the site from where the runoff will flow as it does now, along a concrete drainage ditch southerly approximately 200 feet to a city storm drain system, eventually draining to the San Diego Creek and the Upper Newport Bay, 8.5 miles southwest of the project site. An underground infiltration trench will be incorporated into the drainage system to treat the runoff.</p>			

II.2 Potential Stormwater Pollutants

Determine and list expected stormwater pollutants based on land uses and site activities. *Refer to Section 2.2.2 and Table 2.1 in the Technical Guidance Document (TGD) for guidance.*

Pollutants of Concern			
Pollutant	Check One for each: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
	E <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Suspended-Solid/ Sediment	E <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Nutrients	E <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Heavy Metals	E <input type="checkbox"/>	N <input checked="" type="checkbox"/>	
Pathogens (Bacteria/Virus)	E <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Pesticides	E <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Oil and Grease	E <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Toxic Organic Compounds	E <input type="checkbox"/>	N <input checked="" type="checkbox"/>	
Trash and Debris	E <input checked="" type="checkbox"/>	N <input type="checkbox"/>	

II.3 Hydrologic Conditions of Concern

Determine if streams located downstream from the project area are potentially susceptible to hydromodification impacts. Refer to Section 2.2.3.1 in the Technical Guidance Document (TGD) for North Orange County or Section 2.2.3.2 for South Orange County.

No – Show map

The project site is located in an area designated as “Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility”.

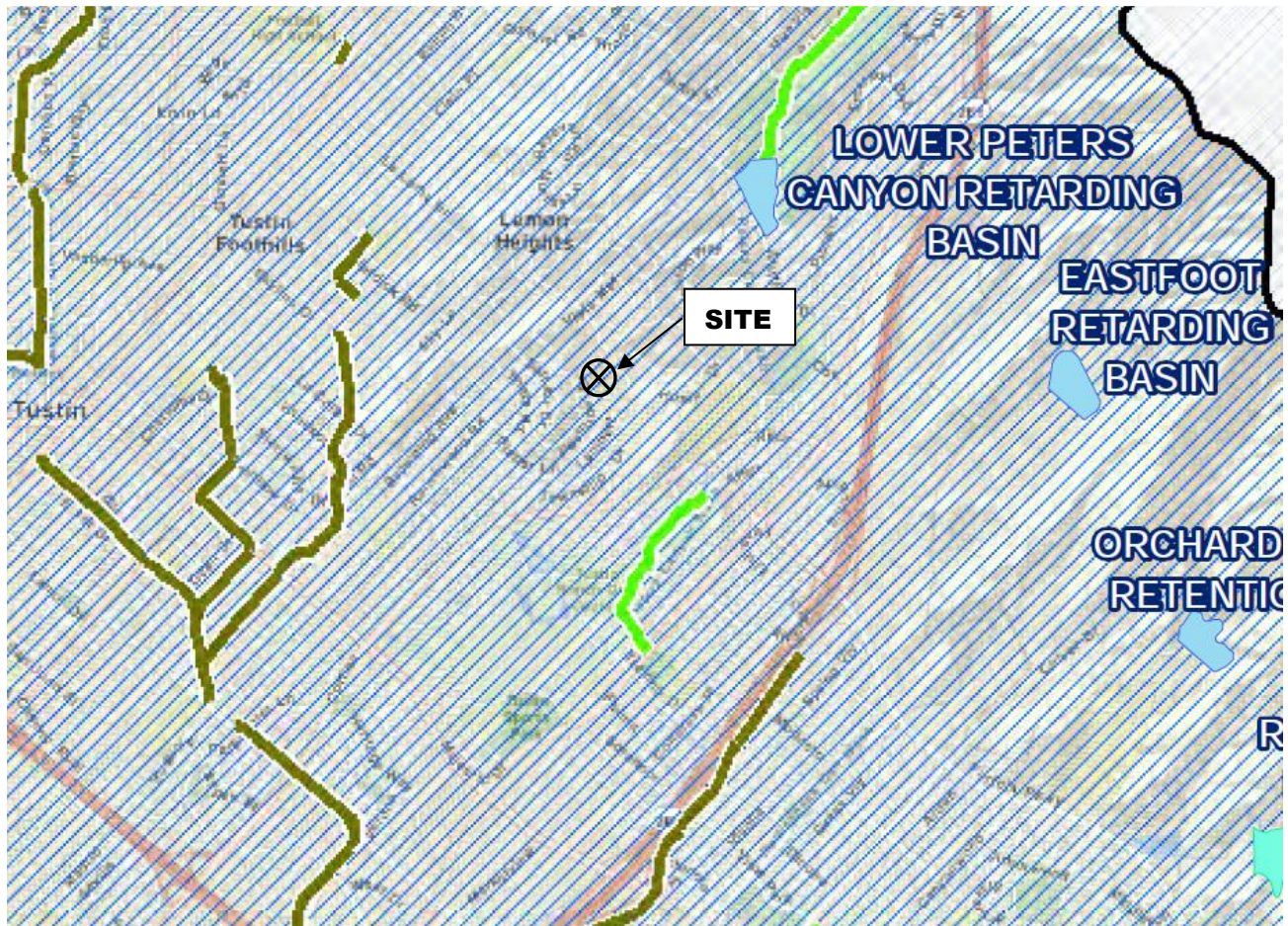


Figure 1: Portion Susceptibility Analysis Newport Bay – Newport Coastal Streams.

Yes – Describe applicable hydrologic conditions of concern below. Refer to Section 2.2.3 in the Technical Guidance Document (TGD).

Portions of San Diego Creek downstream of the project site are not hardened and susceptible to erosion.

II.4 Post Development Drainage Characteristics

Describe post development drainage characteristics. *Refer to Section 2.2.4 in the Technical Guidance Document (TGD).*

After construction, the storm runoff from the site will be collected in the on-site common driveway/street and be directed to an inlet at the end of the common driveway in the southwest portion of the site. A private on-site storm drain system will convey the flows to the southerly corner of the site from where the runoff will flow as it does now, along a concrete drainage ditch southerly approximately 200 feet to a city storm drain system, eventually draining to the San Diego Creek and the Upper Newport Bay, 8.5 miles southwest of the project site. An underground infiltration trench will be incorporated into the drainage system to treat the runoff.

II.5 Property Ownership/Management

Describe property ownership/management. *Refer to Section 2.2.5 in the Technical Guidance Document (TGD).*

The property is currently owned by Ranch Hill Partners LP. . After development, the ownership of the drainage improvements and BMPs will be transferred to the HOA. The drainage improvements and Treatment BMPs will be maintained by the HOA.

There are no off-site infrastructure improvements planned as part of the project other than the extension of utilities to the project site.

Section III Site Description

III.1 Physical Setting

Fill out table with relevant information. *Refer to Section 2.3.1 in the Technical Guidance Document (TGD).*

Name of Planned Community/Planning Area (if applicable)	N/A
Location/Address	The site address is: 11782 SIMON RANCH ROAD, TUSTIN, CA
	Located at the easterly end of Simon Ranch Road near the intersection with Pavilion Drive, in the Unincorporated Territory of the County of Orange, CA.
General Plan Land Use Designation	
Zoning	
Acreage of Project Site	5.882 acres
Predominant Soil Type	Per the Hydrologic Classification of Soils Map, Plate B, of the Orange County Hydrology Manual and Figure XVI.2 NRCS Hydrologic Soils Group Exhibit of the TGD, the site is located in an area designated as Hydrologic Soil Group C.

III.2 Site Characteristics

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. Refer to Section 2.3.2 in the Technical Guidance Document (TGD).

Site Characteristics	
Precipitation Zone	Per Figure XVI.1 of the TGD, the site is in the 0.75” Design Capture Storm Depth Rainfall Zone.
Topography	The surface of the land slopes generally down to the southeast. The lowest point on the site, around elevation 226, is near the most southerly corner where stormwater runoff leaves the site in a concrete drainage ditch. The highpoint on the site is near the most westerly corner of the site around elevation 279. The site is currently terraced for the construction of the tennis courts and clubhouse. The average slope of the site is approximately 7.5 percent, dropping 40 feet in 540 feet of length.
Drainage Patterns/Connections	<p><u>Prior to Development</u></p> <p>The storm runoff from the site currently drains by surface flows along a concrete drainage ditch southerly approximately 200 feet to a city storm drain system, eventually draining to the San Diego Creek and the Upper Newport Bay, 8.5 miles southwest of the project site.</p> <p><u>After Development</u></p> <p>After construction, the storm runoff from the site will be collected in the on-site common driveway/street and be directed to an inlet at the end of the common driveway in the southwest portion of the site. A private on-site storm drain system will convey the flows to the southerly corner of the site from where the runoff will flow as it does now, along a concrete drainage ditch southerly approximately 200 feet to a city storm drain system, eventually draining to the San Diego Creek and the Upper Newport Bay, 8.5 miles southwest of the project site. An underground infiltration trench will be incorporated into the drainage system to treat the runoff.</p>
Soil Type, Geology, and Infiltration Properties	Per the Hydrologic Classification of Soils Map, Plate B, of the Orange County Hydrology Manual and Figure XVI.2 NRCS Hydrologic Soils Group Exhibit of the TGD, the site is located in an area designated as Hydrologic Soil Group C. A subsurface infiltration test performed by the soils engineer in the southerly portion of the site indicate an infiltration rate of 1.2 in/hr.

Hydro-geologic (Groundwater) Conditions	<p>Figure XVI.2d North Orange County Mapped Depth to First Groundwater Exhibit of the TGD does not indicate the depth to groundwater. The soils report for the project indicates that no groundwater was encountered below the site for a depth of 33 feet below the surface.</p> <p>Per Figure XVI.2f North Orange County Groundwater Protection Areas Exhibit of the TGD, the site is not located in a groundwater protection area. The South Basin Groundwater Protection Project and the Approximate Selenium Contamination Area, El Toro Marine Base and Tustin Marine Air Base are all located more than 2 miles southwest of the project.</p>
Geotechnical Conditions (relevant to infiltration)	<p>Per Figure XVI.2c Orange County Mapped Potential Landslide Areas Exhibit of the TGD, the site is not located in a potential landslide area.</p>
Off-Site Drainage	<p>Portions of Lots 69 through 72 of Tract No. 3883, located southeasterly of Outlook Lane, drain onto the project site. The area included is about 1.7 acres.</p>
Utility and Infrastructure Information	<p>There is a public water main crossing the project site and private utility services that serve the existing buildings. The sewer, electric, telephone and cable utilities are all located within the ROW for Simon Ranch Road and Pavillion Drive. Services for the proposed residences will be brought into the site from the utilities in the street.</p>

III.3 Watershed Description

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.3 in the Technical Guidance Document (TGD).*

Receiving Waters	Upper Newport Bay
303(d) Listed Impairments	Sediment, Nutrients, Heavy Metals, Pesticides, Pathogens, Toxicity, Other Organics
Applicable TMDLs	None
Pollutants of Concern for the Project	<p>The Primary Pollutants of Concern for the project as identified in Table 2.1 of the TGD are:</p> <p>Sediment, Nutrients, Pesticides, Pathogens, Toxicity, Other Organics</p> <p>The other pollutants of concern for the project, as identified in Table 2.1 of the TGD are:</p> <ul style="list-style-type: none"> • Oil & Grease, Trash & Debris
Environmentally Sensitive and Special Biological Significant Areas	The project is not within, adjacent to, nor discharges directly to an ESA.

III.4 Proposed Project

Description of Proposed Project				
Project Area (ft ²): 256,217	Number of Dwelling Units: <u>37</u>		SIC Code: <u>NONE</u>	
Narrative Project Description: (Use as much space as necessary.)	<p>Located at the easterly end of Simon Ranch Road near the intersection with Pavilion Drive, in the Unincorporated Territory of the County of Orange, CA. The project is a one lot residential condominium subdivision that includes construction of 37 single family condominium units. There will be 17 duplex buildings and 3 single unit buildings with a combined footprint of approximately 72,810 s.f.</p> <p>The work will include demolition of the existing tennis club, including parking lots, clubhouse, tennis courts and appurtenances; grading of the site for building pads and private streets; and construction of on-site utilities, storm drains, private streets and residences.</p> <p>There will be some minor improvements constructed in Simon Ranch Road and Pavillion Drive to extend the utilities into the site.</p> <p>The new impervious surfaces will include approximately 72,810 sf of building footprints, 3700 s.f. of private patios/walkways, 10,700 s.f. of private driveways, 51,700 s.f. of common driveway/street, 8,500 sf of sidewalk, and 5,560 sf of rec. area. There will be approximately 103,247 sf of typical residential landscaping. There will be some minor trenching constructed in the adjoining streets to extend the utilities to the site.</p>			
	Pervious		Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
	Pre-Project Conditions	83,417 SF 32.6%	172,800 SF 67.4%	
Post-Project Conditions	103,247 SF 40.3%	152,970 SF 59.7%		

Section IV Best Management Practices (BMPs)

IV. 1 Project Performance Criteria

Describe project performance criteria. Several steps must be followed to determine what performance criteria will apply to a project. These steps include:

- If the project has an approved WIHMP or equivalent, then any watershed specific criteria must be used and the project can evaluate participation in the approved regional or sub-regional opportunities. (Please ask your assigned planner or plan checker regarding whether your project is part of an approved WIHMP or equivalent.)
- Determine applicable hydromodification control performance criteria. *Refer to Section 7.II-2.4.2.2 of the Model WQMP.*
- Determine applicable LID performance criteria. *Refer to Section 7.II-2.4.3 of the Model WQMP.*
- Determine applicable treatment control BMP performance criteria. *Refer to Section 7.II-3.2.2 of the Model WQMP.*
- Calculate the LID design storm capture volume for the project. *Refer to Section 7.II-2.4.3 of the Model WQMP.*

(NOC Permit Area only) Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
If yes, describe WIHMP feasibility criteria or regional/sub-regional LID opportunities.	(Empty space for response)	

Project Performance Criteria	
<p>If HCOC exists, list applicable hydromodification control performance criteria (Section 7.II-2.4.2.2 in MWQMP)</p>	<p>If a hydrologic condition of concern (HCOC) exists, priority projects shall implement onsite or regional hydromodification controls such that:</p> <ul style="list-style-type: none"> • Post-development runoff volume for the two-year frequency storm does not exceed that of the predevelopment condition by more than five percent, and • Time of concentration of post-development runoff for the two-year storm event is not less than that for the predevelopment condition by more than five percent.
<p>List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)</p>	<p>LID BMPs must be designed to retain, on-site, (infiltrate, harvest and use, or evapotranspire) stormwater runoff up to 80 percent average annual capture efficiency.</p> <p>LID BMPs must be designed to:</p> <ul style="list-style-type: none"> • Retain, on-site, (infiltrate, harvest and use, or evapotranspire) stormwater runoff as feasible up to the Design Capture Volume, and to Recover (i.e., draw down) the storage volume as soon as possible after a storm event (see criteria for maximizing drawdown rate in the TGD Appendix XI), and, if necessary • Bio-treat, on-site, additional runoff, as feasible, up to 80 percent average annual capture efficiency (cumulative, retention plus bio-treatment), and, if necessary • NOC Permit Area only – retain or bio-treat, in a regional facility, the remaining runoff up to 80 percent average annual capture efficiency (cumulative, retention plus bio-treatment, on-site plus off-site), and, if necessary • Fulfill alternative compliance obligations for runoff volume not retained or bio-treated up to 80 percent average annual capture efficiency using treatment controls or other alternative approaches as described in Section 7.II-3.
<p>List applicable treatment control BMP performance criteria (Section 7.II-3.2.2 from MWQMP)</p>	<p>If it is not feasible to meet LID performance criteria through retention and/or bio-treatment provided on-site or at a sub-regional/regional scale, then treatment control BMPs shall be provided on-site or offsite prior to discharge to waters of the US. Sizing of treatment control BMP(s) shall be based on either the unmet volume after claiming applicable water quality credits, if appropriate (See Section 7.II-3.1 Water Quality Credits) and as calculated in TGD Appendix VI. If treatment control BMPs can treat all of the remaining unmet volume and have a medium to high effectiveness for reducing the primary POCs, the project is considered to be in compliance; a waiver application and participation in an alternative program is not required.</p>
<p>Calculate LID design storm capture volume for Project.</p>	<p>Site Area = 256,217 sf Impervious Area = 152,970 sf % imp.= 59.7% $C = 0.75(0.597) + 0.15 = 0.60$ $d = 0.75''$ $DCV = C \times d \times A \times 1/12 \text{ in/ft} = 9573 \text{ cf}$</p>

IV.2. Site Design and Drainage

Describe site design and drainage including

- A narrative of site design practices utilized or rationale for not using practices;
- A narrative of how site is designed to allow BMPs to be incorporated to the MEP
- A table of DMA characteristics and list of LID BMPs proposed in each DMA.
- Reference to the WQMP “BMP Exhibit.”
- Calculation of Design Capture Volume (DCV) for each drainage area.
- A listing of GIS coordinates for LID and Treatment Control BMPs (unless not required by local jurisdiction).

Refer to Section 2.4.2 in the Technical Guidance Document (TGD).

The site design practices utilized on the project include the following:

Minimize Impervious Area:

Impervious areas are minimized by the use of multi-story residences and minimum street widths, including limiting sidewalk widths and locations to one side of the street in most places.

Maximize Natural Infiltration Capacity:

The project will reduce the amount of impervious surface on the site from 67.4% to 59.7%. Over 10% reduction in impervious surface area allowing more opportunity for surface infiltration.

Disconnect Impervious Areas:

Stormwater runoff from the roofs of the proposed residences will be directed to landscaped areas where feasible.

Protect existing vegetation or sensitive areas:

The site has been previously graded and developed. There are no areas of significant existing native vegetation or sensitive areas on site.

Re-vegetate Disturbed Areas:

The disturbed areas will be planted with ground cover and a combination of native or drought tolerant plants and trees with a water efficient irrigation system.

IV.2.1 Individual DMA DCV Calculations:

Drainage Area	Area (SF) (a)	Imperv. Area (SF) (b)	Imperv. Fraction ¹ (c)	C ² (d)	d (in.)	DCV ³ (CF) (e)
DMA-1	256,217	152,970	59.7%	0.60	0.75	9,573

¹Imperv. Fraction = (b)/(a)

²C= 0.75(c)+0.15

³DCV= (d) × d × (a) × 1/12 in/ft

IV.3 LID BMP Selection and Project Conformance Analysis

Each sub-section below documents that the proposed design features conform to the applicable project performance criteria via check boxes, tables, calculations, narratives, and/or references to worksheets. Refer to Section 2.4.2.3 in the Technical Guidance Document (TGD) for selecting LID BMPs and Section 2.4.3 in the Technical Guidance Document (TGD) for conducting conformance analysis with project performance criteria.

IV.3.1 Hydrologic Source Controls (HSCs)

If required HSCs are included, fill out applicable check box forms. If the retention criteria are otherwise met with other LID BMPs, include a statement indicating HSCs not required.

Name	Included?
Localized on-lot infiltration	<input checked="" type="checkbox"/>
Impervious area dispersion (e.g. roof top disconnection)	<input type="checkbox"/>
Street trees (canopy interception)	<input checked="" type="checkbox"/>
Residential rain barrels (not actively managed)	<input type="checkbox"/>
Green roofs/Brown roofs	<input type="checkbox"/>
Blue roofs	<input type="checkbox"/>
Impervious area reduction (e.g. permeable pavers, site design)	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Table 6.7: Fraction of Average Long Term Runoff Reduced (Capture Efficiency) by HSCs

Cumulative HSC Adjustment to Design Capture Storm Depth (d _{hsc})	Capture Efficiency Achieved Lowland Regions (<1,000 ft)	Capture Efficiency Achieved Mountainous Regions (>1,000 ft)
<0.05	0	0%
0.05"	8%	7%
0.1"	20%	16%
0.2"	37%	31%
0.3"	48%	42%
0.4"	57%	50%
0.5"	64%	57%
0.6"	70%	63%
0.7"	75%	68%
0.8"	80%	72%
0.9"	80%	76%
1.0"	80%	80%

IV.3.2 Infiltration BMPs

Identify infiltration BMPs to be used in project. If design volume cannot be met, state why.

Name	Included?
Bioretention without underdrains	<input type="checkbox"/>
Rain gardens	<input type="checkbox"/>
Porous landscaping	<input type="checkbox"/>
Infiltration planters	<input type="checkbox"/>
Retention swales	<input type="checkbox"/>
Infiltration trenches	<input checked="" type="checkbox"/>
Infiltration basins	<input type="checkbox"/>
Drywells	<input type="checkbox"/>
Subsurface infiltration galleries	<input type="checkbox"/>
French drains	<input type="checkbox"/>
Permeable asphalt	<input type="checkbox"/>
Permeable concrete	<input type="checkbox"/>
Permeable concrete pavers	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with infiltration BMPs. If not, document how much can be met with infiltration and document why it is not feasible to meet the full volume with infiltration BMPs.

See following pages.

Worksheet H: Factor of Safety and Design Infiltration Rate and Worksheet

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) $p = w \times v$
A	Suitability Assessment	Soil assessment methods	0.25	1	0.25
		Predominant soil texture	0.25	1	0.25
		Site soil variability	0.25	1	0.25
		Depth to groundwater / impervious layer	0.25	1	0.25
		Suitability Assessment Safety Factor, $S_A = \sum p$			
B	Design	Tributary area size	0.25	2	0.50
		Level of pretreatment/ expected sediment loads	0.25	1	0.25
		Redundancy	0.25	3	0.75
		Compaction during construction	0.25	2	0.50
		Design Safety Factor, $S_B = \sum p$			
Combined Safety Factor, $S_{TOT} = S_A \times S_B$				2.0	
Measured Infiltration Rate, inch/hr, K_M (corrected for test-specific bias)				1.2	
Design Infiltration Rate, in/hr, $K_{DESIGN} = K_M / S_{TOT}$				0.6	
Supporting Data					
<p>Briefly describe infiltration test and provide reference to test forms: Infiltration rate is based infiltration tests per the TGD. Measured Soils infiltration rate per Soils Engineer = 1.2 in/hr. Infiltration rate is based on field tests- Low Concern Soils are predominantly sands and silts at infiltration depth - Low Concern Site soil is relatively homogenous based on borings - Low Concern Groundwater was not encountered in any borings. - Low Concern Tributary size is small, <10 acres - Low Concern Good pretreatment by catch basin filter prior to infiltration - Med Concern Treatment train is not redundant - High Concern Infiltration layer is in private street area, there is a probability of unintended/indirect compaction - Medium Concern</p>					

DMA-1

Area drains to BMP-1, an 80 ft x 42 ft infiltration trench.

Worksheet B: Simple Design Capture Volume Sizing Method

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth, d (inches)	$d=$	0.75	inches
2	Enter the effect of provided HSCs, d_{HSC} (inches) (Worksheet A)	$d_{HSC}=$	0.121	inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 - Line 2)	$d_{remainder}=$	0.63	inches
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), A (acres)	$A=$	5.882	acres
2	Enter Project Imperviousness, imp (unitless)	$imp=$	0.597	
3	Calculate runoff coefficient, $C= (0.75 \times imp) + 0.15$	$C=$	0.598	
4	Calculate runoff volume, $V_{design}= (C \times d_{remainder} \times A \times 43560 \times (1/12))$	$V_{design}=$	8,044	cu-ft
Step 3: Design BMPs to ensure full retention of the DCV				
<i>Step 3a: Determine design infiltration rate</i>				
1	Enter measured infiltration rate, $K_{measured}$ (in/hr)	$K_{measured}=$	1.2	In/hr
2	Enter combined safety factor from Worksheet H , S_{final} (unitless)	$S_{final}=$	2.0	
3	Calculate design infiltration rate, $K_{design} = K_{measured} \times S_{final}$	$K_{design}=$	0.6	In/hr
<i>Step 3b: Determine minimum BMP footprint</i>				
4	Enter drawdown time, T (max 48 hours)	$T=$	48	Hours
5	Calculate max retention depth that can be drawn down within the drawdown time (feet), $D_{max} = K_{design} \times T \times (1/12)$	$D_{max}=$	2.4	feet
6	Calculate minimum area required for BMP (sq-ft), $A_{min} = V_{design} / d_{max}$	$A_{min}=$	3,352	sq-ft

Infiltration Trench is 3360 s.f. with 6' of gravel and 5@74'x24" dia perf. Pipes.

Volume of pipes = $5 \times 3.14 \text{ sf} \times 74' = 1162 \text{ cf}$

Volume of Gravel = $3360 \text{ sf} \times 6' - 1162 \text{ cf} = 18998 \text{ cf}$

Gravel Storage Volume = $18998 \times 0.35 = 6649 \text{ cf}$

Total Storage Volume = $6649 \text{ cf} + 1162 \text{ cf} = 7811 \text{ cf}$

Effective Depth = $7811 \text{ cf} / 3360 \text{ sf} = 2.32' < 2.4' \checkmark \text{OK}$

Treatment Volume = 7811 cf

Check if Unmet Volume can be supplied by Credit for reducing impervious area in Section IV.4.2.

IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, describe any evapotranspiration and/or rainwater harvesting BMPs included.

Name	Included?
All HSCs; <i>See Section IV.3.1</i>	<input type="checkbox"/>
Surface-based infiltration BMPs	<input type="checkbox"/>
Biotreatment BMPs	<input type="checkbox"/>
Above-ground cisterns and basins	<input type="checkbox"/>
Underground detention	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with evapotranspiration and/or rainwater harvesting BMPs in combination with infiltration BMPs. If not, document below how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with these BMP categories.

The DCV for the site is being met with infiltration BMPs.

IV.3.4 Biotreatment BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, and/or evapotranspiration and rainwater harvesting BMPs, describe biotreatment BMPs included. Include sections for selection, suitability, sizing, and infeasibility, as applicable.

Name	Included?
Bioretention with underdrains	<input type="checkbox"/>
Stormwater planter boxes with underdrains	<input type="checkbox"/>
Rain gardens with underdrains	<input type="checkbox"/>
Constructed wetlands	<input type="checkbox"/>
Vegetated swales	<input type="checkbox"/>
Vegetated filter strips	<input type="checkbox"/>
Proprietary vegetated biotreatment systems	<input type="checkbox"/>
Wet extended detention basin	<input type="checkbox"/>
Dry extended detention basins	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with infiltration, evapotranspiration, rainwater harvesting and/or biotreatment BMPs. If not, document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with these BMP categories.

The DCV for the site is being met with infiltration BMPs.

IV.3.5 Hydromodification Control BMPs

Describe hydromodification control BMPs. See Section 5 of the Technical Guidance Document (TGD). Include sections for selection, suitability, sizing, and infeasibility, as applicable. Detail compliance with Prior Conditions of Approval (if applicable).

Even though the channels downstream of the project are susceptible to erosion, the project does not have an HCOB because the after development stormwater runoff volume will be less than the existing condition. This is due in large part to the significant decrease in the amount of impervious area on the site after development. WinTR-55 software was used to determine the peak runoff rate and total runoff volume for a 2-year storm event. The printouts from the program are included in Attachment D. The results are as follows:

DESCRIPTION	Tc (min)	2-year peak flow (cfs)	2-year runoff (cf)	Percent Change in Runoff Volume
A-1: Pre-developed Site	7.92	4.87	24,162 ^A	-
B-1: Post-developed site	10.01	3.87	21,366 ^B	-11.6%

^A(1.132")(5.88 ac)(43560 ft/ac)(1'/12")
^B(1.001")(5.88 ac)(43560 ft/ac)(1'/12")

The runoff volume decreases by over 11 percent, therefore the project does not have an HCOC.

Per Section 7.II-2.4.2.1 of the Model Water Quality Management Plan:
 "A project does not have an HCOC if either of the following conditions is met:

- The volumes and time of concentration of stormwater runoff for the post-development condition do not significantly exceed those of the predevelopment condition for a two-year frequency storm event (a difference of five percent or less is considered insignificant).

IV.3.6 Regional/Sub-Regional LID BMPs

Describe regional/sub-regional LID BMPs in which the project will participate. Refer to Section 7.II-2.4.3.2 of the Model WQMP.

Regional/Sub-Regional LID BMPs
None

IV.3.7 Treatment Control BMPs

Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs. Describe treatment control BMPs including sections for selection, sizing, and infeasibility, as applicable.

The DCV for the site is being met with infiltration BMPs.

IV.3.8 Non-structural Source Control BMPs

Fill out non-structural source control check box forms or provide a brief narrative explaining if non-structural source controls were not used.

Non-Structural Source Control BMPs				
Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
N1	Education for Property Owners, Tenants and Occupants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N2	Activity Restrictions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N3	Common Area Landscape Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N4	BMP Maintenance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N5	Title 22 CCR Compliance (How development will comply)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development.
N6	Local Industrial Permit Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development
N7	Spill Contingency Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development
N8	Underground Storage Tank Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development
N9	Hazardous Materials Disclosure Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development
N10	Uniform Fire Code Implementation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development
N11	Common Area Litter Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N12	Employee Training	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development
N13	Housekeeping of Loading Docks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No loading docks.
N14	Common Area Catch Basin Inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N15	Street Sweeping Private Streets and Parking Lots	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N16	Retail Gasoline Outlets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development

Non-Structural BMP Implementation			
BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
Education for Property Owners	Developer	The developer shall provide a copy of the WQMP and practical information and materials to the first residents on general housekeeping practices that contribute to the protection of stormwater quality.	At the time of sale of the units.

IV.3.9 Structural Source Control BMPs

Fill out structural source control check box forms or provide a brief narrative explaining if structural source controls were not used.

Structural Source Control BMPs				
Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
S1	Provide storm drain system stenciling and signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S2	Design and construct outdoor material storage areas to reduce pollution introduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No outdoor material storage areas.
S3	Design and construct trash and waste storage areas to reduce pollution introduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trash storage on individual lots inside garage.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S5	Protect slopes and channels and provide energy dissipation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None apply to residential development.
S6	Dock areas	<input type="checkbox"/>	<input type="checkbox"/>	
S7	Maintenance bays	<input type="checkbox"/>	<input type="checkbox"/>	
S8	Vehicle wash areas	<input type="checkbox"/>	<input type="checkbox"/>	
S9	Outdoor processing areas	<input type="checkbox"/>	<input type="checkbox"/>	
S10	Equipment wash areas	<input type="checkbox"/>	<input type="checkbox"/>	
S11	Fueling areas	<input type="checkbox"/>	<input type="checkbox"/>	
S12	Hillside landscaping	<input type="checkbox"/>	<input type="checkbox"/>	
S13	Wash water control for food preparation areas	<input type="checkbox"/>	<input type="checkbox"/>	
S14	Community car wash racks	<input type="checkbox"/>	<input type="checkbox"/>	

IV.4 Alternative Compliance Plan (If Applicable)

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. Refer to Section 7.II 3.0 in the WQMP.

Not applicable on this project.

IV.4.1 Water Quality Credits

Determine if water quality credits are applicable for the project. Refer to Section 3.1 of the Model WQMP for description of credits and Appendix VI of the Technical Guidance Document (TGD) for calculation methods for applying water quality credits.

Description of Proposed Project				
Project Types that Qualify for Water Quality Credits (Select all that apply):				
<input checked="" type="checkbox"/> Redevelopment projects that reduce the overall impervious footprint of the project site.	<input type="checkbox"/> Brownfield redevelopment, meaning redevelopment, expansion, or reuse of real property which may be complicated by the presence or potential presence of hazardous substances, pollutants or contaminants, and which have the potential to contribute to adverse ground or surface WQ if not redeveloped.	<input type="checkbox"/> Higher density development projects which include two distinct categories (credits can only be taken for one category): those with more than seven units per acre of development (lower credit allowance); vertical density developments, for example, those with a Floor to Area Ratio (FAR) of 2 or those having more than 18 units per acre (greater credit allowance).		
<input type="checkbox"/> Mixed use development, such as a combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that can demonstrate environmental benefits that would not be realized through single use projects (e.g. reduced vehicle trip traffic with the potential to reduce sources of water or air pollution).		<input type="checkbox"/> Transit-oriented developments, such as a mixed use residential or commercial area designed to maximize access to public transportation; similar to above criterion, but where the development center is within one half mile of a mass transit center (e.g. bus, rail, light rail or commuter train station). Such projects would not be able to take credit for both categories, but may have greater credit assigned		<input type="checkbox"/> Redevelopment projects in an established historic district, historic preservation area, or similar significant city area including core City Center areas (to be defined through mapping).
<input type="checkbox"/> Developments with dedication of undeveloped portions to parks, preservation areas and other pervious uses.	<input type="checkbox"/> Developments in a city center area.	<input type="checkbox"/> Development s in historic districts or historic preservation areas.	<input type="checkbox"/> Live-work developments, a variety of developments designed to support residential and vocational needs together – similar to criteria to mixed use development; would not be able to take credit for both categories.	<input type="checkbox"/> In-fill projects, the conversion of empty lots and other underused spaces into more beneficially used spaces, such as residential or commercial areas.

Calculation of Water Quality Credits (if applicable)	<p><u>Post-Project DCV</u> Site Area = 256,217 sf Impervious Area = 152,970 sf % imp.= 59.7% $C = 0.75(0.597) + 0.15 = 0.578$ $d = 0.75''$ $DCV = C \times d \times A \times 1/12 \text{ in/ft} = 9256 \text{ cf}$</p> <p><u>Pre-Project DCV</u> Site Area = 256,217 sf Impervious Area = 172800 sf % imp.= 67.4% $C = 0.75(0.674) + 0.15 = 0.656$ $d = 0.75''$ $DCV = C \times d \times A \times 1/12 \text{ in/ft} = 10505 \text{ cf.}$</p> <p>Credit = $10505 - 9256 = 1,249 \text{ cf}$</p>
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IV.4.2 Alternative Compliance Plan Information

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. Refer to Section 7.II 3.0 in the Model WQMP.

Worksheet C: Determining Capture Efficiency of Volume Based, Constant Drawdown BMP based on Design Volume

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth from, d (inches)	$d=$	0.75	inches
2	Enter the storage volume provided in the BMP, V (cu-ft)	$V=$	7811	cu-ft
3	Enter Project area tributary to BMP (s), A (acres)	$A=$	5.882	acres
4	Enter Project Imperviousness, imp (unitless)	$imp=$	0.597	
5	Calculate runoff coefficient, $C = (0.75 \times imp) + 0.15$	$C=$	0.598	
6	Calculate the effective design storm depth provided (inches), $d_{provided} = (V \times 12) / (C \times A \times 43560)$	$d_{provided}=$	0.61	inches
7	Calculate the design storm depth as a fraction of the design capture depth, $X_{fraction} = d_{provided} / d$	$X_{fraction}=$	0.82	
Step 2: Calculate the capture efficiency of the BMP system				
1	Determine the drawdown time of the proposed BMP based on equations provided in the applicable BMP Fact Sheet, T (hours)	$T=$	48	hours
2	Enter the effect of provided HSCs upstream, d_{HSC} (inches) Worksheet A	$d_{HSC}=$	0.121	inches
3	Enter capture efficiency corresponding to d_{HSC} from Table 6.7 (regionally based), Y_1 Worksheet A	$Y_1=$	23	%
4	Using the graph, determine the fraction of "design capture storm depth" at which the drawdown time (T) achieves the upstream capture efficiency (Y_1), X_1	$X_1=$	0.13	
5	Determine the fraction of design capture storm depth corresponding to the cumulative capture efficiency, $X_2 = X_1 + X_{fraction}$	$X_2=$	0.95	
6	Using the graph, determine the capture efficiency corresponding to total fraction of design storm depth (X_2) for drawdown time (T), Y_2	$Y_2=$	78	%
Supporting Calculations				

Worksheet C: Determining Capture Efficiency of Volume Based, Constant Drawdown BMP based on Design Volume

Describe system:

The system is an 80 ft x 42 ft infiltration trench. Trench storage volume = 7811 cf.

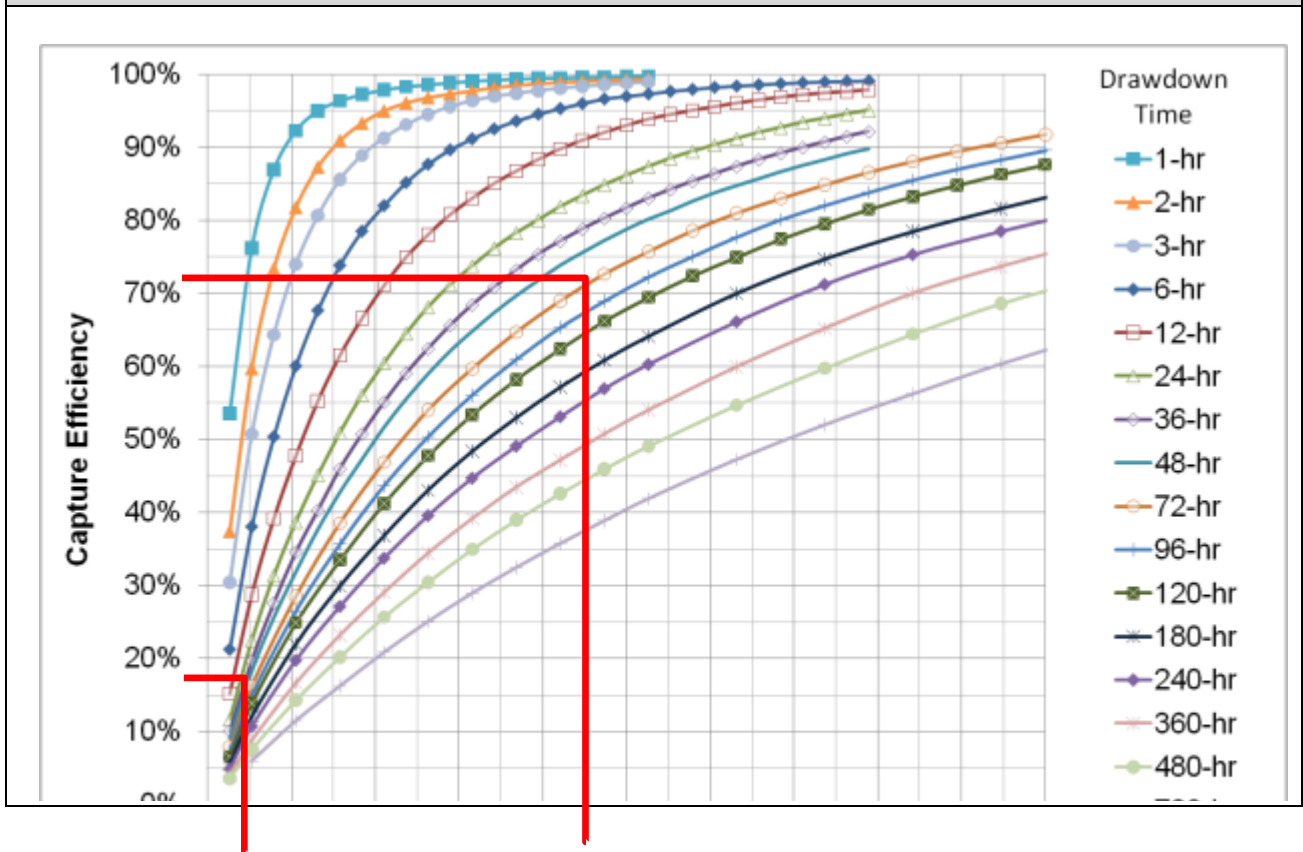
Provide drawdown calculations per equations in applicable BMP Fact Sheet:

The effective depth of BMP-1 is 2.32’.

The design infiltration rate is 0.6 in/hr.

The drawdown time is: $2.32' \times 12''/1' / (0.6''/\text{hr}) = 46 \text{ hrs}$, use 48 hrs

Graphical Operations



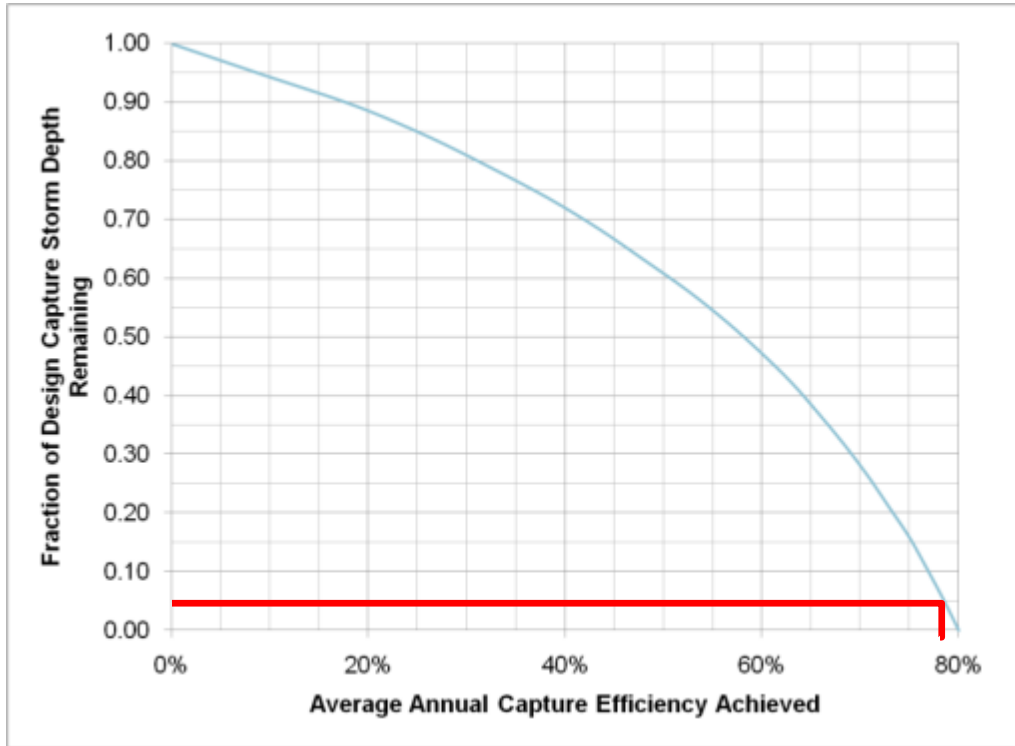
Worksheet D: Alternative Compliance Volume Worksheet

Step 1: Determine the alternative compliance volume without water quality credits				
1	Determine the capture efficiency achieved in upstream BMPs , X_1 (%)	$X_1 =$	78	%
2	Enter design capture storm depth, d (inches)	$d =$	0.75	inches
3	Using figure V1.1, pivot from where X_1 intersects the curve to determine the fraction of design capture storm depth remaining to be met, Y_1	$Y_1 =$	0.05	
4	Calculate the design depth that must be managed in alternative compliance BMPs, $d_{alternative} = Y_1 \times d$	$d_{alternative} =$	0.04	inches
5	Compute the alternative compliance volume corresponding to $d_{alternative}$, ACV (cu-ft)	ACV =	511	cu-ft
Step 2: Determine Credit Volume				
Method 1: Determine Credit Volume based on Reducing Impervious Footprint				
1	Enter design capture storm depth, d (inches)	$d =$	0.75	inches
2	Using d , calculate the DCV using the pre-project imperviousness, DCV_{pre} (cu-ft).	$DCV_{pre} =$	10505	cu-ft
3	Using d , calculate the DCV using the proposed imperviousness and the methods described in Error! Reference source not found. , DCV_{post} (cu-ft).	$DCV_{post} =$	9256	cu-ft
4	Calculate the <i>Credit Volume</i> = $DCV_{pre} - DCV_{post}$ (cu-ft).	Credit Volume =	1249	cu-ft
Method 2: Determine Credit Volume based on Project Type and Density				
1	Determine the sum of the Credit Percentages applicable to the Project, \sum Credit Percentages (%). (See Section 2.4 of the WQMP)	\sum Credit Percentages =	N/A	%
2	Enter design capture storm depth, d (inches)	$d =$		inches
3	Using d , calculate the DCV using the proposed imperviousness without BMPs and the methods described, $DCV_{post\ no\ BMP}$ (cu-ft).	$DCV_{post\ no\ BMP} =$		cu-ft
4	Calculate the <i>Credit Volume</i> = $DCV_{post\ no\ BMP} \times \sum$ Credit Percentages	Credit Volume =		cu-ft
Step 3: Determine the Alternative Compliance Volume after WQ Credits				
1	Enter design capture storm depth from Error! Reference source not found. , d (inches)	$d =$	N/A	inches
2	Using d , calculate the DCV using the proposed imperviousness and the methods described in Error! Reference source not found. , DCV_{post} (cu-ft).	$DCV_{post} =$		cu-ft
3	Calculate the alternative compliance volume,	ACV =		cu-ft

Worksheet D: Alternative Compliance Volume Worksheet

$ACV = DCV_{post} - \text{Credit Volume}$			
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Figure VI.1: Lookup Graph for Fraction of Design Capture Storm Depth Remaining



Credit Volume = 1249 cf > Alternate Compliance Volume = 511 ✓OK

Section V Inspection/Maintenance Responsibility for BMPs

Fill out information in table below. Prepare and attach an Operation and Maintenance Plan. Identify the funding mechanism through which BMPs will be maintained. Inspection and maintenance records must be kept for a minimum of five years for inspection by the regulatory agencies. *Refer to Section 7.II 4.0 in the Model WQMP.*

The developer shall be responsible for the implementation and initial maintenance of the BMPs.

Ranch Hill Partners LP.
 2454 Alton Pkwy.
 Irvine, California 92606
 (949) 230-5426

After the units are sold, the HOA shall be responsible for ongoing maintenance of the BMPs.

BMP Inspection/Maintenance			
BMP	Responsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
BMP-1 Catch Basin Insert (Approx. Lat.:33.750800° Long.: -117.781677°)	HOA	Remove and properly dispose of accumulated sediment and debris. Inspect and repair any structural damage. Replace filter material per manufacturer's recommendations.	Quarterly
BMP-1 – Infiltration Trench (Approx. Lat.:33.750800° Long.: -117.781677°)	HOA	Check for standing water after storm events.	4 days after storm events.

See Operations & Maintenance Plan in Attachment A.

Section VI Site Plan and Drainage Plan

VI.1 BMP Exhibit (Site Plan)

Include a BMP Exhibit (Site Plan), at a size no less than 24” by 36,” which includes the following minimum information:

- Insert in the title block (lower right hand corner) of BMP Exhibit: the WQMP Number (assigned by staff) and the grading/building or Planning Application permit numbers
- Project location (address, tract/lot number(s), etc.)
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural BMP locations
- Drainage delineations and flow information
- Delineate the area being treated by each structural BMP
- GIS coordinates for LID and Treatment Control BMPs
- Drainage connections
- BMP details
- Preparer name and stamp

Please do not include any areas outside of the project area or any information not related to drainage or water quality. The approved BMP Exhibit (Site Plan) shall be submitted as a plan sheet on all grading and building plan sets submitted for plan check review and approval. The BMP Exhibit shall be at the same size as the rest of the plan sheets in the submittal and shall have an approval stamp and signature prior to plan check submittal.

See the attached 24”x36” WQMP Site Plan in the folder at the back of this report.

VI.2 Submittal and Recordation of Water Quality Management Plan

Following approval of the Final Project-Specific WQMP, three copies of the approved WQMP (including BMP Exhibit, Operations and Maintenance (O&M) Plan, and Appendices) shall be submitted. In addition, these documents shall be submitted in a PDF format. Each approved WQMP (including BMP Exhibit, Operations and Maintenance (O&M) Plan, and Appendices) shall be recorded in the Orange County Clerk-Recorder’s Office, prior to close-out of grading and/or building permit. Educational Materials are not required to be included.

Section VII Educational Materials

Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. Please only attach the educational materials specifically applicable to this project. Other materials specific to the project may be included as well and must be attached.

Education Materials			
Residential Material (http://www.ocwatersheds.com)	Check If Applicable	Business Material (http://www.ocwatersheds.com)	Check If Applicable
The Ocean Begins at Your Front Door	<input checked="" type="checkbox"/>	Tips for the Automotive Industry	<input type="checkbox"/>
Tips for Car Wash Fund-raisers	<input type="checkbox"/>	Tips for Using Concrete and Mortar	<input checked="" type="checkbox"/>
Tips for the Home Mechanic	<input checked="" type="checkbox"/>	Tips for the Food Service Industry	<input type="checkbox"/>
Homeowners Guide for Sustainable Water Use	<input checked="" type="checkbox"/>	Proper Maintenance Practices for Your Business	<input type="checkbox"/>
Household Tips	<input checked="" type="checkbox"/>	Other Material	Check If Attached
Proper Disposal of Household Hazardous Waste	<input checked="" type="checkbox"/>		
Recycle at Your Local Used Oil Collection Center (North County)	<input checked="" type="checkbox"/>	CASQA SD-10 Site Design & Landscape Planning	<input checked="" type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (Central County)	<input type="checkbox"/>	CASQA SD-11 Roof Runoff Controls	<input checked="" type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (South County)	<input type="checkbox"/>	CASQA SD-12 Efficient Irrigation	<input checked="" type="checkbox"/>
Tips for Maintaining a Septic Tank System	<input type="checkbox"/>	CASQA TC-32 Bioretention	<input checked="" type="checkbox"/>
Responsible Pest Control	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Sewer Spill	<input type="checkbox"/>		<input type="checkbox"/>
Tips for the Home Improvement Projects	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Horse Care	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Landscaping and Gardening	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Pet Care	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Pool Maintenance	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Residential Pool, Landscape and Hardscape Drains	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Projects Using Paint	<input checked="" type="checkbox"/>		<input type="checkbox"/>

See Educational Materials in Attachment D.

Attachment A

OPERATION & MAINTENANCE PLAN

I. Inspection, Maintenance Log and Self-Verification Forms

Bio-infiltration are BMPs that have minimal maintenance responsibilities, and are typical for residential land uses. The proposed BMPs inherently "take care of themselves", or property owners can naturally be expected to do so as an incident of taking care of their property.)

The property owners/HOA will be responsible for maintenance of the BMPs and will provide annual documentation to the City verifying that the BMPs are maintained and functioning properly. The property owner is to use the "Private Treatment Control BMP Operation and Maintenance Verification Form" included at the back of this Attachment.

II. Updates, Revisions and Errata

This maintenance plan is a "living document" and must be kept up-to-date.

As such, this plan must be updated whenever changes or revisions are made in the parties responsible for operation and maintenance of the BMPs and/or it is determined that additional maintenance procedures are needed.

Any updates or revisions to the maintenance plan must accompany the annual inspection report when it is transmitted to the county.

III. Introduction

A. Narrative overview describing the site; drainage areas, routing, and discharge points; and treatment facilities.

The project site is approximately 0.75 acres located between Walnut Place and Esther Street approximately 90 feet southeasterly of Tustin Avenue, in the City of Costa Mesa, County of Orange, CA. The project is a residential subdivision that includes construction of 4 residences on 4 parcels.

The project includes three LID BMP's.

BMP 1:

An 80'x42' underground infiltration trench and inlet with catch basin inlet located at the downstream end of the on-site common driveway.

IV. Responsibility for Maintenance

A. General

(1) Name and contact information for responsible individual(s).

The HOA for the planned condominium units will be responsible for the maintenance of the Infiltration trench and inlet treating the flows from the proposed development. The HOA will be responsible for maintaining records, filing annual reports and ensuring that the required maintenance is performed.

The developer of the project will be responsible for the initial implementation of the BMP and the maintenance, until the HOA is formed. The developer contact party is:

Ranch Hill Partners LP.
2454 Alton Pkwy.
Irvine, California 92606
(949) 230-5426

(2) Maintenance Funding.

The funding for the annual maintenance of the BMP's will be provided by the condominium owners through the HOA dues.

B. Records

All records for the maintenance and operation of the BMPs will be kept by the HOA.

V. Summary of Drainage Areas and Stormwater Facilities

A. Drainage Areas

The WQMP Site Plan Exhibit from the WQMP shows the location of the BMPs. The exhibit also indicates the pervious and impervious areas which are draining into the BMPs.

VI. Facility Documentation

A. "As-built" drawings of the BMPs will be kept with the Maintenance Plan after the project is constructed.

VII. Maintenance Schedule or Matrix

Infiltration Trench Inspection and Maintenance Matrix	
Frequency	Maintenance Actions
After a rain event.	Check for standing water in the infiltration more than 3 days after the rain event.
Catch Basin Insert Inspection and Maintenance Matrix	
Frequency	Maintenance Actions
Quarterly.	Remove and properly dispose of accumulated sediment and debris. Inspect and repair any structural damage. Inspect and replace any damaged or dead vegetation.

**PRIVATE TREATMENT CONTROL BMP
OPERATION AND MAINTENANCE VERIFICATION FORM
Catch Basin Insert**

Permit No.: _____

BMP Location: _____

Responsible Party: _____

Phone Number: (_____) _____ Email: _____

Responsible Party Address: _____
Number Street Name & Suffix City/Zip

Check here for Address or phone number change

Using the Table below, please describe the inspections and maintenance activities that have been conducted during the fiscal year (July 1 – June 30), and date(s) maintenance was performed. Under “Results of Inspection,” indicate whether maintenance was required based on each inspection, and if so, what type of maintenance. If maintenance was required, provide the date maintenance was conducted and a description of the maintenance. **REFER TO THE NEXT SHEET FOR MORE INFORMATION DESCRIBING TYPICAL MAINTENANCE INDICATORS AND MAINTENANCE ACTIVITIES.** If no maintenance was required based on the inspection results, state “no maintenance required.”

What To Look For?	Date Inspected	Results of Inspection: Work needed? (Yes/No)	Date Maintenance Completed and Description of Maintenance Conducted
<ul style="list-style-type: none"> • Accumulation of Sediment and Litter • Structural Damage. 			

Attach copies of available supporting documents (photographs, copies of maintenance contracts, and/or maintenance records). Maintain all records for 5 years.

Signature of Responsible Party Print Name Date

PRIVATE TREATMENT CONTROL BMP
OPERATION AND MAINTENANCE VERIFICATION FORM
Underground Infiltration

Very little routine maintenance is needed for infiltration trenches. Fine sediment can collect in the bottom of the trench and eventually cause the water to stop infiltrating properly if the sediment filter in the catch basin is not properly maintained. Preventing erosion of soils upstream of the trench can greatly extend the life of the basin.

Bioretention BMPs Inspection and Maintenance Checklist	
Typical Maintenance Indicators	Typical Maintenance Actions
Standing water in the infiltration trench longer than 72 hours after a rainfall event has ended.	Trench gravel and filter blanket may have to be removed and replaced. Contact an engineer for solution to the issue.

Attachment B: Conditions of Approval

The conditions of approval for the approved Tentative Parcel Map will be included on the following pages when they become available.

Attachment C: Infiltration Test

Geocon West, Inc. prepared a soils report for the project and performed an infiltration test on the site. The report dated May 16, 2017 is included on the following pages.

GEOTECHNICAL INVESTIGATION

**PROPERTY TRANSACTION AND
PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA**



GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

**RANCH HILL PARTERS, LP
NEWPORT BEACH, CALIFORNIA**

**MAY 16, 2017
PROJECT NO. A9568-88-02**



Project No. A9568-88-02
May 16, 2017

Ranch Hill Partners, LP
124 Tustin Avenue, Suite 200
Newport Beach, California 92663

Attention: Mr. Peter Zehnder

Subject: GEOTECHNICAL INVESTIGATION
PROPERTY TRANSACTION AND
PROPOSED SINGLE-FAMILY RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

Dear Mr. Zehnder:

In accordance with your authorization, we have prepared this geotechnical investigation report for the pending property transaction and the proposed single-family residential tract development for the parcel designated as 11782 Simon Ranch Road within the City of Santa Ana, California. The accompanying report presents the findings of our study and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed provided the recommendations of this report are followed and implemented during design and construction.

Geocon West Inc. is the Geotechnical Consultant of Record and will be providing the necessary geotechnical consultation, plan review, design recommendations, inspections, and testing services for this project.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.



Arnold Gastelum
PE 81553



Jelisa Thomas Adams
GE 3092



Susan F. Kirkgard
CEG 1754

(EMAIL) Addressee

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LIMITATIONS AND UNIFORMITY OF CONDITIONS

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- Figure 3, Regional Fault Map
- Figure 4, Regional Seismicity Map
- Figure 5, Fill Slope Detail
- Figures 6 and 7, Retaining Wall Drainage
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APPENDIX A

FIELD INVESTIGATION

Figures A1 through A5, Boring Logs

APPENDIX B

LABORATORY TESTING

Figures B1 and B2, Direct Shear Test Results

Figure B3, Consolidation Test Results

Figure B4, Grain Size Distribution

Figure B5, Lab Test Results

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GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for the pending property transaction and proposed single-family residential tract development for the parcel designated as 11782 Simon Ranch Road within the City of Santa Ana, California (see Vicinity Map, Figure 1). The purpose of the investigation was to evaluate subsurface soil and geologic conditions underlying the site and, based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on April 13, 2017, by excavating five 8-inch diameter borings to depths of approximately 18½ to 33½ feet below the existing ground surface utilizing a truck-mounted hollow-stem auger drilling machine. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 2). A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The subject site is located at 11782 Simon Ranch Road within the City of Santa Ana, in the County of Orange, California. The site is an irregularly-shaped parcel and is currently occupied by three pads that step down from northwest to southeast. Existing site improvements include a paved parking lot, single-story clubhouse, swimming pool, twelve tennis courts, and lawn/patio/hardscape areas. The site is bounded by single-family residences to the northeast, northwest, southeast, and southwest. Current topographic relief is gently southeasterly sloping, accommodating a total elevation change of roughly 48 vertical feet (Elevation 227 to Elevation 275 feet above mean sea level [MSL]). Changes in elevation between pads are accommodated by retaining walls and 2:1 (H:V) slopes. Surface water drainage at the site appears to be by sheet flow along the existing ground contours to the city streets. Vegetation onsite consists of grass and trees, which are located in the lawn and planter areas.

Based on the information provided by the Client, it is our understanding that the proposed development will consist of 37 dwelling units comprised of 17 duplex buildings and 3 single unit buildings with internal streets and an openspace lot. We anticipate construction will consist of two-story wood-framed structures with conventional spread footings and slab-on-grade floors. The proposed slopes around the perimeter of the site and between the individual pads will be up to 15 feet in height and will be constructed at a gradient of 2:1 (horizontal to vertical). Due to the preliminary nature of the project, formal plans depicting the proposed development are not available for inclusion in this report. The existing site conditions are depicted on the Site Plan – Existing (see Figure 2A).

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed residential buildings will be up to 75 kips, and wall loads will be up to 2 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located on a bedrock high along the eastern portion of the Coastal Plain of Orange County. The site is situated on the western flank of the foothills at the base of the Santa Ana Mountains north and west of Peters Canyon Wash. Published geologic maps indicate a northeasterly trending contact transects the site, separating early Miocene to late Eocene age bedrock on the northwest from alluvial deposits on the southeast. Based on a review of aerial photography the original grading of the site likely resulted in a wedge of artificial fill that thickens to the southeast overlying a former drainage channel.

4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by artificial fill and Holocene age alluvial deposits underlain by early Miocene to late Eocene age sedimentary bedrock of the undifferentiated Vaqueros and Sespe Formations (Morton, 1999). Detailed stratigraphic profiles of the materials encountered at the site are provided on the boring logs in Appendix A.

4.1 Artificial Fill

Artificial fill was encountered in our field explorations to a maximum depth of 8 feet below existing ground surface. The artificial fill generally consists of dark brown to dark yellowish brown sandy silt. The artificial fill is characterized as slightly moist and soft to firm. The fill is likely the result of past grading or construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Alluvium

Holocene age alluvium was encountered beneath the fill in borings B2, B3, and B5. The fill consists primarily of sandy silt, clayey silt, silty sand and silt with sand. The soil is primarily yellowish brown to dark yellowish brown, slightly moist and medium dense to dense or stiff to hard.

4.3 Undifferentiated Vaqueros and Sespe Formations

The artificial fill and alluvium is underlain by sedimentary bedrock of the early Miocene age to late Eocene age undifferentiated Vaqueros and Sespe Formations (Morton, 1999). The bedrock was encountered in the borings at depths ranging from 5 to 23 feet beneath the existing ground surface and generally consist of yellowish brown, olive brown, and gray interbedded sandstone and siltstone. The bedrock is slightly moist and soft to moderately hard, unfractured to intensely fractured, and fresh to moderately weathered.

5. GROUNDWATER

The site is elevated above the local alluviated groundwater basin and is underlain by sedimentary bedrock units that are not considered water-bearing. Review of the Seismic Hazard Zone Report for the Orange Quadrangle (California Division of Mines and Geology [CDMG], 2001) indicates there is no available historic or current groundwater data for the site or the immediately surrounding area.

At the time of our field investigation, no evidence of near surface water, such as seeps, springs, or phreatophytes were observed at the site. Groundwater was not encountered in our field explorations, drilled to a maximum depth of 33½ feet below the existing ground surface. Based on the lack of groundwater in our borings and depth of proposed construction, groundwater is neither expected to be encountered during construction or impact foundation excavations or grading operations. However, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the *Surface Drainage* section of this report (see Section 7.17).

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (Bryant and Hart, 2007). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years), but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2017) for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest surface trace of an active fault to the site is the Whittier Fault located approximately 10.5 miles to the northeast (Ziony and Jones, 1989). Other nearby active faults include the Elsinore Fault, the Newport-Inglewood Fault Zone, the Chino Fault, and the Central Avenue Fault located approximately 11.5 miles northeast, 12.0 miles southwest, 13.0 miles northeast, and 15.5 miles north-northeast of the site, respectively (Ziony and Jones, 1989). The active San Andreas Fault Zone is located approximately 39 miles northeast of the site.

The closest potentially active fault to the site is the Peralta Hills Fault located approximately 5.0 miles to the northwest (Ziony and Jones, 1989). Other nearby potentially active faults are the Pelican Hill Fault, the Norwalk Fault, and the Los Alamitos Fault located approximately 10.0 miles southwest, 13.5 miles northwest, and 17.5 miles northwest of the site, respectively (Ziony and Jones, 1989).

Several buried thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin (including the Orange County Coastal Plain) at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than 3.0 kilometers. The October 1, 1987 M_w 5.9 Whittier Narrows earthquake and the January 17, 1994 M_w 6.7 Northridge earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. These thrust faults and others in the greater Los Angeles area are not exposed at the surface and do not present a potential surface fault rupture hazard at the site; however, these deep thrust faults are considered active features capable of generating future earthquakes that could result in moderate to significant ground shaking at the site.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
San Jacinto-Hemet area	April 21, 1918	6.8	45	E
Near Redlands	July 23, 1923	6.3	35	ENE
Long Beach	March 10, 1933	6.4	14	SW
Tehachapi	July 21, 1952	7.5	58	NW
San Fernando	February 9, 1971	6.6	27	NW
Whittier Narrows	October 1, 1987	5.9	37	NNW
Sierra Madre	June 28, 1991	5.8	83	ENE
Landers	June 28, 1992	7.3	63	ENE
Big Bear	June 28, 1992	6.4	54	NW
Northridge	January 17, 1994	6.7	104	ENE
Hector Mine	October 16, 1999	7.1	45	E

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

The following table summarizes site-specific design criteria obtained from the 2016 California Building Code (CBC; Based on the 2015 International Building Code [IBC] and ASCE 7-10), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the computer program *U.S. Seismic Design Maps*, provided by the USGS. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.3.2 of the 2016 CBC and Table 20.3-1 of ASCE 7-10. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

2016 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2016 CBC Reference
Site Class	C	Section 1613.3.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.504g	Figure 1613.3.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.551g	Figure 1613.3.1(2)
Site Coefficient, F_A	1.0	Table 1613.3.3(1)
Site Coefficient, F_V	1.3	Table 1613.3.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.504g	Section 1613.3.3 (Eqn 16-37)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	0.716g	Section 1613.3.3 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.003g	Section 1613.3.4 (Eqn 16-39)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.477g	Section 1613.3.4 (Eqn 16-40)

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-10.

ASCE 7-10 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-10 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.537g	Figure 22-7
Site Coefficient, F_{PGA}	1.0	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.537g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2016 California Building Code and ASCE 7-10, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain “Life Safety” during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online BETA Unified Hazard Tool, 2008 Conterminous U.S. Dynamic edition. The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 6.56 magnitude event occurring at a hypocentral distance of 13.0 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 6.61 magnitude occurring at a hypocentral distance of 18.78 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the “Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California” and “Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California” requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Orange Quadrangle (1998) indicates that the site is not located in an area designated as “liquefiable.” In addition, the Orange County General Plan (2004) indicates that the site is not located within an area identified as having a potential for liquefaction. As previously discussed, consolidated early Miocene to late Eocene age sedimentary bedrock that is not prone to liquefaction underlies the site at depths ranging from 5 to 23 feet beneath the existing ground surface. Based on these considerations, it is our opinion that the potential for liquefaction and associated ground deformations beneath the site is very low.

6.5 Slope Stability

The topography at the site is sloping gently southeast accommodating a total elevation change of roughly 48 vertical feet from Elevation 275 MSL to Elevation 227 (above mean sea level [MSL]). Changes in elevations between pads are accommodated by retaining walls and 2:1 (H:V) graded slopes. According to the Orange County General Plan (2004), the site is not within an area identified as having a potential for slope instability. Additionally, the site is not within an area identified as having a potential for seismic slope instability (CDMG, 1998). There are no known landslides near the site, nor is the site in the path of any known or potential landslides. Therefore, the potential for slope stability hazards to adversely affect the proposed development is considered low.

Based on published geologic maps, the geologic structure of the bedrock in the area is oriented favorably with respect to the existing on-site slopes. However, the orientation of the bedrock will require further assessment during the future design phases of the project and prior to grading.

6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. Based on a review of the Orange County General Plan (2004), the site is not located within a potential inundation area for an earthquake-induced dam failure. The probability of earthquake-induced flooding is considered very low.

6.7 Tsunamis, Seiches, and Flooding

The site is not located within a coastal area. Therefore, tsunamis, seismic sea waves, are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding resulting from a seismically-induced seiche is considered unlikely.

The site is within an area of minimal flooding (Zone X) as defined by the Federal Emergency Management Agency (FEMA, 2017).

6.8 Oil Fields & Methane Potential

Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Oil and Gas Well Location Map W1-6, the site is not located within the limits of an oilfield and oil or gas wells are not located in the immediate site vicinity. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map and undocumented wells could be encountered during construction. Any wells encountered during construction will need to be properly abandoned in accordance with the current requirements of the DOGGR.

Since the site is not located within the boundaries of a known oil field, the potential for the presence of methane or other volatile gases at the site is considered low. However, should it be determined that a methane study is required for the proposed development it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

- 7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed development provided the recommendations presented herein are followed and implemented during design and construction.
- 7.1.2 Up to 8 feet of existing artificial fill was encountered during the site investigation. The existing fill encountered is believed to be the result of past grading and construction activities at the site. Deeper fill may exist in other areas of the site that were not directly explored. Future demolition of the existing structures which occupy the site will likely disturb the upper few feet of soil. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the Grading section of this report are followed (see Section 7.4). If bedrock is to be utilized as engineered fill, it may be blocky and may have to be crushed, moisture conditioned, and blended prior to utilization.
- 7.1.3 Based on these considerations, at a minimum it is recommended that the upper 5 feet of existing earth materials within the building footprint areas be excavated and properly compacted for foundation and slab support. Deeper excavations should be conducted as needed to remove any encountered fill or soft soils as necessary at the direction of the Geotechnical Engineer (a representative of Geocon). Removals of 8 feet or more should be expected, especially over the former drainage channel in the southeastern portion of the site. The excavation should extend laterally a minimum distance of 3 feet beyond the building footprint areas, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. Proposed building foundations should be underlain by a minimum of 3 feet of newly placed engineered fill. The limits of existing fill and/or soft soil removal will be verified by the Geocon representative during site grading activities. Recommendations for earthwork are provided in the *Grading* section of this report (see Section 7.4).
- 7.1.4 Subsequent to the recommended grading, the proposed residential buildings may be supported on conventional shallow spread foundation systems deriving support in newly placed engineered fill.
- 7.1.5 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon). Prior to placing any fill, the upper 12 inches of the excavation bottom must be scarified, moistened, and proof-rolled with heavy equipment in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.).

- 7.1.6 It is anticipated that stable excavations for the recommended grading associated with the proposed residential buildings can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.15).
- 7.1.7 Foundations for small outlying structures, such as block walls less than 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed residential buildings, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the competent undisturbed alluvial soils found at or below a depth of 30 inches, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. Based on the variable subsurface conditions across the site, alternative miscellaneous foundation recommendations may be required and can be provided as the project progresses under separate cover. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.
- 7.1.8 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft alluvial soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of subgrade soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.12).
- 7.1.9 Based on the results of percolation testing performed at the site, a stormwater infiltration system is considered feasible for this project. Recommendations for infiltration are provided in the *Stormwater Infiltration* section of this report (see Section 7.16).
- 7.1.10 Additional site exploration and laboratory testing should be considered to study the eastern portion of the property, which is currently occupied by tennis courts. The additional site exploration can be conducted as a second phase of geotechnical investigation or immediately following site demolition. Until additional site exploration is conducted, the recommendations provided herein should be considered preliminary with respect to the western portion of the site.

7.1.11 Once the design and foundation loading configuration for the proposed residential buildings proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be re-evaluated by this office.

7.1.12 Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate to heavy effort using conventional excavation equipment. Some caving should be anticipated in unshored excavations, especially where granular soils are encountered.

7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of existing adjacent improvements.

7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping or shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.15).

7.2.4 The upper 5 feet of existing site soils encountered during this investigation are considered to have a “medium” expansive potential (EI = 66); and are classified as “expansive” based on the 2016 California Building Code (CBC) Section 1803.5.3. Recommendations presented herein assume that the building foundations and slabs will derive support in these materials.

7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered “corrosive” with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B6) and should be considered for design of underground structures.

- 7.3.2 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B6) and indicate that the on-site materials possess “not applicable” sulfate exposure to concrete structures as defined by 2016 CBC Section 1904 and ACI 318-11 Sections 4.2 and 4.3.
- 7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

- 7.4.1 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill and alluvial soil encountered during exploration is suitable for re-use as engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris are removed. If bedrock is to be utilized as engineered fill, it may be blocky and may have to be crushed, moisture conditioned, and blended prior to utilization.
- 7.4.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and building official in attendance. Special soil handling requirements can be discussed at that time.
- 7.4.3 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).
- 7.4.4 As a minimum, it is recommended that the upper 5 feet of existing earth materials within the proposed building footprint areas be excavated and properly compacted for foundation and slab support. Deeper excavations should be conducted as necessary to remove deeper artificial fill or soft alluvial soil at the direction of the Geotechnical Engineer (a representative of Geocon). Removals of 8 feet or more should be expected in the southern portion of the site. The excavation should extend laterally a minimum distance of 3 feet beyond the building footprint area, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. Proposed building foundations should be underlain by a minimum of 3 feet

of newly placed engineered fill. The limits of existing fill and/or soft alluvial soils removal will be verified by the Geocon representative during site grading activities.

- 7.4.5 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon). Prior to placing any fill, the upper 12 inches of the excavation bottom must be scarified, moistened, and proof-rolled with heavy equipment in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.).
- 7.4.6 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to optimum moisture content, and properly compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D 1557 (latest edition).
- 7.4.7. Where new paving is to be placed, it is recommended that all existing fill and soft alluvium be excavated and properly compacted for paving support. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to optimum moisture content, and compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.12).
- 7.4.8 It is anticipated that stable excavations for the recommended grading can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of the existing offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.15).
- 7.4.9 Foundations for small outlying structures, such as block walls less than 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed building, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils found at or below a depth of 30 inches, and should be deepened as necessary to maintain a minimum 12 inch embedment into the recommended bearing materials. Based on the variable subsurface conditions across the site, alternative miscellaneous foundation recommendations may be required and can be provided as the project progresses under separate cover. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

- 7.4.10 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry is also acceptable as backfill (see Section 7.4). Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).
- 7.4.11 All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 50 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B6). Import soils placed in the building area should be placed uniformly across a building pad or in a manner that is approved by the Geotechnical Engineer (a representative of Geocon).
- 7.4.12 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

7.5 Slope Construction

- 7.5.1 Prior to construction of slopes, it is recommended that all existing artificial fill be excavated within the footprint of the proposed slope. If all artificial fill may not be removed prior to placement of additional fill for construction of proposed slopes, the Client should be aware that placement of additional engineered fill over the existing artificial fill could induce settlement of the existing artificial fill that could adversely affect proposed improvements. If settlement of the existing artificial fill occurs, the overlying improvements may experience distress such as settlement or, in extreme circumstances, slope failure may occur. Recommendations for earthwork are provided in Section 7.4.
- 7.5.2 A keyway is required at the toe of all proposed fill slopes which are not directly underlain by newly placed engineered fill. The keyway should be cut a minimum of 2 feet into competent material and must be observed and approved in writing by the Geotechnical Engineer prior to placement of any fill. A detail is provided on Figure 5.

- 7.5.3 All engineered fill must be placed and compacted on a horizontal surface; benching into the existing ground surface must be performed as necessary such that all fill is placed and compacted on a horizontal surface.
- 7.5.4 Fill slopes comprised of on-site materials should be constructed at a gradient of 2:1 or flatter. Fill slopes should be overbuilt by at least 3 feet measured perpendicular to the slope face and trimmed back to the tight fill core. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.
- 7.5.5 As an alternative, fill slope faces may be compacted by track-rolling with a loaded sheepsfoot roller at vertical intervals not to exceed 4 feet, and should be track-walked at the completion of each slope such that the fill is compacted to a dry density of at least 90 percent of the laboratory maximum dry density.
- 7.5.6 All slopes should be planted, drained, and property maintained to reduce erosion. It is recommended that finished slopes be planted as soon after completion of grading as possible. Planting on the slope stabilizes the surface and reduces the potential for erosion. It is further suggested that a jute or mesh product be placed on the slope face prior to planting. The planting of the slope should be performed at the direction of a qualified landscaping consultant.

7.6 Shrinkage

- 7.6.1 Shrinkage results when a volume of material removed at one density is compacted to a higher density. A shrinkage factor of up to 8 percent should be anticipated when excavating and compacting the upper 5 feet of existing earth materials on the site to an average relative compaction of 92 percent. Bulking of cut bedrock is likely to occur and anticipated bulking percentages should be evaluated once the project proceeds to a more finalized plan.
- 7.4.2 If import soils will be utilized in the building pads, the soils must be placed uniformly and at equal thickness at the direction of the Geotechnical Engineer (a representative of Geokon West, Inc.). Soils can be borrowed from non-building pad areas and later replaced with imported soils.

7.7 Foundation Design

- 7.7.1 Subsequent to the recommended grading, a conventional shallow spread foundation system may be utilized for support of the proposed residential buildings provided foundations derive support in newly placed engineered fill. Foundations should be underlain by a minimum of 3 feet of newly placed engineered fill.
- 7.7.2 Continuous footings may be designed for an allowable bearing capacity of 2,400 pounds per square foot (psf), and should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

- 7.7.3 Isolated spread foundations may be designed for an allowable bearing capacity of 3,000 psf, and should be a minimum of 24 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.
- 7.7.4 The allowable soil bearing pressure above may be increased by 160 psf and 500 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 3,500 psf.
- 7.7.5 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.
- 7.7.6 If depth increases are utilized for the perimeter foundations, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary. Additional grading should be conducted as-needed in order to maintain the required 3-foot thick blanket of engineered fill below proposed foundations.
- 7.7.7 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.
- 7.7.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.
- 7.7.9 Due to the expansive potential of the subgrade soils, the moisture content in the slab and foundation subgrade should be maintained at 2 percent above optimum moisture content prior to and at the time of concrete placement.
- 7.7.10 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.
- 7.7.11 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.8 Foundation Settlement

- 7.8.1 The maximum expected static settlement for a residential building supported on a conventional foundation system deriving support in the recommended bearing materials and designed with a maximum bearing pressure of 3,500 psf is estimated to be less than ½ inch and occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on initial application of loading. Differential settlement is not expected to exceed ¼ inch over a distance of 20 feet.
- 7.8.2 Once the design and foundation loading configurations for the proposed residential buildings proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.9 Miscellaneous Foundations

- 7.9.1 Foundations for small outlying structures, such as block walls less than 6 feet in height, planter walls or trash enclosures which will not be tied to a proposed residential building may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils found at or below a depth of 30 inches, and should be deepened as necessary to maintain a minimum 12 inch embedment into the recommended bearing materials. Based on the variable subsurface conditions across the site, alternative miscellaneous foundation recommendations may be required and can be provided as the project progresses under separate cover
- 7.9.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.
- 7.9.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.10 Lateral Design

- 7.10.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.3 may be used with the dead load forces in properly compacted engineered fill or competent alluvial soils.
- 7.10.2 Passive earth pressure for the sides of foundations and slabs poured against properly compacted engineered fill or competent alluvial soils may be computed as an equivalent fluid having a density of 200 pcf with a maximum earth pressure of 2,000 psf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.11 Concrete Slabs-on-Grade

- 7.11.1 Concrete slabs-on-grade subject to vehicle loading should be designed in accordance with the recommendations in the *Preliminary Pavement Recommendations* section of this report (Section 7.12).
- 7.11.2 Subsequent to the recommended grading, concrete slabs-on-grade for structures, not subject to vehicle loading, should be a minimum of 4 inches thick and minimum slab reinforcement should consist of No. 4 steel reinforcing bars placed 16 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint.
- 7.11.3 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

- 7.11.4 For seismic design purposes, a coefficient of friction of 0.3 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.
- 7.11.5 Exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.
- 7.11.6 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.12 Preliminary Pavement Recommendations

- 7.12.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable alluvial materials be excavated and properly recompact for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft alluvium in the area of new paving is not required; however, paving constructed over existing unsuitable material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to optimum moisture content, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).
- 7.12.2 The following pavement sections are based on R-Value laboratory test result of 13. Once site grading activities are complete another R-Value should be obtained for laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

7.12.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking And Driveways	4.0	3.0	5.0
Trash Truck & Fire Lanes	7.0	4.0	13.5

7.12.4 Asphalt concrete should conform to Section 203-6 of the “*Standard Specifications for Public Works Construction*” (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the “*Standard Specifications of the State of California, Department of Transportation*” (Caltrans). The use of Crushed Miscellaneous Base in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200 2.4 of the “*Standard Specifications for Public Works Construction*” (Green Book).

7.12.5 Unless specifically designed and evaluated by the project structural engineer, where exterior concrete paving will be utilized for support of vehicles, it is recommended that the concrete be a minimum of 6 inches of concrete reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compactions as determined by ASTM Test Method D 1557 (latest edition).

7.12.6 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.13 Retaining Walls Design

- 7.13.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 6 feet. In the event that walls significantly higher than 6 feet are planned, Geocon should be contacted for additional recommendations.
- 7.13.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* sections of this report (see Section 7.7).
- 7.13.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure) of 30 pcf.
- 7.13.4 Restrained walls are those that are not allowed to rotate more than $0.001H$ (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure) of 50 pcf.
- 7.13.5 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils or engineered fill derived from onsite soils. If import material is placed behind proposed walls, revised earth pressures may be required. This should be evaluated once the use of import material is established and the geotechnical characteristics of the import soils can be further evaluated.
- 7.13.6 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 90 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.
- 7.13.7 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses. Once the design becomes more finalized, an addendum letter can be prepared revising recommendations and addressing specific surcharge conditions throughout the project, if necessary.

7.14 Retaining Wall Drainage

- 7.14.1 Retaining walls should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 6). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

- 7.14.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 7). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.
- 7.14.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures. Drainage should not be allowed to flow uncontrolled over descending slopes.
- 7.14.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.15 Temporary Excavations

- 7.15.1 Excavations on the order of 8 feet in height may be required during grading operations. The excavations are expected to expose artificial fill, alluvial soils, and bedrock which are suitable for vertical excavations up to 5 feet in height where loose soils or caving sands are not present, and where not surcharged by adjacent traffic or structures.
- 7.15.2 Vertical excavations greater than 5 feet or where surcharged by existing structures will require sloping or shoring measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter up to maximum height of 10 feet. A uniform slope does not have a vertical portion.
- 7.15.3 If excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures such as slot-cutting or shoring may be necessary in order to maintain lateral support of offsite improvements. Recommendations for special temporary excavation measures can be provided under separate cover once the proposed building layout is established.

7.15.4 Where sloped embankments are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.16 Stormwater Infiltration

7.16.1 During the April 13, 2017, site exploration, boring B3 was utilized to perform percolation testing. The percolation testing was performed at the depths listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with gravel. The boring was then filled with water to pre-saturate the soils. On April 14, 2017, the casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavation. Based on the test results, the average infiltration rate (adjusted percolation rate), for the earth materials encountered, is provided in the following table. The field-measured percolation rate has been adjusted to infiltration rates in accordance with the County of Orange Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (December 2013). Additional correction factors may be required and should be applied by the engineer in responsible charge of the design of the stormwater infiltration system and based on applicable guidelines. Percolation test data is provided as Figure 8.

Boring	Infiltration Depth (ft.)	Average Infiltration Rate (in / hour)
B3	20-22	1.9

7.16.2 The results of the percolation testing indicate that the soils at depths in the above table are conducive to infiltration. It is our opinion that the soil zone encountered at the depth and location as listed in the table above are suitable for infiltration of stormwater and will not induce excessive hydro-consolidation, will not affect soil structure interaction of existing or proposed foundations due to expansive soils, will not saturate soils supported by existing or proposed retaining walls, and will not increase the potential for liquefaction. Resulting settlements are anticipated to be less than ¼ inch, if any. Additional studies may be required to confirm that stormwater infiltration will not create a perched groundwater condition that would adversely affect the subject site or surrounding properties.

- 7.16.3 Where infiltration systems will be utilized, it is recommended that a minimum 10-foot horizontal and vertical setback be maintained from existing or proposed foundations. Additional setbacks may be required by the governing jurisdiction and should be incorporated into the stormwater infiltration system design as necessary.
- 7.16.4 Subsequent to the placement of the infiltration system, it is acceptable to backfill the resulting void space between the excavation sidewalls and the infiltration system with minimum two-sack slurry provided the slurry is not placed in the infiltration zone. It is recommended that pea gravel be utilized adjacent to the infiltration zone so communication of water to the soil is not hindered.
- 7.16.5 Due to the preliminary nature of the project at this time, the type of stormwater infiltration system and location of the stormwater infiltration systems has not yet been determined. The design drawings should be reviewed and approved by the Geotechnical Engineer. The installation of the stormwater infiltration system should be observed and approved by the Geotechnical Engineer (a representative of Geocon).

7.17 Surface Drainage

- 7.17.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.
- 7.17.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2016 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within five feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.
- 7.17.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pad and pavement areas should be fine graded such that water is not allowed to pond.

7.17.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.18 Plan Review

7.18.1 Grading and foundation plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.
2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.
4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

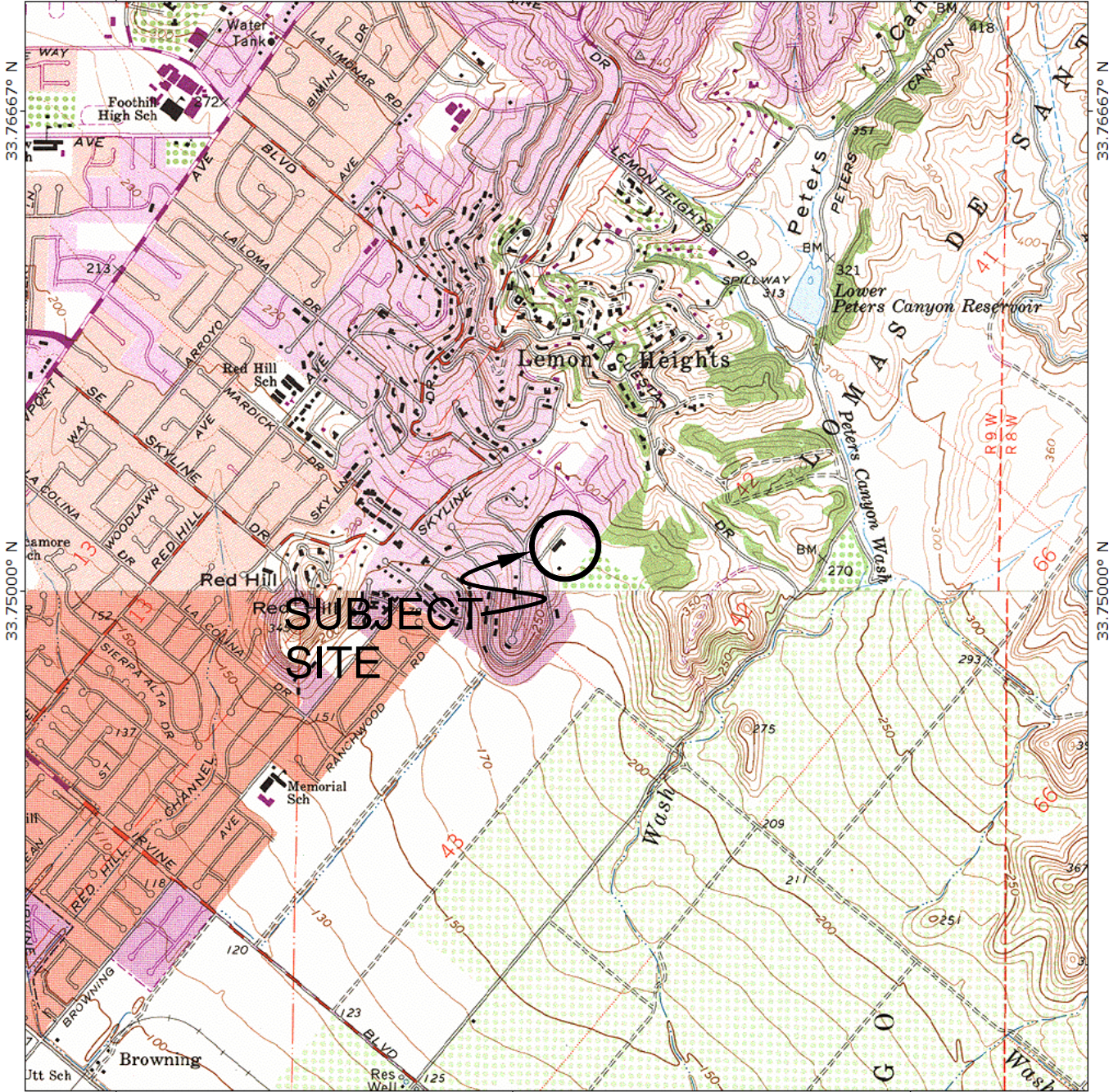
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TOPO! map printed on 05/08/17 from "LA.TPO" and "Untitled.tpg"

117.80000° W

117.78333° W

WGS84 117.76667° W



33.76667° N

33.75000° N

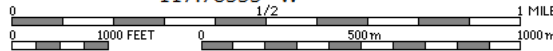
33.76667° N

33.75000° N

117.80000° W

117.78333° W

WGS84 117.76667° W



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REFERENCE: U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, ORANGE, CA QUADRANGLE

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WEST, INC.



ENVIRONMENTAL GEOTECHNICAL MATERIALS
15520 ROCKFIELD BLVD. - SUITE J - IRVINE, CA 92618
PHONE (949) 491-6570

VICINITY MAP

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

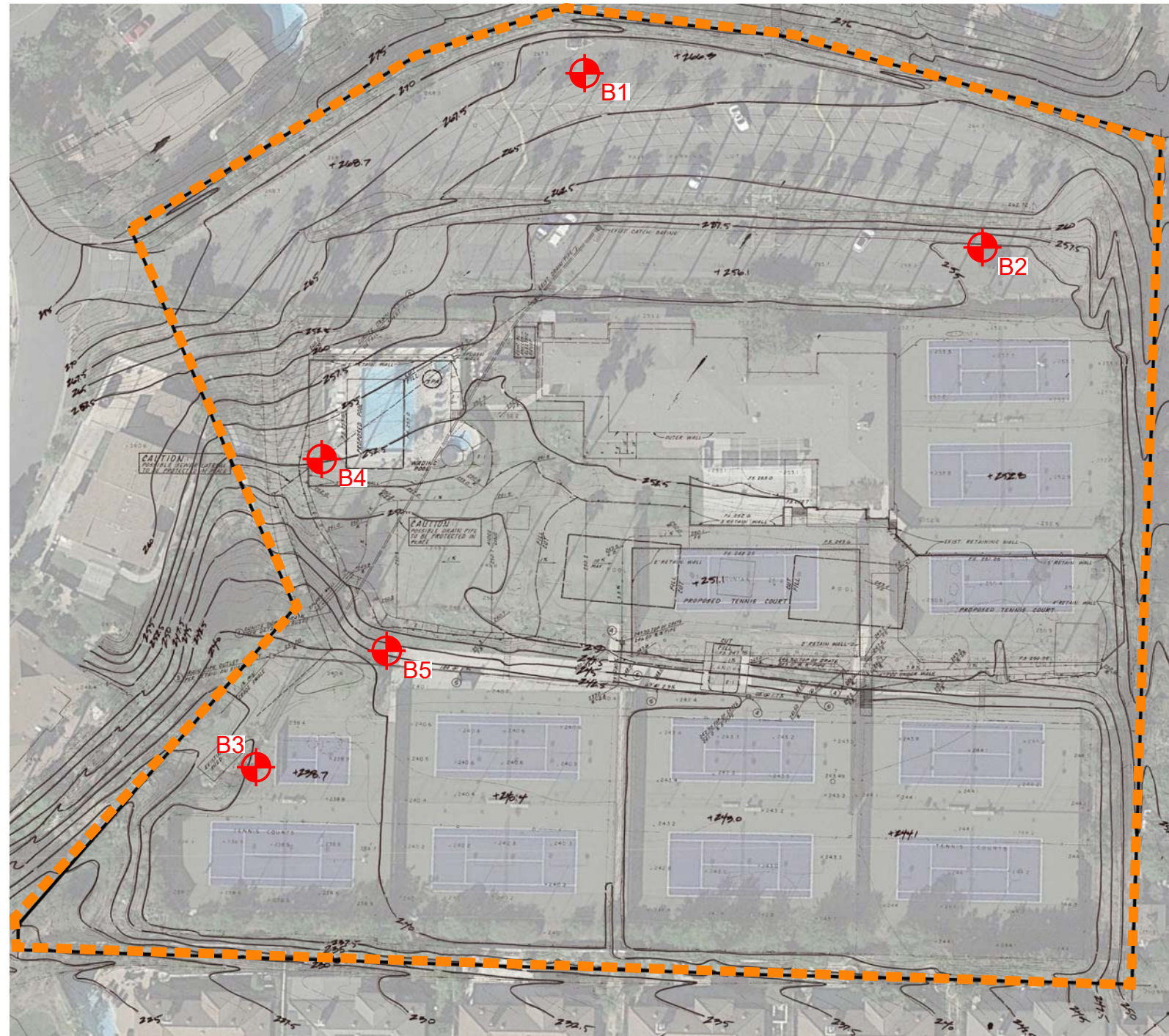
DRAFTED BY: RMA

CHECKED BY: GAK/SFK



MAY 2017

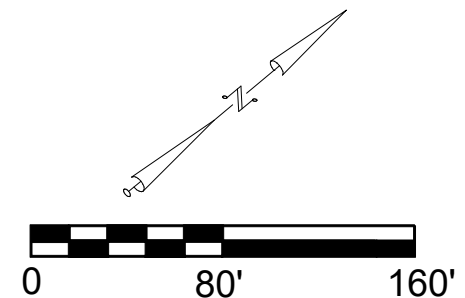
PROJECT NO. A9568-88-02


FIG. 1



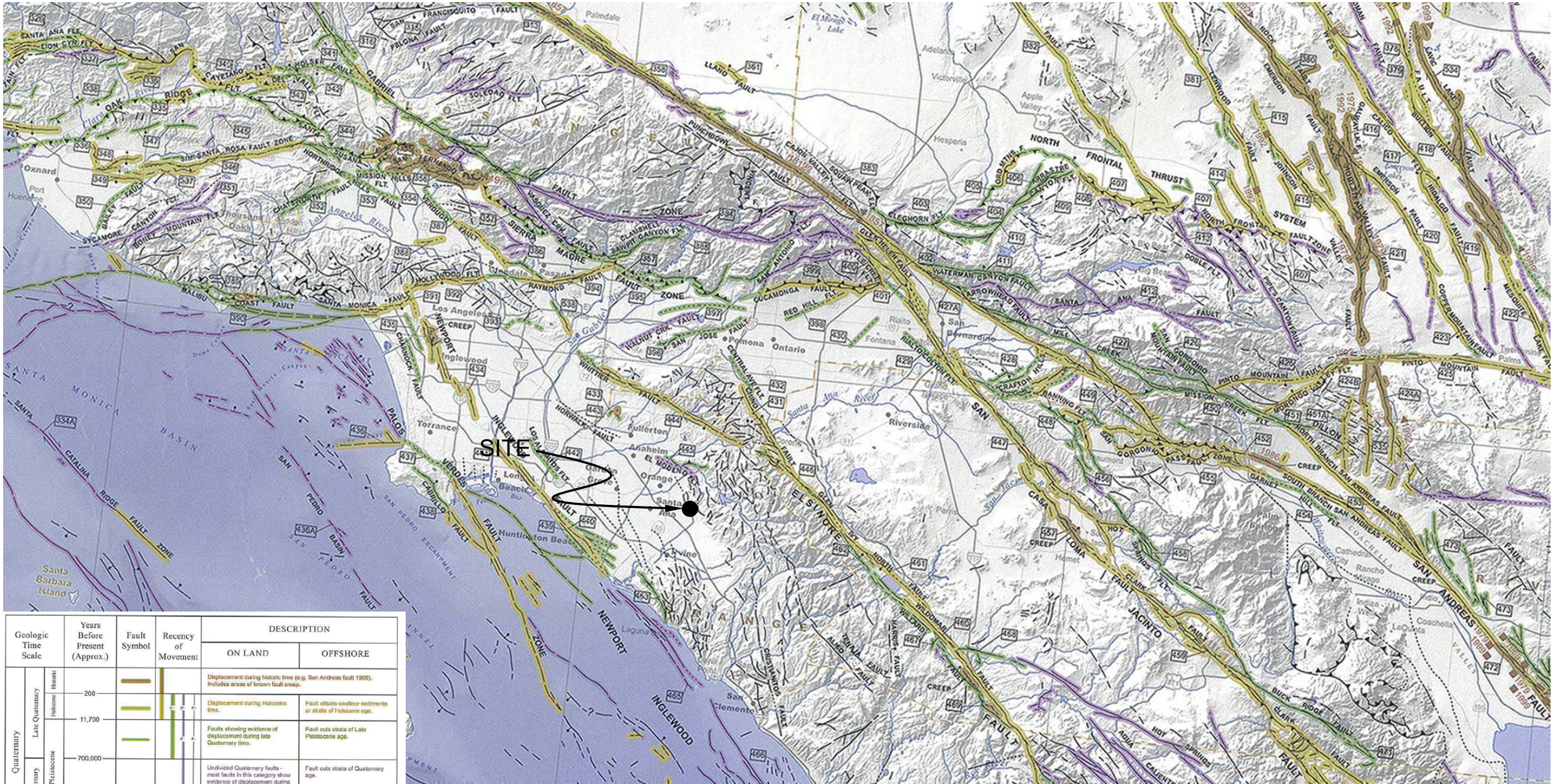
LEGEND

-  B5 Approximate Location of Boring
-  Approximate Location of Property Line



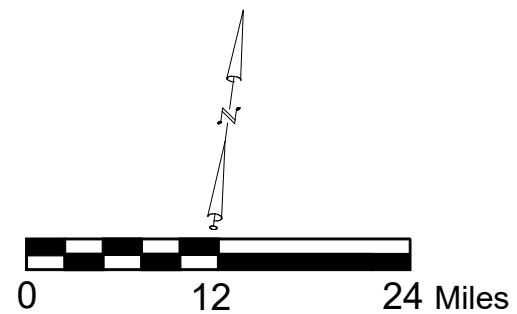
GEOCON WEST, INC.			
ENVIRONMENTAL GEOTECHNICAL MATERIALS 15520 ROCKFIELD BLVD. - SUITE J - IRVINE, CA 92618 PHONE (949) 491-6570			
DRAFTED BY: RMA		CHECKED BY: SFK	
SITE PLAN - EXISTING PROPOSED SINGLE-FAMILY RESIDENTIAL TRACT DEVELOPMENT 11782 SIMON RANCH ROAD SANTA ANA, CALIFORNIA		MAY 2017	PROJECT NO. A9568-88-02
			FIG. 2

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale	Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
				ON LAND	OFFSHORE
Quaternary	Late Quaternary Holocene			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	Fault offsets seafloor sediments or strata of Holocene age.
				Displacement during Holocene time.	Fault cuts strata of Pleistocene age.
	Early Quaternary Pleistocene			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
Pre-Quaternary	1,600,000'			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
	4.5 billion (Age of Earth)			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.



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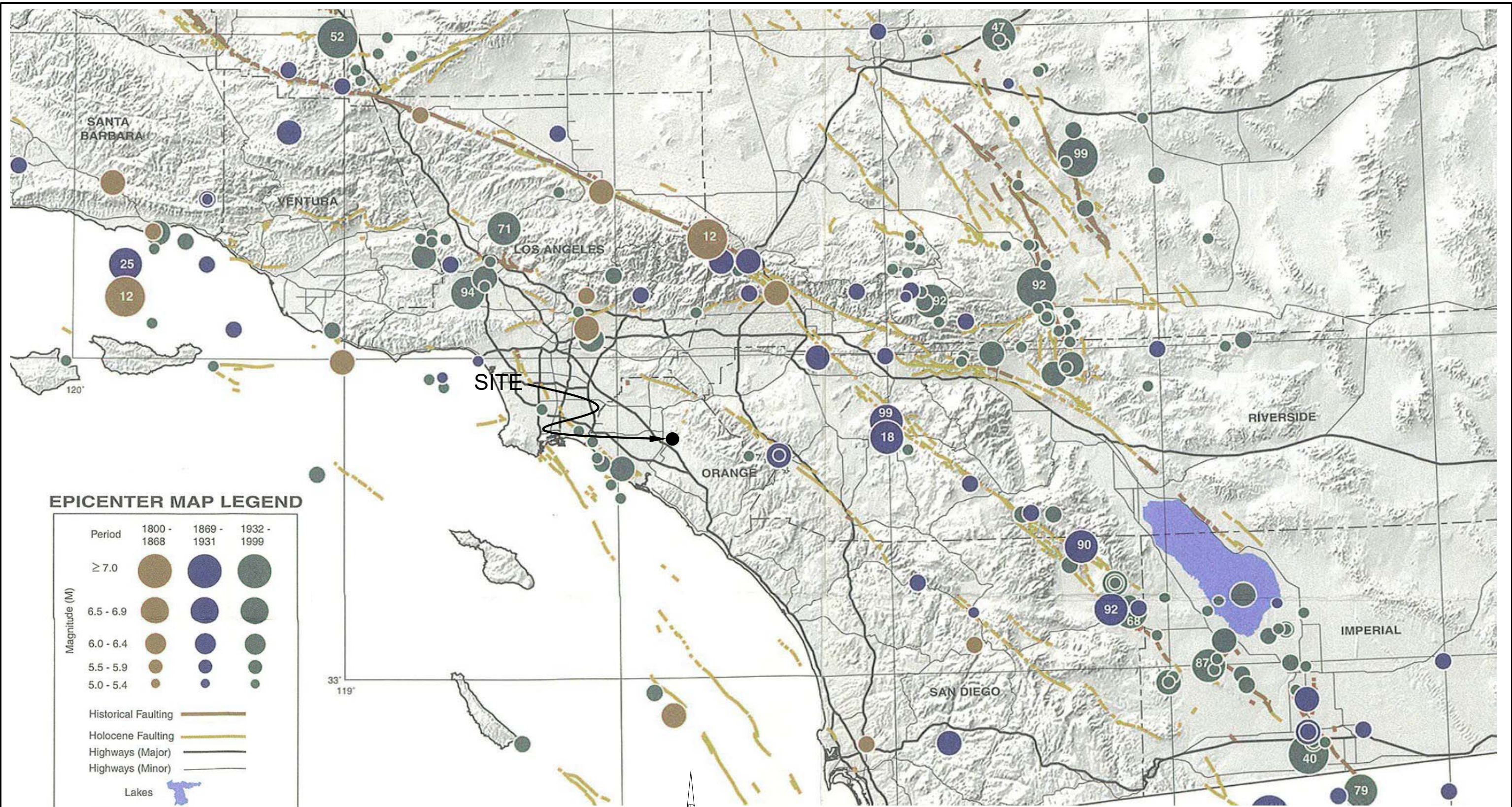
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REGIONAL FAULT MAP

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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SANTA ANA, CALIFORNIA

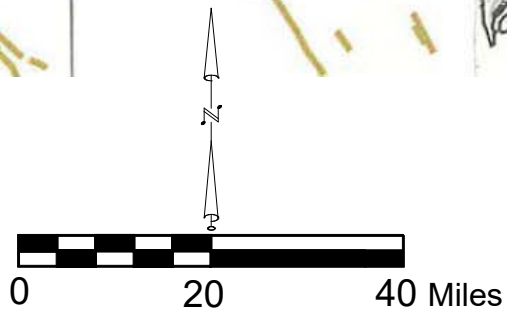
MAY 2017 PROJECT NO. A9568-88-02 FIG. 3



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M)			
≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			
Historical Faulting			
Holocene Faulting			
Highways (Major)			
Highways (Minor)			
Lakes			
	Last two digits of M ≥ 6.5 earthquake year		

Reference: Topozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.



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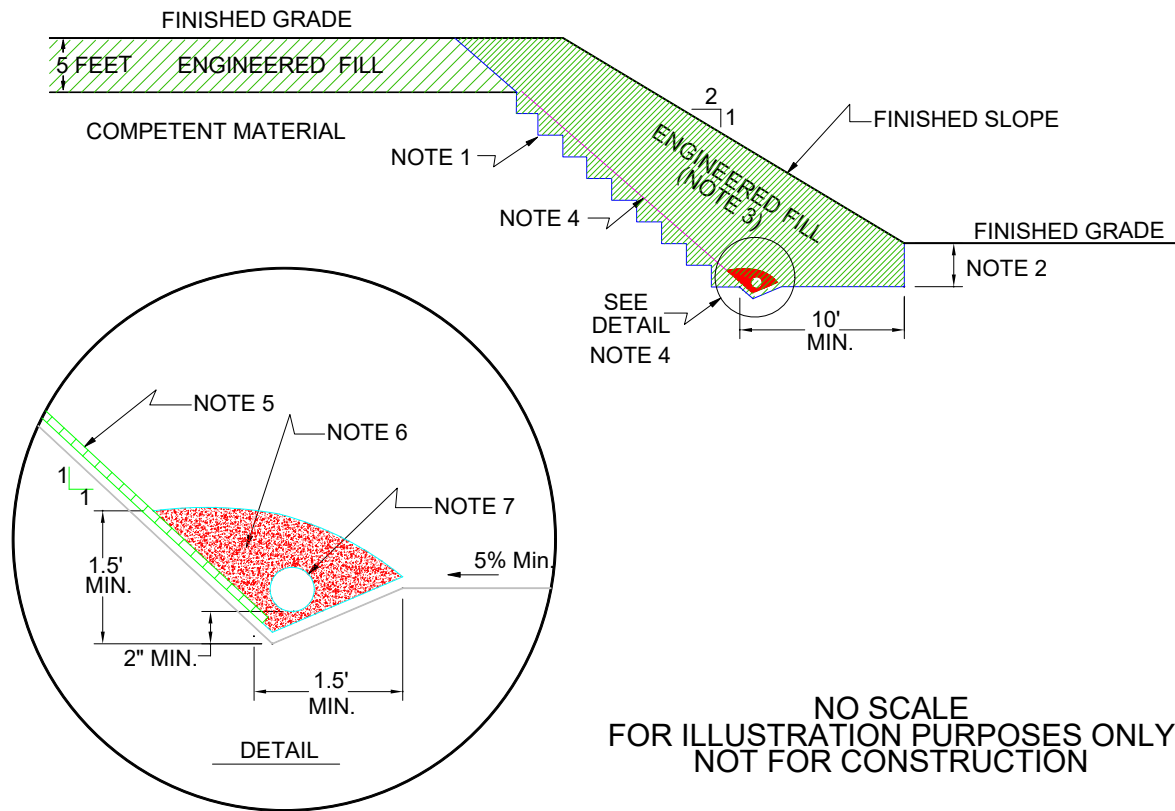
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REGIONAL SEISMICITY MAP

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017 PROJECT NO. A9568-88-02 FIG. 4



NO SCALE
FOR ILLUSTRATION PURPOSES ONLY
NOT FOR CONSTRUCTION

NOTES

- 1 EXCAVATE BENCHED BACKCUT AT 1:1 INCLINATION OR FLATTER
- 2 BASE OF SLOPE KEYWAY TO BE 2 FEET BELOW PAD GRADE SLOPING A MINIMUM 5% INTO SLOPE
- 3 FILL SLOPE TO BE COMPOSED OF PROPERLY COMPACTED ENGINEERED FILL
- 4 KEYWAY DRAIN TO BE INSTALLED WHERE BEDROCK IS EXPOSED WITHIN EXCAVATION FOR FILL SLOPE
- 5 WHERE SEEPAGE IS ENCOUNTERED IN BACKCUT OR SLOPE HEIGHT EXCEEDS 15 FEET, CHIMNEY DRAINS ARE RECOMMENDED, CHIMNEY DRAINS TO BE APPROVED, PREFABRICATED DRAINS ARE CHIMNEY DRAIN PANELS (MIRIDRAIN 5000 OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE
- 6 FILTER MATERIAL TO BE 1-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC
- 7 COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET

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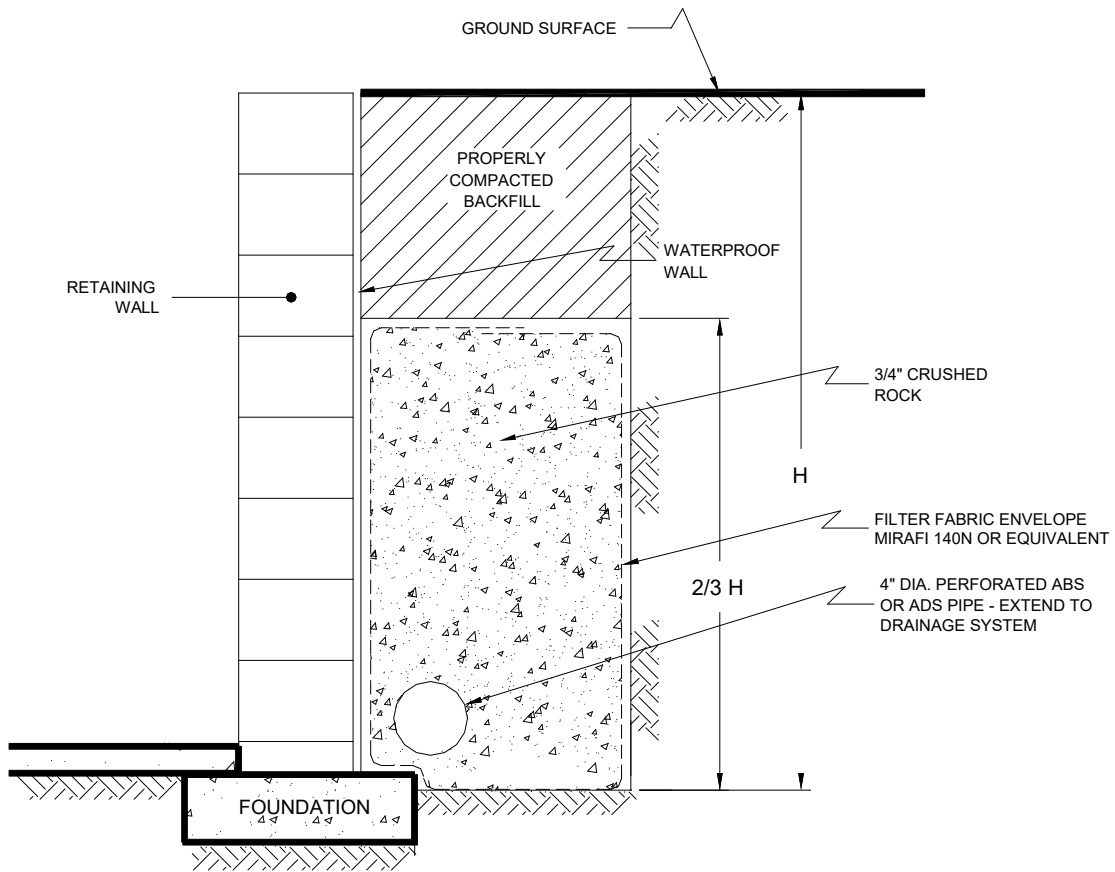
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FILL SLOPE DETAIL

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017 PROJECT NO. A9568-88-02 FIG. 5



NO SCALE

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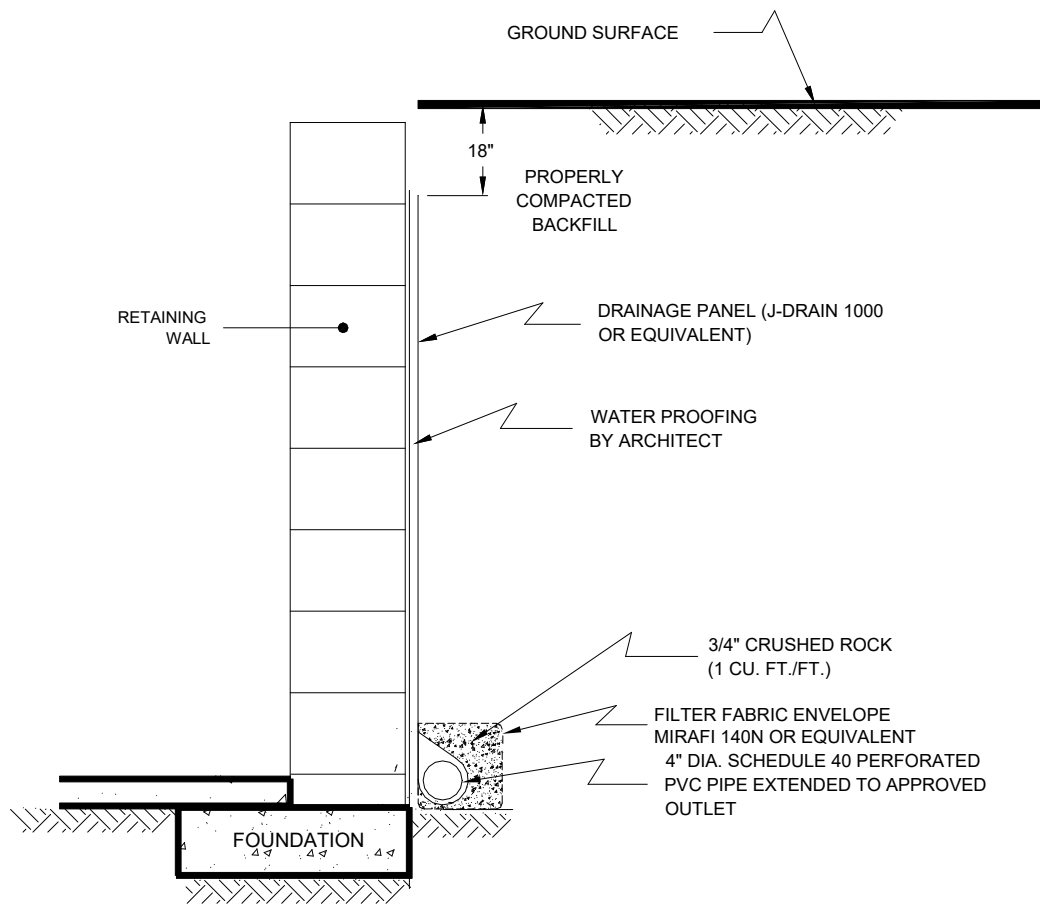
RETAINING WALL DRAIN DETAIL

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. 6



NO SCALE

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DRAFTED BY: AG

CHECKED BY: JTA

RETAINING WALL DRAIN DETAIL

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. 7

PERCOLATION TEST DATA SHEET

Project:	11782 Simon Ranch Rd	Project No:	A9568-88-02	Date:	4/14/2017
Test Hole No:	B3	Tested By:	RA		
Depth of Test Hole, D _T :	22	USCS Soil Classification:			
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round) =	8	Sides (if rectangular) =	---	---	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D ₀ Initial Depth to Water (in)	D _f Final Depth to Water (in)	ΔD Change in Water Level (in)	Greater than or Equal to 6"? (y/n)
1	10:14	10:39	25	204.0	225.6	21.6	y
2	10:58	11:23	25	198.0	223.2	25.2	y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements, taken every 10 minutes. Otherwise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D ₀ Initial Depth to Water (in)	D _f Final Depth to Water (in)	ΔD Change in Water Level (in)	Percolation Rate (min/in)
1	11:32	11:42	10	204.0	213.6	9.6	1500
2	11:57	12:07	10	204.0	213.6	9.6	1500
3	12:10	12:20	10	204.0	214.9	10.9	1319
4	12:26	12:36	10	204.0	213.7	9.7	1481
5	12:38	12:48	10	201.0	210.0	9.0	1600
6	12:51	13:01	10	200.4	209.9	9.5	1519
7							
8							

Infiltration Rate Calculation:

Time Interval, Δt =	10	minutes	Ho =	63.6	inches
Final Depth to Water, D _f =	209.9	inches	H _f =	54.1	inches
Test Hole Radius, r =	4	inches	ΔH =	9.5	inches
Initial Depth to Water, D ₀ =	200.4	inches	H _{avg} =	58.9	inches
Total Depth of Test Hole, D _T =	264.0	inches			

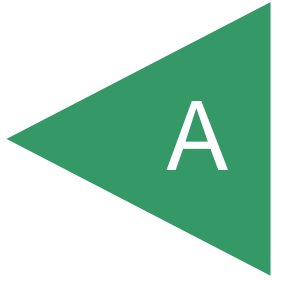
$$I_t = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Infiltration Rate, I_t = **1.9** inches/hour

Figure 8

APPENDIX

A



APPENDIX A

FIELD INVESTIGATION

The site was explored on April 13, 2017, by excavating five 8-inch diameter borings to depths of approximately 18½ to 33½ feet below the existing ground surface utilizing a truck-mounted hollow-stem auger drilling machine. Representative and relatively undisturbed samples were obtained by driving a 3-inch, O. D., California Modified Sampler into the “undisturbed” soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2³/₈-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the borings are presented on Figures A1 through A5. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The location of the borings are shown on Figure 2.












DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 1		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	
					ELEV. (MSL.) <u>266.0</u>	DATE COMPLETED <u>4/13/17</u>				
					EQUIPMENT <u>HOLLOW STEM AUGER</u>		BY: <u>RMA</u>			
MATERIAL DESCRIPTION										
0	BULK 0-5'				AC: 5" BASE: NONE ARTIFICIAL FILL Sandy Silt, firm, slightly moist, yellowish brown, fine-grained, trace clay.					
2										
4										
6	B1@5'				UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Sandy Siltstone, soft, slightly moist, light yellowish brown, thinly bedded, unfractured to slightly fractured, slightly weathered.	50 (5.5")	109.7	12.1		
8					- increase in fine-grained					
10	B1@10'					50 (6")	113.1	11.4		
12										
14					Siltstone, olive brown, slightly fractured, thinly bedded, some oxidation staining, moderately weathered.					
16	B1@15'				Clayey Siltstone, soft, thinly bedded, moderately weathered.	70	99.1	23.5		
18										
20	B1@20'				- soft to medium hard	50 (3")	97.2	29.4		
					Total depth of boring: refusal at 21 feet Fill to 5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Asphalt patched.					
					*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.					

Figure A1,
Log of Boring 1, Page 1 of 1

A9568-88-02 BORING LOGS.GPJ

SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 2		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) <u>255.0</u>	DATE COMPLETED <u>4/13/17</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u>		BY: <u>RMA</u>		
MATERIAL DESCRIPTION									
0	BULK 0-5'					AC: 5.5' BASE: NONE ARTIFICIAL FILL Sandy Silt, firm, slightly moist, dark yellowish brown, fine-grained, some asphalt debris & rootlets, trace fine gravel.			
2	B2@3'			SM		ALLUVIUM Silty Sand, medium dense to dense, slightly moist, dark yellowish brown, fine- to medium-grained, trace coarse-grained. - moderately weathered, some oxidation, trace rootlets	56	119.6	12.1
4	B2@6'			SM			41	121.6	13.3
6	B2@9'			ML		Clayey Silt, stiff, slightly moist, dark yellowish brown, trace fine-grained sand.	35	114.8	15.9
8	B2@12'					UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Silty Sandstone, soft, slightly moist, slightly fractured, light yellowish brown, massive, slightly fractured, moderately weathered.	64	122.1	11.5
10	B2@15'					Sandy Siltstone, soft, slightly moist, light yellowish brown, thinly bedded, slightly weathered, slightly fractured.	50 (4")	122.9	11.2
12	B2@18'					Sandstone, moderately hard, slightly moist, light yellowish brown, massive, intensely fractured, slightly weathered.	50 (6")	125.4	7.4
14	B2@21'					Siltstone, moderately hard, slightly moist, olive brown, thinly bedded, slightly fractured, moderately weathered. - highly weathered, dark red mottles	50 (6")	110.0	17.1
16						Total depth of boring: 21.5 feet Fill to 2.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Asphalt patched. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

Figure A2,
Log of Boring 2, Page 1 of 1

A9568-88-02 BORING LOGS.GPJ

SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)			
					ELEV. (MSL.) <u>238.0</u>	DATE COMPLETED <u>4/13/17</u>						
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>							
MATERIAL DESCRIPTION												
0	BULK 0-5'					ARTIFICIAL FILL Sandy Silt, soft, slightly moist, dark brown, fine-grained, some fine gravel (to 3"). - decrease in sand content						
2	B3@3'					11				113.4	14.7	
4	B3@6'					- trace asphalt debris (to 4"), trace rootlets				11	103.5	18.5
6	B3@9'					ALLUVIUM Sandy Silt, stiff, slightly moist, yellowish brown, fine-grained, trace rootlets. - hard, trace clay				32	120.1	13.4
8	B3@12'									49	117.3	14.9
10	B3@15'									Silty Sand , medium dense, slightly moist, yellowish brown, fine- to medium-grained. - increase in silt content, trace clay	39	117.2
12	BULK 15-20'	SM - increase in sand content, decrease in silt content, trace rootlets	43	110.4	17.4							
14	B3@18'		21	117.1	13.6							
16	BULK 20-22'		UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Sandy Siltstone, very soft, slightly moist, light grayish brown with dark orange mottles, thinly bedded to laminated, fine-grained, slightly fractured, slightly weathered.	19	104.0	19.4						
18	B3@21'	Sandstone, moderately hard, slightly moist, light gray, massive, friable, intensely fractured, fresh to slightly weathered.		50 (6")	120.8	12.1						
20	B3@24'											
22	B3@27'											

Figure A3,
Log of Boring 3, Page 1 of 2

A9568-88-02 BORING LOGS.GPJ


SAMPLE SYMBOLS	... SAMPLING UNSUCCESSFUL	... STANDARD PENETRATION TEST	... DRIVE SAMPLE (UNDISTURBED)
	... DISTURBED OR BAG SAMPLE	... CHUNK SAMPLE	... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) <u>238.0</u>	DATE COMPLETED <u>4/13/17</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>				
MATERIAL DESCRIPTION									
30	B3@30'						50 (6")	111.9	10.7
32					- slightly weathered, trace secondary clay				
	B3@33'						50 (3")	110.5	11.7
					Total depth of boring: 33.5 feet Fill to 8 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.				

**Figure A3,
Log of Boring 3, Page 2 of 2**

A9568-88-02 BORING LOGS.GPJ







SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 4 ELEV. (MSL.) <u>253.0</u> DATE COMPLETED <u>4/13/17</u> EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
MATERIAL DESCRIPTION								
0	BULK 0-5'				ARTIFICIAL FILL Sandy Silt, firm, slightly moist, dark brown, fine- to medium-grained, some coarse-grained, some fine gravel (to 4"), some rootlets, trace clay.			
2								
4								
6	B4@6'				UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Silty Sandstone, gray, thinly bedded, friable, slightly fractured, fresh to slightly weathered. - decrease in silt content - slightly weathered	11	107.8	13.6
8								
10	B4@9' BULK 9-12'					86	121.4	10.7
12	B4@12'					50 (6")	116.5	6.8
14								
16	B4@15'					50 (4")	107.5	9.3
18	B4@18'				50 (6")	111.8	8.1	
					Total depth of boring: 18.5 feet Fill to 6.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

Figure A4,
Log of Boring 4, Page 1 of 1

A9568-88-02 BORING LOGS.GPJ







SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 5		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) <u>292.5</u>	DATE COMPLETED <u>4/13/17</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>				
MATERIAL DESCRIPTION									
0					ARTIFICIAL FILL Sandy Silt, firm, slightly moist, dark brown, fine-grained.				
2									
4	B5@3'				ALLUVIUM Silt with Sand, stiff, slightly moist, dark yellowish brown, fine-grained, trace clay. - hard, reddish brown		24	118.9	13.9
6	B5@6'						52	121.3	13.8
8				ML					
10	B5@9'						50	122.3	13.1
12	B5@12'				- gray mottling				
14									
16	B5@15'			SM	Silty Sand, dense, slightly moist, dark yellowish brown, fine-grained, trace clay.		75	126.4	9.4
18				SP-SM	Sand with Silt, poorly graded, medium dense, slightly moist, brown, fine- to medium-grained.				
20	B5@18'				Sandy Silt, hard, slightly moist, dark yellowish brown, fine-grained.		47	116.4	12.0
22				ML					
24	B5@21'				UNDIFFERENTIATED VAQUEROS-SESPE FORMATION Siltstone, reddish brown, massive, slightly fractured, moderately weathered.		65	117.9	15.3
26					- some clay				
28	B5@24'						50 (6")	116.1	14.3
	B5@27'						50 (4")	120.4	15.1
					Sandstone, moderately hard, slightly moist, gray, massive, friable, unfractured, fresh.				

**Figure A5,
Log of Boring 5, Page 1 of 2**

A9568-88-02 BORING LOGS.GPJ

SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 5		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	
					ELEV. (MSL.) <u>292.5</u>	DATE COMPLETED <u>4/13/17</u>				
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>RMA</u>					
					MATERIAL DESCRIPTION					
30	B5@30'				Total depth of boring: 30.5 feet Fill to 3 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.		50 (5")	117.0	9.0	

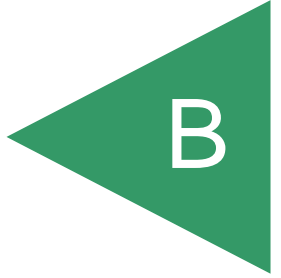
**Figure A5,
Log of Boring 5, Page 2 of 2**

A9568-88-02 BORING LOGS.GPJ

SAMPLE SYMBOLS	<input type="checkbox"/> ... SAMPLING UNSUCCESSFUL	<input type="checkbox"/> ... STANDARD PENETRATION TEST	<input type="checkbox"/> ... DRIVE SAMPLE (UNDISTURBED)
	<input checked="" type="checkbox"/> ... DISTURBED OR BAG SAMPLE	<input checked="" type="checkbox"/> ... CHUNK SAMPLE	<input checked="" type="checkbox"/> ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

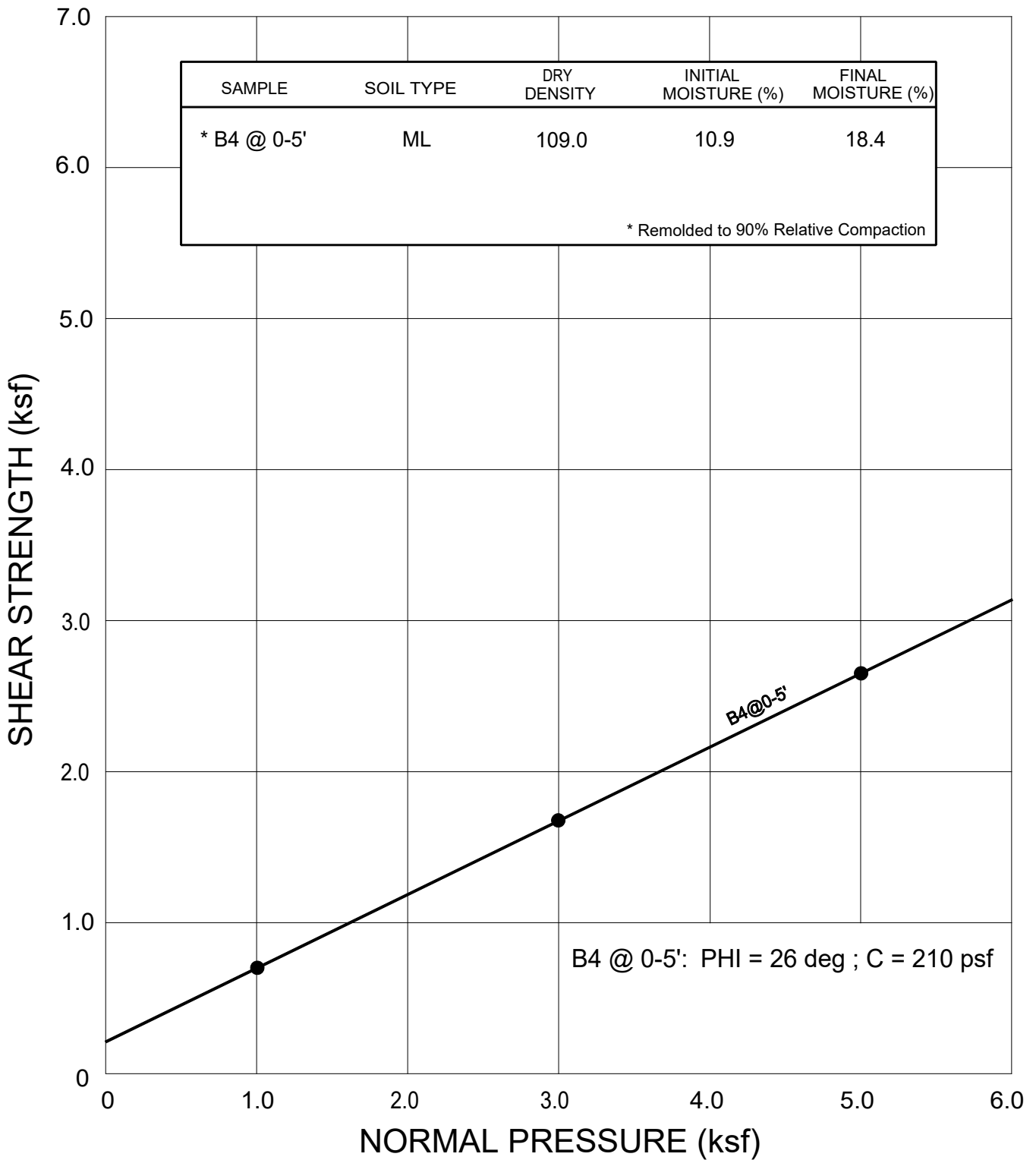
APPENDIX



APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the “American Society for Testing and Materials (ASTM)”, or other suggested procedures. Selected samples were tested for direct shear strength, consolidation, gradation, and expansion characteristics, compaction, resistance value (R-value), corrosivity, and in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B6. The in-place dry density and moisture content of the samples tested are presented on the boring logs, Appendix A.



● DIRECT SHEAR, SATURATED

GEOCON
WEST, INC.



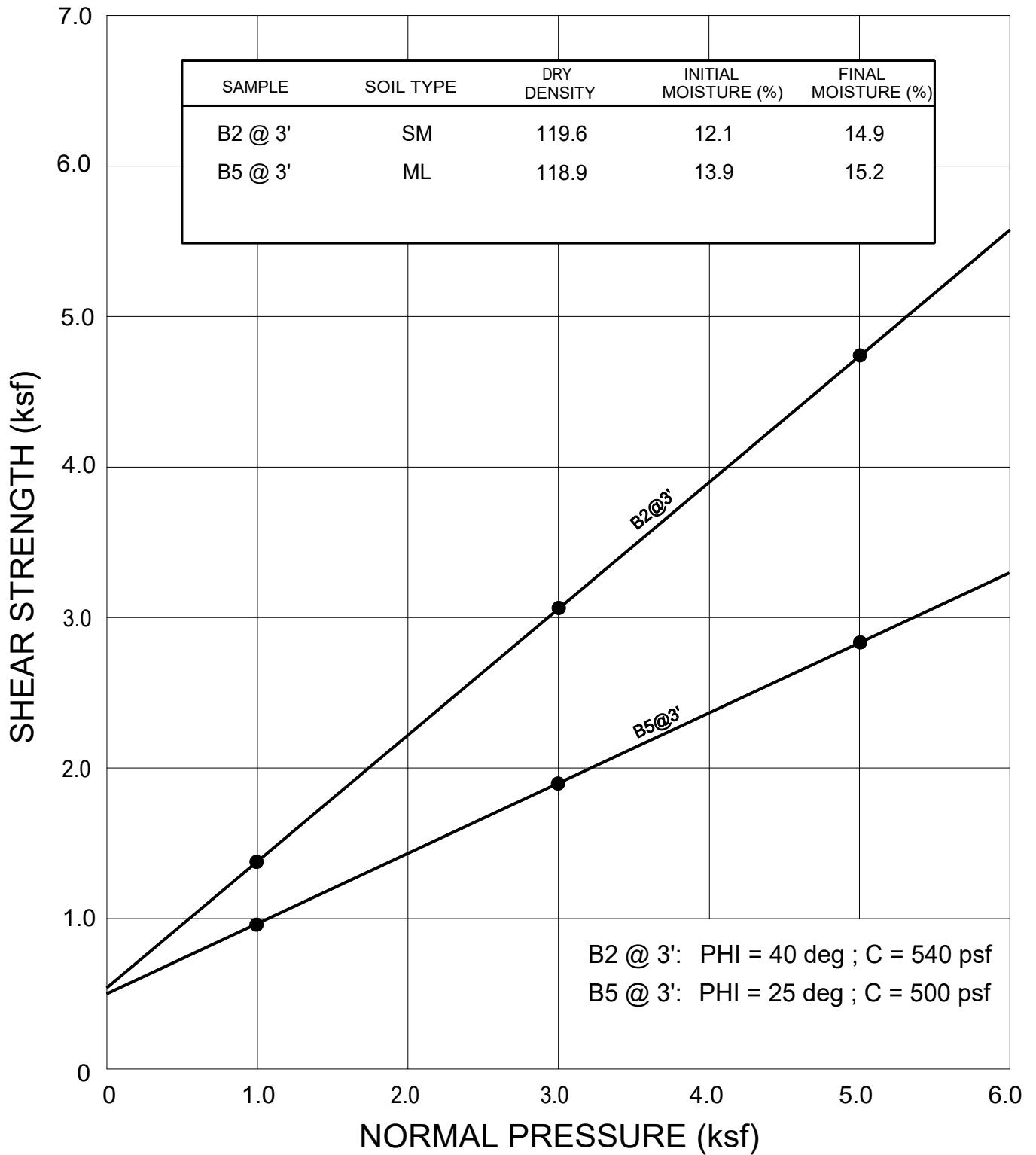
ENVIRONMENTAL GEOTECHNICAL MATERIALS
15520 ROCKFIELD BLVD. - SUITE J - IRVINE, CA 92618
PHONE (949) 491-6570

DRAFTED BY: AG CHECKED BY: JTA

DIRECT SHEAR TEST RESULTS

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
11782 SIMON RANCH ROAD
SANTA ANA, CALIFORNIA

MAY 2017 PROJECT NO. A9568-88-02 FIG. B1



● DIRECT SHEAR, SATURATED

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WEST, INC.



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DRAFTED BY: AG

CHECKED BY: JTA

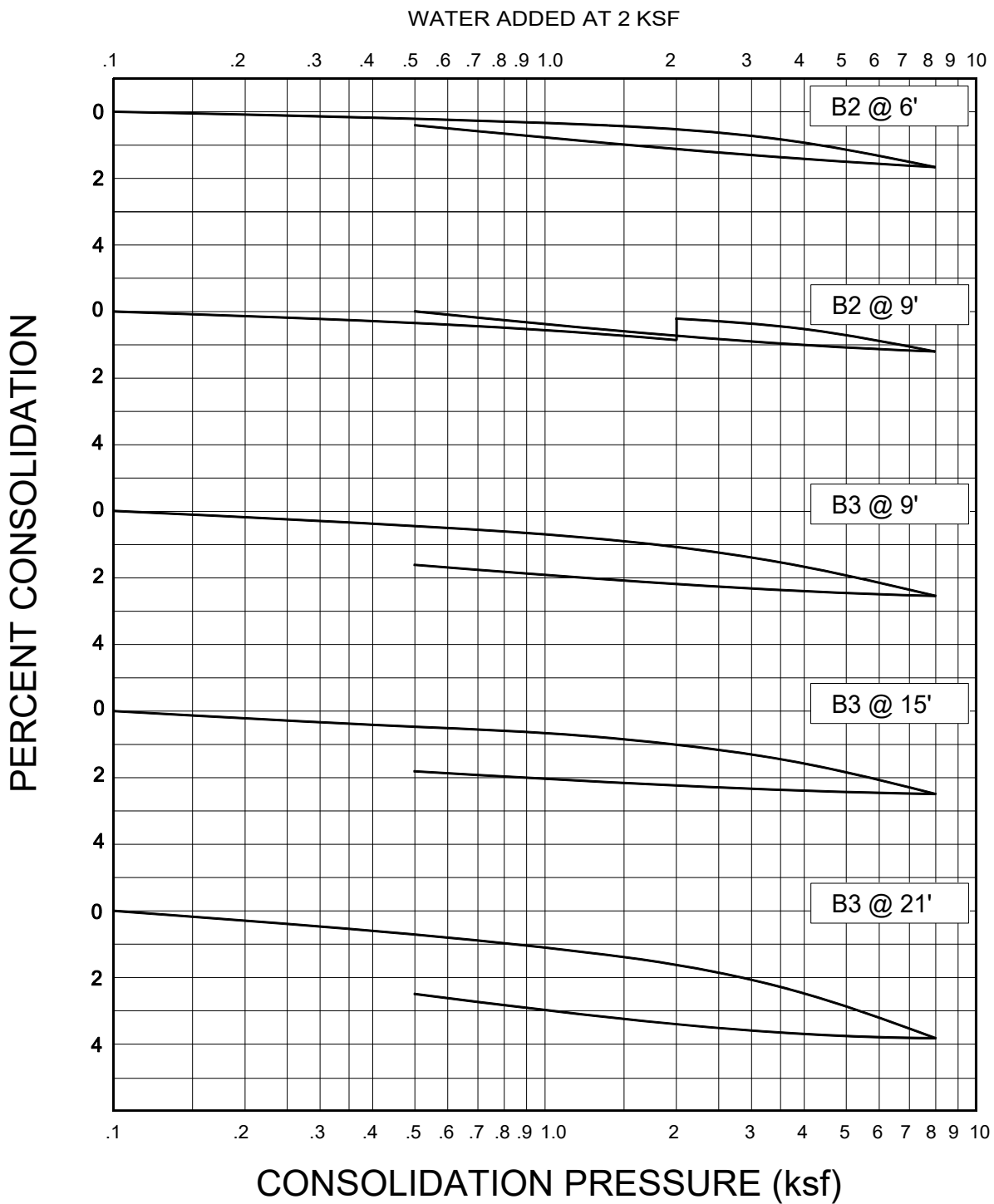
DIRECT SHEAR TEST RESULTS

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. B2



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CONSOLIDATION TEST RESULTS

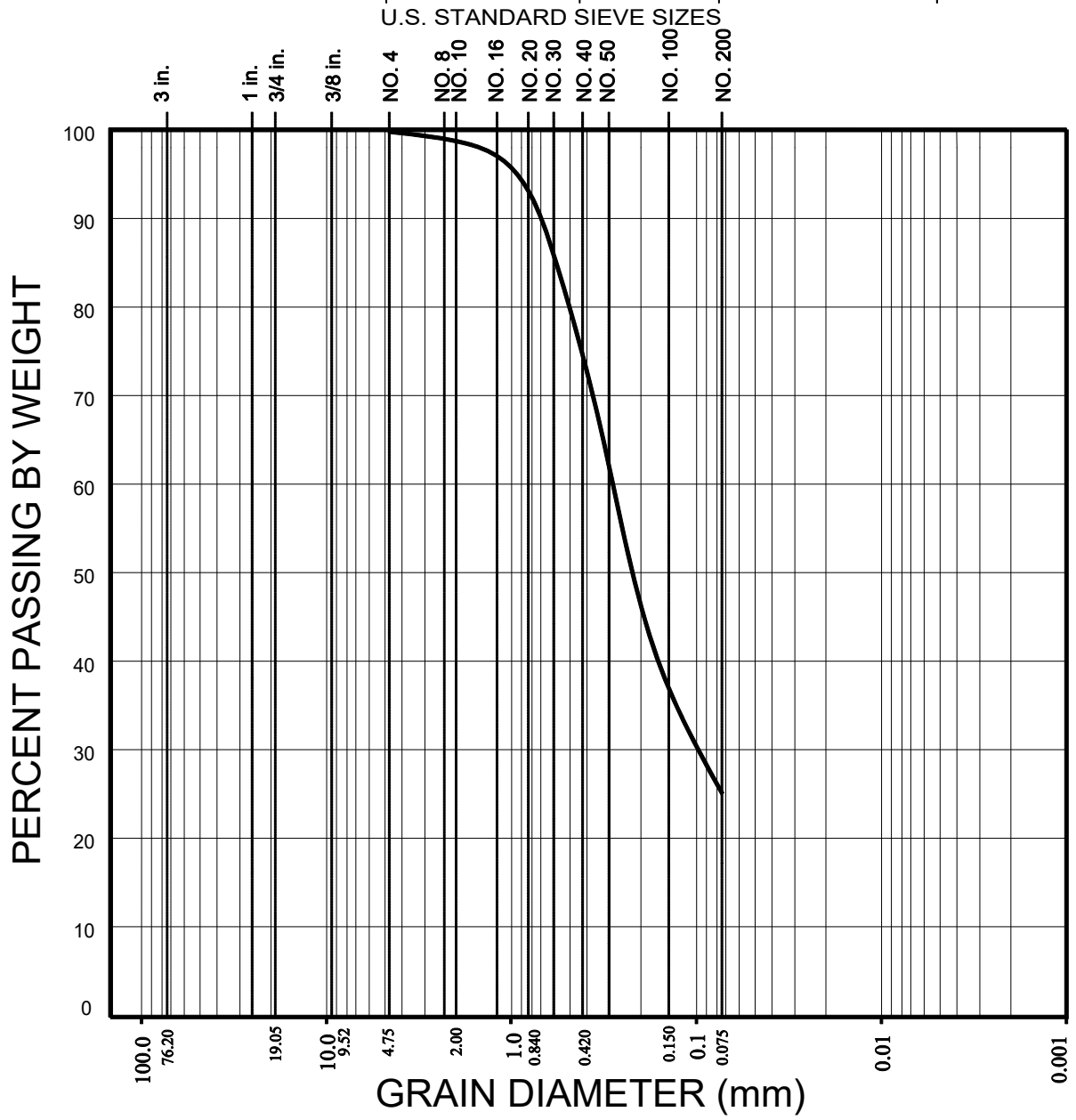
PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. B3

GRAVEL	SAND		SILT	CLAY
	MEDIUM TO COARSE	FINE		



SAMPLE	UNIFIED SOIL CLASSIFICATION
— B3 @ 20-22'	SM

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----------------	-----------------

GRAIN SIZE DISTRIBUTION

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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SANTA ANA, CALIFORNIA

MAY 2017	PROJECT NO. A9568-88-02	FIG. B4
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**SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS
ASTM D 4829-11**

SAMPLE NO.	MOISTURE CONTENT(%)		DRY DENSITY (PCF)	EXPANSION INDEX	*UBC CLASSIFICATION	**CBC CLASSIFICATION
	BEFORE	AFTER				
B4 @ 0-5'	10.0	20.5	110.4	66	Medium	Expansive

* Reference: 1997 Uniform Building Code, Table 18-I-B.

** Reference: 2016 California Building Code, Section 1803.5.3

**SUMMARY OF LABORATORY MAXIMUM DENSITY AND
AND OPTIMUM MOISTURE CONTENT TEST RESULTS
ASTM D 1557-12**

SAMPLE NO.	SOIL DESCRIPTION	MAXIMUM DRY DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)
B4 @0-5'	Dark Brown Sandy Silt	122.7	9.6

**SUMMARY OF LABORATORY RESISTANCE VALUE
(R-VALUE) TEST RESULTS
ASTM D 2844**

SAMPLE NO.	RESISTANCE VALUE (R-VALUE)
B1 @0-5'	13

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CHECKED BY: JTA

LABORATORY TEST RESULTS

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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SANTA ANA, CALIFORNIA

MAY 2017

PROJECT NO. A9568-88-02

FIG. B5

**SUMMARY OF LABORATORY POTENTIAL OF
HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
CALIFORNIA TEST NO. 643**

SAMPLE NO.	pH	RESISTIVITY (OHM CENTIMETERS)
B4 @ 0-5'	8.4	1011 (Corrosive)

**SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
EPA NO. 325.3**

SAMPLE NO.	CHLORIDE ION CONTENT (%)
B4 @ 0-5'	0.030

**SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417**

SAMPLE NO.	WATER SOLUBLE SULFATE (% SO ₄)	SULFATE EXPOSURE *
B4 @ 0-5'	0.002	Not Applicable (S0)

* Reference: 2016 California Building Code, Section 1904.3 and ACI 318-11 Section 4.3.

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CHECKED BY: JTA

CORROSIVITY TEST RESULTS

PROPOSED SINGLE-FAMILY
RESIDENTIAL TRACT DEVELOPMENT
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MAY 2017

PROJECT NO. A9568-88-02

FIG. B6

Attachment D: Hydromodification Calculations

WinTR-55 software was used to determine the peak runoff rate and total runoff volume for a 2-year storm event. The printouts from the program are on the following pages. The results are as follows:

DESCRIPTION	Tc (min)	2-year peak flow (cfs)	2-year runoff (cf)	Percent Change in Runoff Volume
A-1: Pre-developed Site	7.92	4.87	24,162 ^A	-
B-1: Post-developed site	10.01	3.87	21,366 ^B	-11.6%

^A(1.132")(5.88 ac)(43560 ft/ac)(1'/12")

^B(1.001")(5.88 ac)(43560 ft/ac)(1'/12")

The runoff volume decreases by over 11 percent, therefore the project does not have an HCOC.

Per Section 7.II-2.4.2.1 of the Model Water Quality Management Plan:

“A project does not have an HCOC if either of the following conditions is met:

- The volumes and time of concentration of stormwater runoff for the post-development condition do not significantly exceed those of the predevelopment condition for a two-year frequency storm event (a difference of five percent or less is considered insignificant).

WinTR-20 Printed Page File Beginning of Input Data List
 TR20.inp

WinTR-20: Version 1.10 0 0 0.05
 Tustin Racquet Club
 Existing Condition

SUB-AREA:
 A-1 Outlet .00919 90. .132

STREAM REACH:

STORM ANALYSIS:
 2-Yr 2.05 Type I 2

STRUCTURE RATING:

GLOBAL OUTPUT:
 2 0.05 YYYYN YYYYNN

WinTR-20 Printed Page File End of Input Data List

Tustin Racquet Club
 Existing Condition

Name of printed page file:
 TR20.out

STORM 2-Yr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Elevation (ft)	Peak Flow Time (hr)	Rate (cfs)	Rate (csm)
A-1	0.009		1.132		9.95	4.87	529.71

Line Start Time (hr)	Flow (cfs)	Values @ time increment (cfs)	Flow Values @ time increment (cfs)	of 0.008 hr (cfs)	Flow (cfs)	Flow (cfs)
6.801	0.05	0.05	0.05	0.05	0.05	0.05
6.860	0.05	0.05	0.05	0.05	0.06	0.06
6.918	0.06	0.06	0.06	0.06	0.06	0.06
6.976	0.06	0.06	0.06	0.06	0.06	0.06
7.035	0.06	0.06	0.07	0.07	0.07	0.07
7.093	0.07	0.07	0.07	0.07	0.07	0.07
7.151	0.07	0.07	0.07	0.07	0.07	0.07
7.210	0.07	0.07	0.07	0.08	0.08	0.08
7.268	0.08	0.08	0.08	0.08	0.08	0.08
7.326	0.08	0.08	0.08	0.08	0.08	0.08
7.385	0.08	0.08	0.08	0.08	0.09	0.09
7.443	0.09	0.09	0.09	0.09	0.09	0.09
7.501	0.09	0.09	0.09	0.09	0.09	0.09
7.560	0.09	0.09	0.09	0.09	0.09	0.10
7.618	0.10	0.10	0.10	0.10	0.10	0.10
7.677	0.10	0.10	0.10	0.10	0.10	0.10
7.735	0.10	0.10	0.10	0.10	0.10	0.10
7.793	0.11	0.11	0.11	0.11	0.11	0.11
7.852	0.11	0.11	0.11	0.11	0.11	0.11
7.910	0.11	0.11	0.11	0.11	0.11	0.11
7.968	0.12	0.12	0.12	0.12	0.12	0.12
8.027	0.12	0.12	0.12	0.12	0.12	0.12
8.085	0.12	0.12	0.13	0.13	0.13	0.13
8.143	0.13	0.13	0.13	0.14	0.14	0.14
8.202	0.14	0.14	0.14	0.15	0.15	0.15
8.260	0.15	0.15	0.16	0.16	0.16	0.16
8.318	0.16	0.16	0.17	0.17	0.17	0.17
8.377	0.18	0.18	0.18	0.18	0.18	0.19
8.435	0.19	0.19	0.19	0.19	0.20	0.20
8.494	0.20	0.20	0.21	0.21	0.21	0.21
8.552	0.21	0.22	0.22	0.22	0.22	0.23
8.610	0.23	0.23	0.23	0.24	0.24	0.24
8.669	0.24	0.25	0.25	0.25	0.25	0.26
8.727	0.26	0.26	0.26	0.26	0.27	0.27
8.785	0.27	0.28	0.28	0.28	0.28	0.29

8.844	0.29	0.29	0.29	0.30	0.30	0.30	0.30
8.902	0.31	0.31	0.31	0.31	0.32	0.32	0.32
8.960	0.32	0.33	0.33	0.33	0.33	0.34	0.34
9.019	0.34	0.34	0.35	0.35	0.35	0.35	0.36
9.077	0.36	0.37	0.37	0.37	0.37	0.38	0.38

Tustin Racquet Club
Existing Condition

Line Start Time (hr)	----- (cfs)	Flow (cfs)	Values @ time (cfs)	increment of (cfs)	0.008 hr (cfs)	----- (cfs)	----- (cfs)
9.135	0.38	0.39	0.39	0.40	0.40	0.40	0.41
9.194	0.41	0.42	0.42	0.42	0.43	0.43	0.44
9.252	0.44	0.45	0.45	0.46	0.46	0.47	0.47
9.311	0.47	0.48	0.48	0.49	0.49	0.50	0.50
9.369	0.51	0.51	0.52	0.52	0.53	0.53	0.54
9.427	0.54	0.54	0.55	0.55	0.56	0.57	0.57
9.486	0.58	0.58	0.59	0.59	0.60	0.61	0.62
9.544	0.63	0.65	0.67	0.70	0.72	0.75	0.77
9.602	0.80	0.82	0.84	0.87	0.90	0.94	0.98
9.661	1.03	1.08	1.13	1.18	1.23	1.28	1.33
9.719	1.38	1.43	1.49	1.56	1.64	1.73	1.83
9.777	1.93	2.03	2.13	2.22	2.32	2.42	2.53
9.836	2.65	2.80	2.97	3.17	3.38	3.60	3.82
9.894	4.03	4.23	4.42	4.58	4.71	4.80	4.85
9.952	4.87	4.85	4.81	4.76	4.69	4.63	4.56
10.011	4.49	4.41	4.32	4.21	4.07	3.90	3.71
10.069	3.49	3.27	3.06	2.84	2.65	2.47	2.30
10.128	2.16	2.05	1.95	1.86	1.78	1.71	1.65
10.186	1.60	1.56	1.52	1.48	1.45	1.42	1.40
10.244	1.38	1.35	1.33	1.31	1.29	1.27	1.26
10.303	1.24	1.23	1.21	1.20	1.19	1.18	1.16
10.361	1.15	1.14	1.12	1.11	1.09	1.08	1.07
10.419	1.06	1.05	1.04	1.03	1.02	1.00	0.99
10.478	0.98	0.96	0.95	0.94	0.93	0.92	0.91
10.536	0.90	0.89	0.88	0.87	0.86	0.85	0.84
10.594	0.83	0.82	0.82	0.81	0.80	0.80	0.79
10.653	0.79	0.78	0.78	0.77	0.77	0.77	0.76
10.711	0.76	0.76	0.75	0.75	0.75	0.74	0.74
10.769	0.74	0.73	0.73	0.73	0.72	0.72	0.72
10.828	0.72	0.71	0.71	0.71	0.71	0.70	0.70
10.886	0.70	0.69	0.69	0.69	0.68	0.68	0.68
10.945	0.68	0.67	0.67	0.67	0.66	0.66	0.66
11.003	0.65	0.65	0.65	0.65	0.64	0.64	0.64
11.061	0.64	0.63	0.63	0.63	0.63	0.62	0.62
11.120	0.62	0.62	0.62	0.62	0.62	0.61	0.61
11.178	0.61	0.61	0.61	0.61	0.61	0.61	0.60
11.236	0.60	0.60	0.60	0.60	0.60	0.60	0.60
11.295	0.60	0.59	0.59	0.59	0.59	0.59	0.59
11.353	0.59	0.59	0.59	0.59	0.58	0.58	0.58
11.411	0.58	0.58	0.58	0.58	0.58	0.58	0.58
11.470	0.57	0.57	0.57	0.57	0.57	0.57	0.57
11.528	0.57	0.57	0.57	0.56	0.56	0.56	0.56
11.587	0.56	0.56	0.56	0.56	0.56	0.55	0.55
11.645	0.55	0.55	0.55	0.55	0.55	0.55	0.55
11.703	0.54	0.54	0.54	0.54	0.54	0.54	0.54
11.762	0.54	0.54	0.54	0.53	0.53	0.53	0.53
11.820	0.53	0.53	0.53	0.53	0.53	0.52	0.52
11.878	0.52	0.52	0.52	0.52	0.52	0.52	0.52
11.937	0.52	0.51	0.51	0.51	0.51	0.51	0.51
11.995	0.51	0.51	0.50	0.50	0.50	0.50	0.50
12.053	0.50	0.50	0.50	0.50	0.50	0.50	0.49

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet .00919 90. .132

STREAM REACH:

Tustin Racquet Club
Existing Condition

Line	Flow Values @ time increment of 0.008 hr						
Start Time (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
12.112	0.49	0.49	0.49	0.49	0.49	0.49	0.49
12.170	0.49	0.49	0.49	0.49	0.48	0.48	0.48
12.228	0.48	0.48	0.48	0.48	0.48	0.48	0.48
12.287	0.48	0.48	0.48	0.48	0.48	0.47	0.47
12.345	0.47	0.47	0.47	0.47	0.47	0.47	0.47
12.404	0.47	0.47	0.47	0.47	0.47	0.47	0.46
12.462	0.46	0.46	0.46	0.46	0.46	0.46	0.46
12.520	0.46	0.46	0.46	0.46	0.46	0.46	0.46
12.579	0.45	0.45	0.45	0.45	0.45	0.45	0.45
12.637	0.45	0.45	0.45	0.45	0.45	0.45	0.45
12.695	0.44	0.44	0.44	0.44	0.44	0.44	0.44
12.754	0.44	0.44	0.44	0.44	0.44	0.44	0.44
12.812	0.43	0.43	0.43	0.43	0.43	0.43	0.43
12.870	0.43	0.43	0.43	0.43	0.43	0.43	0.43
12.929	0.42	0.42	0.42	0.42	0.42	0.42	0.42
12.987	0.42	0.42	0.42	0.42	0.42	0.42	0.42
13.045	0.41	0.41	0.41	0.41	0.41	0.41	0.41
13.104	0.41	0.41	0.41	0.41	0.41	0.41	0.41
13.162	0.40	0.40	0.40	0.40	0.40	0.40	0.40
13.221	0.40	0.40	0.40	0.40	0.40	0.40	0.40
13.279	0.39	0.39	0.39	0.39	0.39	0.39	0.39
13.337	0.39	0.39	0.39	0.39	0.39	0.39	0.38
13.396	0.38	0.38	0.38	0.38	0.38	0.38	0.38
13.454	0.38	0.38	0.38	0.38	0.38	0.37	0.37
13.512	0.37	0.37	0.37	0.37	0.37	0.37	0.37
13.571	0.37	0.37	0.37	0.37	0.37	0.36	0.36
13.629	0.36	0.36	0.36	0.36	0.36	0.36	0.36
13.687	0.36	0.36	0.36	0.36	0.35	0.35	0.35
13.746	0.35	0.35	0.35	0.35	0.35	0.35	0.35
13.804	0.35	0.35	0.35	0.35	0.34	0.34	0.34

WinTR-20: Version 1.10
 n Racquet Club
 Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet .00919 90. .132

STREAM REACH:

15.496	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
15.555	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
15.613	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
15.672	0.30	0.29	0.29	0.29	0.29	0.29	0.29	0.29
15.730	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
15.788	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
15.847	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
15.905	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
15.963	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
16.022	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
16.080	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
16.138	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
16.197	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
16.255	0.29	0.29	0.29	0.28	0.28	0.28	0.28	0.28
16.313	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.372	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.430	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.489	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.547	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.605	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.664	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.722	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.780	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
16.839	0.28	0.28	0.28	0.27	0.27	0.27	0.27	0.27
16.897	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.955	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
17.014	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
17.072	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
17.131	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
17.189	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
17.247	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
17.306	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
17.364	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
17.422	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
17.481	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
17.539	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
17.597	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
17.656	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

SUB-AREA:

STORM 2-Yr

A-1 Outlet .00919 90. .132

STREAM REACH:

21.040	0.20	0.20	0.20	0.20	0.20	0.20	0.20
21.099	0.20	0.20	0.20	0.20	0.20	0.19	0.19
21.157	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.216	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.274	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.332	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.391	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.449	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.507	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.566	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.624	0.19	0.19	0.19	0.18	0.18	0.18	0.18
21.682	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.741	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.799	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.857	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.916	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.974	0.18	0.18	0.18	0.18	0.18	0.18	0.18
22.033	0.18	0.18	0.18	0.18	0.18	0.18	0.18
22.091	0.18	0.18	0.18	0.18	0.18	0.18	0.18
22.149	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.208	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.266	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.324	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.383	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.441	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.499	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.558	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.616	0.17	0.17	0.17	0.17	0.16	0.16	0.16
22.675	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.733	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.791	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.850	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.908	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.966	0.16	0.16	0.16	0.16	0.16	0.16	0.16
23.025	0.16	0.16	0.16	0.16	0.16	0.16	0.16
23.083	0.16	0.16	0.16	0.16	0.16	0.16	0.16
23.141	0.16	0.15	0.15	0.15	0.15	0.15	0.15

WinTR-20: Version 1.10
 n Racquet Club
 Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet .00919 90. .132

STREAM REACH:

23.200	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.258	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.316	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.375	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.433	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.492	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.550	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.608	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14
23.667	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.725	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.783	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.842	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.900	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.958	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

Tustin Racquet Club
 Existing Condition

Line	Flow Values @ time increment of 0.008 hr						
Start Time (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
24.017	0.14	0.13	0.13	0.13	0.12	0.11	0.10
24.075	0.09	0.08	0.07	0.06	0.05		

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Elevation (ft)	Peak Flow Time (hr)	Rate (cfs)	Rate (csm)
OUTLET	0.009		1.132		9.95	4.87	529.71

Line	Flow Values @ time increment of 0.008 hr						
Start Time (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
6.801	0.05	0.05	0.05	0.05	0.05	0.05	0.05

WinTR-20: Version 1.10
 n Racquet Club
 Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet .00919 90. .132

STREAM REACH:

6.860	0.05	0.05	0.05	0.05	0.06	0.06	0.06
6.918	0.06	0.06	0.06	0.06	0.06	0.06	0.06
6.976	0.06	0.06	0.06	0.06	0.06	0.06	0.06
7.035	0.06	0.06	0.07	0.07	0.07	0.07	0.07
7.093	0.07	0.07	0.07	0.07	0.07	0.07	0.07
7.151	0.07	0.07	0.07	0.07	0.07	0.07	0.07
7.210	0.07	0.07	0.07	0.08	0.08	0.08	0.08
7.268	0.08	0.08	0.08	0.08	0.08	0.08	0.08
7.326	0.08	0.08	0.08	0.08	0.08	0.08	0.08
7.385	0.08	0.08	0.08	0.08	0.09	0.09	0.09
7.443	0.09	0.09	0.09	0.09	0.09	0.09	0.09
7.501	0.09	0.09	0.09	0.09	0.09	0.09	0.09
7.560	0.09	0.09	0.09	0.09	0.09	0.10	0.10
7.618	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7.677	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7.735	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7.793	0.11	0.11	0.11	0.11	0.11	0.11	0.11
7.852	0.11	0.11	0.11	0.11	0.11	0.11	0.11
7.910	0.11	0.11	0.11	0.11	0.11	0.11	0.11
7.968	0.12	0.12	0.12	0.12	0.12	0.12	0.12
8.027	0.12	0.12	0.12	0.12	0.12	0.12	0.12
8.085	0.12	0.12	0.13	0.13	0.13	0.13	0.13
8.143	0.13	0.13	0.13	0.14	0.14	0.14	0.14
8.202	0.14	0.14	0.14	0.15	0.15	0.15	0.15
8.260	0.15	0.15	0.16	0.16	0.16	0.16	0.16
8.318	0.16	0.16	0.17	0.17	0.17	0.17	0.17
8.377	0.18	0.18	0.18	0.18	0.18	0.18	0.19
8.435	0.19	0.19	0.19	0.19	0.20	0.20	0.20
8.494	0.20	0.20	0.21	0.21	0.21	0.21	0.21
8.552	0.21	0.22	0.22	0.22	0.22	0.23	0.23
8.610	0.23	0.23	0.23	0.24	0.24	0.24	0.24
8.669	0.24	0.25	0.25	0.25	0.25	0.25	0.26
8.727	0.26	0.26	0.26	0.26	0.27	0.27	0.27
8.785	0.27	0.28	0.28	0.28	0.28	0.29	0.29
8.844	0.29	0.29	0.29	0.30	0.30	0.30	0.30
8.902	0.31	0.31	0.31	0.31	0.32	0.32	0.32
8.960	0.32	0.33	0.33	0.33	0.33	0.34	0.34

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet .00919 90. .132

STREAM REACH:

WinTR-20 Version 1.10

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Tustin Racquet Club
Existing Condition

Line	Start Time (hr)	Flow (cfs)	Values @ time (cfs)	increment (cfs)	of (cfs)	0.008 hr (cfs)	----- (cfs)
9.019	0.34	0.34	0.35	0.35	0.35	0.35	0.36
9.077	0.36	0.37	0.37	0.37	0.37	0.38	0.38
9.135	0.38	0.39	0.39	0.40	0.40	0.40	0.41
9.194	0.41	0.42	0.42	0.42	0.43	0.43	0.44
9.252	0.44	0.45	0.45	0.46	0.46	0.47	0.47
9.311	0.47	0.48	0.48	0.49	0.49	0.50	0.50
9.369	0.51	0.51	0.52	0.52	0.53	0.53	0.54
9.427	0.54	0.54	0.55	0.55	0.56	0.57	0.57
9.486	0.58	0.58	0.59	0.59	0.60	0.61	0.62
9.544	0.63	0.65	0.67	0.70	0.72	0.75	0.77
9.602	0.80	0.82	0.84	0.87	0.90	0.94	0.98
9.661	1.03	1.08	1.13	1.18	1.23	1.28	1.33
9.719	1.38	1.43	1.49	1.56	1.64	1.73	1.83
9.777	1.93	2.03	2.13	2.22	2.32	2.42	2.53
9.836	2.65	2.80	2.97	3.17	3.38	3.60	3.82
9.894	4.03	4.23	4.42	4.58	4.71	4.80	4.85
9.952	4.87	4.85	4.81	4.76	4.69	4.63	4.56
10.011	4.49	4.41	4.32	4.21	4.07	3.90	3.71
10.069	3.49	3.27	3.06	2.84	2.65	2.47	2.30
10.128	2.16	2.05	1.95	1.86	1.78	1.71	1.65
10.186	1.60	1.56	1.52	1.48	1.45	1.42	1.40
10.244	1.38	1.35	1.33	1.31	1.29	1.27	1.26
10.303	1.24	1.23	1.21	1.20	1.19	1.18	1.16
10.361	1.15	1.14	1.12	1.11	1.09	1.08	1.07
10.419	1.06	1.05	1.04	1.03	1.02	1.00	0.99
10.478	0.98	0.96	0.95	0.94	0.93	0.92	0.91
10.536	0.90	0.89	0.88	0.87	0.86	0.85	0.84
10.594	0.83	0.82	0.82	0.81	0.80	0.80	0.79
10.653	0.79	0.78	0.78	0.77	0.77	0.77	0.76

WinTR-20: Version 1.10 0 0 0.05
n Racquet Club (continued)
Existing Condition

STORM 2-Yr

SUB-AREA:
 A-1 Outlet .00919 90. .132

STREAM REACH:

10.711	0.76	0.76	0.75	0.75	0.75	0.74	0.74
10.769	0.74	0.73	0.73	0.73	0.72	0.72	0.72
10.828	0.72	0.71	0.71	0.71	0.71	0.70	0.70
10.886	0.70	0.69	0.69	0.69	0.68	0.68	0.68
10.945	0.68	0.67	0.67	0.67	0.66	0.66	0.66
11.003	0.65	0.65	0.65	0.65	0.64	0.64	0.64
11.061	0.64	0.63	0.63	0.63	0.63	0.62	0.62
11.120	0.62	0.62	0.62	0.62	0.62	0.61	0.61
11.178	0.61	0.61	0.61	0.61	0.61	0.61	0.60
11.236	0.60	0.60	0.60	0.60	0.60	0.60	0.60
11.295	0.60	0.59	0.59	0.59	0.59	0.59	0.59
11.353	0.59	0.59	0.59	0.59	0.58	0.58	0.58
11.411	0.58	0.58	0.58	0.58	0.58	0.58	0.58
11.470	0.57	0.57	0.57	0.57	0.57	0.57	0.57
11.528	0.57	0.57	0.57	0.56	0.56	0.56	0.56
11.587	0.56	0.56	0.56	0.56	0.56	0.55	0.55
11.645	0.55	0.55	0.55	0.55	0.55	0.55	0.55
11.703	0.54	0.54	0.54	0.54	0.54	0.54	0.54
11.762	0.54	0.54	0.54	0.53	0.53	0.53	0.53
11.820	0.53	0.53	0.53	0.53	0.53	0.52	0.52
11.878	0.52	0.52	0.52	0.52	0.52	0.52	0.52
11.937	0.52	0.51	0.51	0.51	0.51	0.51	0.51

Tustin Racquet Club
Existing Condition

Line Start Time (hr)	Flow (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)
11.995	0.51	0.51	0.50	0.50	0.50	0.50	0.50
12.053	0.50	0.50	0.50	0.50	0.50	0.50	0.49
12.112	0.49	0.49	0.49	0.49	0.49	0.49	0.49
12.170	0.49	0.49	0.49	0.49	0.48	0.48	0.48
12.228	0.48	0.48	0.48	0.48	0.48	0.48	0.48
12.287	0.48	0.48	0.48	0.48	0.48	0.47	0.47

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet .00919 90. .132

STREAM REACH:

12.345	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
12.404	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.46
12.462	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
12.520	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
12.579	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
12.637	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
12.695	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
12.754	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
12.812	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
12.870	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
12.929	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
12.987	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
13.045	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
13.104	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
13.162	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
13.221	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
13.279	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
13.337	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.38
13.396	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
13.454	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.37
13.512	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
13.571	0.37	0.37	0.37	0.37	0.37	0.37	0.36	0.36
13.629	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
13.687	0.36	0.36	0.36	0.36	0.36	0.35	0.35	0.35
13.746	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
13.804	0.35	0.35	0.35	0.35	0.35	0.34	0.34	0.34
13.862	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
13.921	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33
13.979	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
14.038	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.32
14.096	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
14.154	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
14.213	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
14.271	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
14.329	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
14.388	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.31
14.446	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
14.504	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31

WinTR-20: Version 1.10
 n Racquet Club
 Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet .00919 90. .132

STREAM REACH:

(hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
17.948	0.26	0.26	0.26	0.26	0.25	0.25	0.25
18.006	0.25	0.25	0.25	0.25	0.25	0.25	0.25
18.064	0.25	0.25	0.25	0.25	0.25	0.25	0.25
18.123	0.25	0.25	0.25	0.25	0.25	0.25	0.25
18.181	0.25	0.25	0.25	0.25	0.25	0.25	0.25
18.239	0.25	0.25	0.25	0.25	0.25	0.25	0.25
18.298	0.25	0.25	0.25	0.25	0.25	0.25	0.25
18.356	0.25	0.25	0.25	0.25	0.25	0.25	0.25
18.414	0.25	0.25	0.25	0.25	0.25	0.25	0.25
18.473	0.25	0.25	0.25	0.25	0.25	0.25	0.24
18.531	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.589	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.648	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.706	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.765	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.823	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.881	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.940	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.998	0.24	0.24	0.24	0.24	0.24	0.24	0.24
19.056	0.24	0.23	0.23	0.23	0.23	0.23	0.23
19.115	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.173	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.231	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.290	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.348	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.406	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.465	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.523	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.582	0.23	0.22	0.22	0.22	0.22	0.22	0.22
19.640	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.698	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.757	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.815	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.873	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.932	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.990	0.22	0.22	0.22	0.22	0.22	0.22	0.22

WinTR-20: Version 1.10 0 0 0.05 (continued)
n Racquet Club
Existing Condition

STORM 2-Yr

SUB-AREA:
A-1 Outlet .00919 90. .132

STREAM REACH:

20.048	0.22	0.22	0.22	0.22	0.22	0.22	0.22
20.107	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.165	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.223	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.282	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.340	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.399	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.457	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.515	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.574	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.632	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.690	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.749	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.807	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.865	0.20	0.20	0.20	0.20	0.20	0.20	0.20

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Tustin Racquet Club
Existing Condition

Line	Flow Values @ time increment of 0.008 hr						
Start Time (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
20.924	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.982	0.20	0.20	0.20	0.20	0.20	0.20	0.20
21.040	0.20	0.20	0.20	0.20	0.20	0.20	0.20
21.099	0.20	0.20	0.20	0.20	0.20	0.19	0.19
21.157	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.216	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.274	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.332	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.391	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.449	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.507	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.566	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.624	0.19	0.19	0.19	0.18	0.18	0.18	0.18

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet .00919 90. .132

STREAM REACH:

21.682	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.741	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.799	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.857	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.916	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.974	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
22.033	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
22.091	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
22.149	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.208	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.266	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.324	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.383	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.441	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.499	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.558	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.616	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
22.675	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.733	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.791	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.850	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.908	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.966	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
23.025	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
23.083	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
23.141	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.200	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.258	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.316	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.375	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.433	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.492	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.550	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.608	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14
23.667	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.725	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.783	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.842	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

WinTR-20 Printed Page File
TR20.inp

Beginning of Input Data List

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

SUB-AREA:

STORM 2-Yr

A-1 Outlet .00919 90. .132

STREAM REACH:

WinTR-20 Version 1.10

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Tustin Racquet Club
Existing Condition

Line Start Time (hr)	----- (cfs)	Flow (cfs)	Values @ time (cfs)	increment (cfs)	of (cfs)	0.008 hr (cfs)	----- (cfs)
23.900	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.958	0.14	0.14	0.14	0.14	0.14	0.14	0.14
24.017	0.14	0.13	0.13	0.13	0.12	0.11	0.10
24.075	0.09	0.08	0.07	0.06	0.05		

WinTR-20 Printed Page File
TR20.inp

Beginning of Input Data List

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet

.00919 90. .132

STREAM REACH:

WinTR-20 Version 1.10

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Tustin Racquet Club
Existing Condition

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	----- Peak Flow by Storm -----				
			2-Yr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)
A-1	0.009		4.87				
OUTLET	0.009		4.87				

WinTR-55, Version 1.00.10

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WinTR-20 Printed Page File
TR20.inp

Beginning of Input Data List

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet

.00919 90. .132

STREAM REACH:

WinTR-20 Printed Page File
TR20.inp

Beginning of Input Data List

WinTR-20: Version 1.10
n Racquet Club
Existing Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

A-1 Outlet

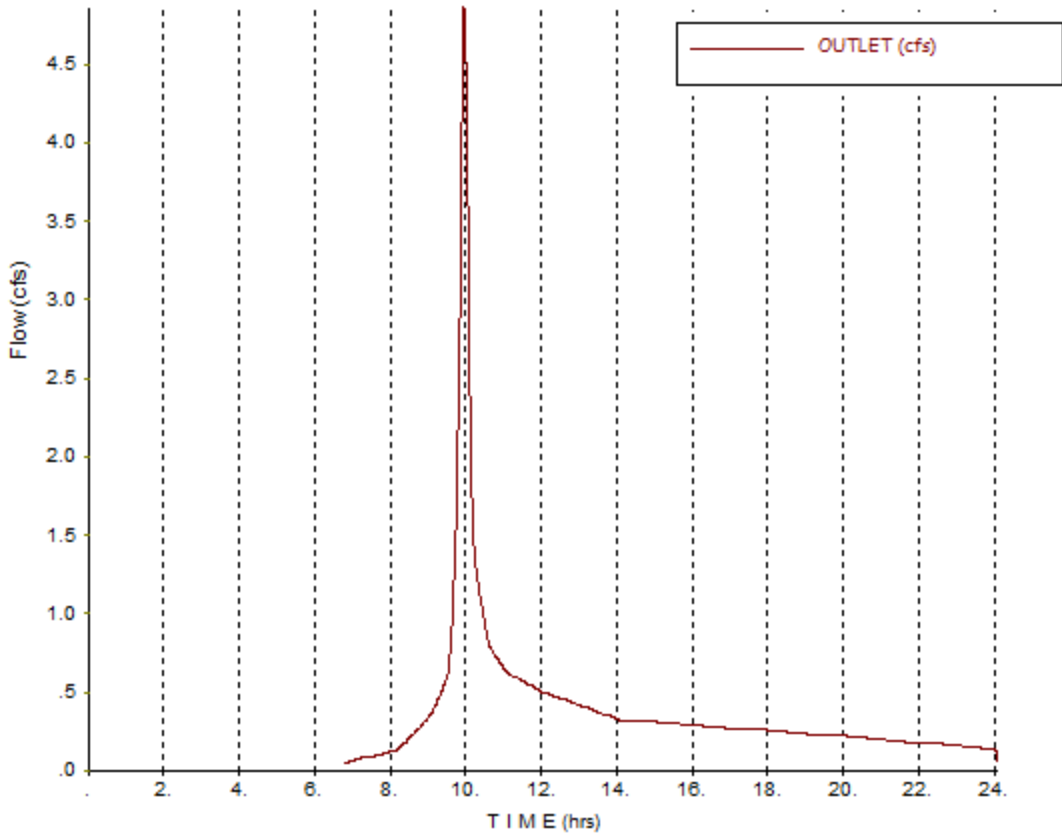
.00919 90. .132

STREAM REACH:

WinTR-20 Version 1.10

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WinTR-20 Printed Page File Beginning of Input Data List
 TR20.inp

WinTR-20: Version 1.10 0 0 0.05
 Tustin Racquet Club
 Developed Condition

SUB-AREA:
 B-1 Outlet .00919 88. .191

STREAM REACH:

STORM ANALYSIS:
 2-Yr 2.05 Type I 2

STRUCTURE RATING:

GLOBAL OUTPUT:
 2 0.05 YYYYN YYYYNN

WinTR-20 Printed Page File End of Input Data List

Tustin Racquet Club
 Developed Condition

Name of printed page file:
 TR20.out

STORM 2-Yr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Elevation (ft)	Peak Flow Time (hr)	Rate (cfs)	Rate (csm)
B-1	0.009		1.001		10.01	3.87	420.73

Line Start Time (hr)	Flow (cfs)	Values @ time (cfs)	increment (cfs)	of 0.012 hr (cfs)	----- (cfs)	----- (cfs)
7.598	0.05	0.05	0.05	0.05	0.05	0.05
7.683	0.05	0.05	0.06	0.06	0.06	0.06
7.767	0.06	0.06	0.06	0.06	0.06	0.06
7.851	0.06	0.06	0.06	0.06	0.07	0.07
7.936	0.07	0.07	0.07	0.07	0.07	0.07
8.020	0.07	0.07	0.07	0.07	0.07	0.08
8.105	0.08	0.08	0.08	0.08	0.08	0.08
8.189	0.08	0.09	0.09	0.09	0.09	0.09
8.274	0.09	0.10	0.10	0.10	0.10	0.11
8.358	0.11	0.11	0.11	0.11	0.11	0.12
8.443	0.12	0.12	0.12	0.13	0.13	0.13
8.527	0.14	0.14	0.14	0.14	0.14	0.15
8.611	0.15	0.15	0.16	0.16	0.16	0.17
8.696	0.17	0.17	0.17	0.18	0.18	0.18
8.780	0.19	0.19	0.19	0.19	0.20	0.20
8.865	0.20	0.21	0.21	0.21	0.22	0.22
8.949	0.22	0.23	0.23	0.23	0.24	0.24
9.034	0.24	0.25	0.25	0.25	0.26	0.27
9.118	0.27	0.27	0.28	0.28	0.29	0.29
9.203	0.30	0.30	0.31	0.31	0.32	0.33
9.287	0.33	0.34	0.34	0.35	0.36	0.37
9.371	0.37	0.38	0.38	0.39	0.40	0.41
9.456	0.41	0.42	0.43	0.43	0.44	0.45
9.540	0.46	0.48	0.49	0.51	0.53	0.57
9.625	0.60	0.63	0.66	0.70	0.74	0.83
9.709	0.88	0.94	1.00	1.06	1.13	1.30
9.794	1.40	1.50	1.60	1.72	1.85	2.16
9.878	2.35	2.56	2.77	2.99	3.19	3.54
9.963	3.68	3.77	3.83	3.86	3.87	3.79
10.047	3.72	3.62	3.48	3.31	3.13	2.76
10.131	2.57	2.39	2.23	2.07	1.94	1.73
10.216	1.64	1.57	1.51	1.45	1.40	1.31
10.300	1.28	1.24	1.21	1.19	1.16	1.11
10.385	1.09	1.07	1.05	1.03	1.01	0.97
10.469	0.96	0.94	0.92	0.90	0.89	0.86

10.554	0.84	0.83	0.82	0.80	0.79	0.78	0.77
10.638	0.76	0.75	0.74	0.73	0.72	0.72	0.71
10.723	0.70	0.70	0.69	0.69	0.68	0.68	0.68
10.807	0.67	0.67	0.66	0.66	0.65	0.65	0.65
10.891	0.64	0.64	0.63	0.63	0.63	0.62	0.62

Tustin Racquet Club
Developed Condition

Line Start Time (hr)	----- (cfs)	Flow (cfs)	Values @ time (cfs)	increment of (cfs)	0.012 hr (cfs)	----- (cfs)	----- (cfs)
10.976	0.62	0.61	0.61	0.60	0.60	0.60	0.59
11.060	0.59	0.59	0.58	0.58	0.58	0.57	0.57
11.145	0.57	0.57	0.56	0.56	0.56	0.56	0.56
11.229	0.56	0.55	0.55	0.55	0.55	0.55	0.55
11.314	0.55	0.54	0.54	0.54	0.54	0.54	0.54
11.398	0.54	0.53	0.53	0.53	0.53	0.53	0.53
11.482	0.53	0.53	0.52	0.52	0.52	0.52	0.52
11.567	0.52	0.52	0.52	0.51	0.51	0.51	0.51
11.651	0.51	0.51	0.51	0.50	0.50	0.50	0.50
11.736	0.50	0.50	0.50	0.50	0.49	0.49	0.49
11.820	0.49	0.49	0.49	0.49	0.48	0.48	0.48
11.905	0.48	0.48	0.48	0.48	0.47	0.47	0.47
11.989	0.47	0.47	0.47	0.47	0.46	0.46	0.46
12.074	0.46	0.46	0.46	0.46	0.46	0.45	0.45
12.158	0.45	0.45	0.45	0.45	0.45	0.45	0.45
12.242	0.45	0.44	0.44	0.44	0.44	0.44	0.44
12.327	0.44	0.44	0.44	0.44	0.44	0.44	0.43
12.411	0.43	0.43	0.43	0.43	0.43	0.43	0.43
12.496	0.43	0.43	0.43	0.42	0.42	0.42	0.42
12.580	0.42	0.42	0.42	0.42	0.42	0.42	0.42
12.665	0.41	0.41	0.41	0.41	0.41	0.41	0.41
12.749	0.41	0.41	0.41	0.41	0.40	0.40	0.40
12.834	0.40	0.40	0.40	0.40	0.40	0.40	0.40
12.918	0.40	0.39	0.39	0.39	0.39	0.39	0.39
13.002	0.39	0.39	0.39	0.39	0.39	0.38	0.38
13.087	0.38	0.38	0.38	0.38	0.38	0.38	0.38
13.171	0.38	0.38	0.37	0.37	0.37	0.37	0.37
13.256	0.37	0.37	0.37	0.37	0.37	0.36	0.36
13.340	0.36	0.36	0.36	0.36	0.36	0.36	0.36
13.425	0.36	0.36	0.35	0.35	0.35	0.35	0.35
13.509	0.35	0.35	0.35	0.35	0.35	0.34	0.34
13.594	0.34	0.34	0.34	0.34	0.34	0.34	0.34
13.678	0.34	0.33	0.33	0.33	0.33	0.33	0.33
13.762	0.33	0.33	0.33	0.33	0.32	0.32	0.32
13.847	0.32	0.32	0.32	0.32	0.32	0.32	0.32
13.931	0.31	0.31	0.31	0.31	0.31	0.31	0.31
14.016	0.31	0.31	0.31	0.30	0.30	0.30	0.30
14.100	0.30	0.30	0.30	0.30	0.30	0.30	0.30
14.185	0.30	0.30	0.30	0.30	0.30	0.30	0.30
14.269	0.30	0.30	0.29	0.29	0.29	0.29	0.29
14.354	0.29	0.29	0.29	0.29	0.29	0.29	0.29
14.438	0.29	0.29	0.29	0.29	0.29	0.29	0.29
14.522	0.29	0.29	0.29	0.29	0.29	0.29	0.29
14.607	0.29	0.29	0.29	0.29	0.29	0.29	0.29
14.691	0.29	0.29	0.29	0.29	0.29	0.29	0.29
14.776	0.29	0.29	0.29	0.29	0.29	0.29	0.29
14.860	0.29	0.29	0.29	0.29	0.29	0.29	0.29
14.945	0.29	0.29	0.29	0.29	0.29	0.29	0.29
15.029	0.28	0.28	0.28	0.28	0.28	0.28	0.28
15.113	0.28	0.28	0.28	0.28	0.28	0.28	0.28
15.198	0.28	0.28	0.28	0.28	0.28	0.28	0.28

WinTR-20: Version 1.10
 n Racquet Club
 Developed Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

B-1 Outlet .00919 88. .191

STREAM REACH:

Tustin Racquet Club
 Developed Condition

Line Start Time (hr)	Flow (cfs)	Values @ time (cfs)	increment of (cfs)	0.012 hr (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)
15.282	0.28	0.28	0.28	0.28	0.28	0.28	0.28
15.367	0.28	0.28	0.28	0.28	0.28	0.28	0.28
15.451	0.28	0.28	0.28	0.28	0.28	0.28	0.28
15.536	0.28	0.28	0.28	0.28	0.28	0.28	0.28
15.620	0.28	0.28	0.28	0.28	0.28	0.28	0.28
15.705	0.28	0.28	0.27	0.27	0.27	0.27	0.27
15.789	0.27	0.27	0.27	0.27	0.27	0.27	0.27
15.873	0.27	0.27	0.27	0.27	0.27	0.27	0.27
15.958	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.042	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.127	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.211	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.296	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.380	0.27	0.27	0.26	0.26	0.26	0.26	0.26
16.465	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.549	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.633	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.718	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.802	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.887	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.971	0.26	0.26	0.26	0.26	0.26	0.26	0.26
17.056	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.140	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.225	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.309	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.393	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.478	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.562	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.647	0.25	0.25	0.24	0.24	0.24	0.24	0.24
17.731	0.24	0.24	0.24	0.24	0.24	0.24	0.24

WinTR-20: Version 1.10
n Racquet Club
Developed Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

B-1 Outlet .00919 88. .191

STREAM REACH:

20.180	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.264	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.349	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.433	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.518	0.20	0.20	0.20	0.20	0.20	0.20	0.19	0.19
20.602	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.687	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.771	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.856	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.940	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.024	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.109	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.18
21.193	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.278	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.362	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.447	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.531	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.616	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.17
21.700	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
21.784	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
21.869	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
21.953	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.038	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.122	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.207	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.291	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.376	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.460	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.544	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.629	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.713	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15
22.798	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
22.882	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
22.967	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.051	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.135	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.220	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14
23.304	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

WinTR-20: Version 1.10
n Racquet Club
Developed Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

B-1 Outlet .00919 88. .191

STREAM REACH:

10.638	0.76	0.75	0.74	0.73	0.72	0.72	0.71
10.723	0.70	0.70	0.69	0.69	0.68	0.68	0.68
10.807	0.67	0.67	0.66	0.66	0.65	0.65	0.65
10.891	0.64	0.64	0.63	0.63	0.63	0.62	0.62
10.976	0.62	0.61	0.61	0.60	0.60	0.60	0.59
11.060	0.59	0.59	0.58	0.58	0.58	0.57	0.57
11.145	0.57	0.57	0.56	0.56	0.56	0.56	0.56
11.229	0.56	0.55	0.55	0.55	0.55	0.55	0.55
11.314	0.55	0.54	0.54	0.54	0.54	0.54	0.54
11.398	0.54	0.53	0.53	0.53	0.53	0.53	0.53
11.482	0.53	0.53	0.52	0.52	0.52	0.52	0.52
11.567	0.52	0.52	0.52	0.51	0.51	0.51	0.51
11.651	0.51	0.51	0.51	0.50	0.50	0.50	0.50
11.736	0.50	0.50	0.50	0.50	0.49	0.49	0.49
11.820	0.49	0.49	0.49	0.49	0.48	0.48	0.48
11.905	0.48	0.48	0.48	0.48	0.47	0.47	0.47
11.989	0.47	0.47	0.47	0.47	0.46	0.46	0.46
12.074	0.46	0.46	0.46	0.46	0.46	0.45	0.45
12.158	0.45	0.45	0.45	0.45	0.45	0.45	0.45
12.242	0.45	0.44	0.44	0.44	0.44	0.44	0.44
12.327	0.44	0.44	0.44	0.44	0.44	0.44	0.43
12.411	0.43	0.43	0.43	0.43	0.43	0.43	0.43
12.496	0.43	0.43	0.43	0.42	0.42	0.42	0.42
12.580	0.42	0.42	0.42	0.42	0.42	0.42	0.42
12.665	0.41	0.41	0.41	0.41	0.41	0.41	0.41
12.749	0.41	0.41	0.41	0.41	0.40	0.40	0.40
12.834	0.40	0.40	0.40	0.40	0.40	0.40	0.40
12.918	0.40	0.39	0.39	0.39	0.39	0.39	0.39
13.002	0.39	0.39	0.39	0.39	0.39	0.38	0.38
13.087	0.38	0.38	0.38	0.38	0.38	0.38	0.38
13.171	0.38	0.38	0.37	0.37	0.37	0.37	0.37
13.256	0.37	0.37	0.37	0.37	0.37	0.36	0.36
13.340	0.36	0.36	0.36	0.36	0.36	0.36	0.36
13.425	0.36	0.36	0.35	0.35	0.35	0.35	0.35
13.509	0.35	0.35	0.35	0.35	0.35	0.34	0.34
13.594	0.34	0.34	0.34	0.34	0.34	0.34	0.34
13.678	0.34	0.33	0.33	0.33	0.33	0.33	0.33

WinTR-20: Version 1.10
n Racquet Club
Developed Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

B-1 Outlet .00919 88. .191

STREAM REACH:

16.127	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.211	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.296	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
16.380	0.27	0.27	0.26	0.26	0.26	0.26	0.26	0.26
16.465	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.549	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.633	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.718	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.802	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.887	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
16.971	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.25
17.056	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.140	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.225	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.309	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.393	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.478	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.562	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17.647	0.25	0.25	0.24	0.24	0.24	0.24	0.24	0.24
17.731	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
17.816	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
17.900	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
17.985	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.069	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.153	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
18.238	0.24	0.24	0.24	0.24	0.23	0.23	0.23	0.23
18.322	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
18.407	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
18.491	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
18.576	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
18.660	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
18.745	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
18.829	0.23	0.23	0.23	0.23	0.22	0.22	0.22	0.22
18.913	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
18.998	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.082	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.167	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22

WinTR-20: Version 1.10
n Racquet Club
Developed Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

B-1 Outlet .00919 88. .191

STREAM REACH:

WinTR-20 Version 1.10

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Tustin Racquet Club
Developed Condition

Line Start Time (hr)	Flow Values @ time increment of 0.012 hr						
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
19.251	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.336	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19.420	0.22	0.22	0.22	0.21	0.21	0.21	0.21
19.504	0.21	0.21	0.21	0.21	0.21	0.21	0.21
19.589	0.21	0.21	0.21	0.21	0.21	0.21	0.21
19.673	0.21	0.21	0.21	0.21	0.21	0.21	0.21
19.758	0.21	0.21	0.21	0.21	0.21	0.21	0.21
19.842	0.21	0.21	0.21	0.21	0.21	0.21	0.21
19.927	0.21	0.21	0.21	0.21	0.21	0.21	0.21
20.011	0.21	0.20	0.20	0.20	0.20	0.20	0.20
20.096	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.180	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.264	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.349	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.433	0.20	0.20	0.20	0.20	0.20	0.20	0.20
20.518	0.20	0.20	0.20	0.20	0.20	0.19	0.19
20.602	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.687	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.771	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.856	0.19	0.19	0.19	0.19	0.19	0.19	0.19
20.940	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.024	0.19	0.19	0.19	0.19	0.19	0.19	0.19
21.109	0.19	0.19	0.18	0.18	0.18	0.18	0.18
21.193	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.278	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.362	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.447	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.531	0.18	0.18	0.18	0.18	0.18	0.18	0.18
21.616	0.18	0.18	0.18	0.18	0.18	0.17	0.17

WinTR-20: Version 1.10 0 0 0.05
n Racquet Club (continued)
Developed Condition

STORM 2-Yr

SUB-AREA:
B-1 Outlet .00919 88. .191

STREAM REACH:

21.700	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
21.784	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
21.869	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
21.953	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.038	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.122	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
22.207	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.291	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.376	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.460	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.544	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.629	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
22.713	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15
22.798	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
22.882	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
22.967	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.051	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.135	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23.220	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14
23.304	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.389	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.473	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

Tustin Racquet Club
Developed Condition

Line Start Time (hr)	Flow (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)	Flow (cfs)
23.558	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.642	0.14	0.14	0.14	0.14	0.14	0.14	0.14
23.727	0.14	0.14	0.14	0.14	0.14	0.14	0.13
23.811	0.13	0.13	0.13	0.13	0.13	0.13	0.13
23.895	0.13	0.13	0.13	0.13	0.13	0.13	0.13
23.980	0.13	0.13	0.13	0.13	0.13	0.13	0.12

WinTR-20 Printed Page File
TR20.inp

Beginning of Input Data List

WinTR-20: Version 1.10
n Racquet Club
Developed Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

B-1 Outlet .00919 88. .191

STREAM REACH:

24.064 0.12 0.11 0.10 0.09 0.08 0.07 0.06
24.149 0.05

WinTR-20 Printed Page File
TR20.inp

Beginning of Input Data List

WinTR-20: Version 1.10
n Racquet Club
Developed Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

B-1 Outlet .00919 88. .191

STREAM REACH:

WinTR-20 Version 1.10

Page 9

04/23/2018 14:20

Tustin Racquet Club
Developed Condition

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	----- Peak Flow by Storm -----			
			2-Yr (cfs)	(cfs)	(cfs)	(cfs)
B-1	0.009		3.87			
OUTLET	0.009		3.87			

WinTR-20 Printed Page File
TR20.inp

Beginning of Input Data List

WinTR-20: Version 1.10
n Racquet Club
Developed Condition

0 0 0.05

(continued)

STORM 2-Yr

SUB-AREA:

B-1 Outlet

.00919 88. .191

STREAM REACH:

Attachment E: Educational Materials

For developments with less than fifty (50) dwelling units, practical information materials will be provided to the first residents/occupants/tenants on general housekeeping practices that contribute to the protection of stormwater quality. These materials will be initially developed and provided to first residents/ occupants/ tenants by the developer. Thereafter such materials will be available through the Permittees education program. Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available.

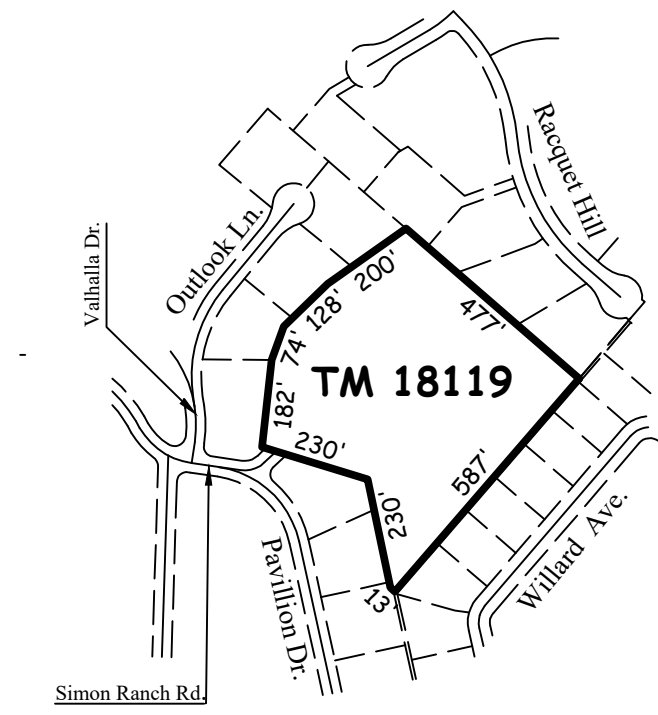
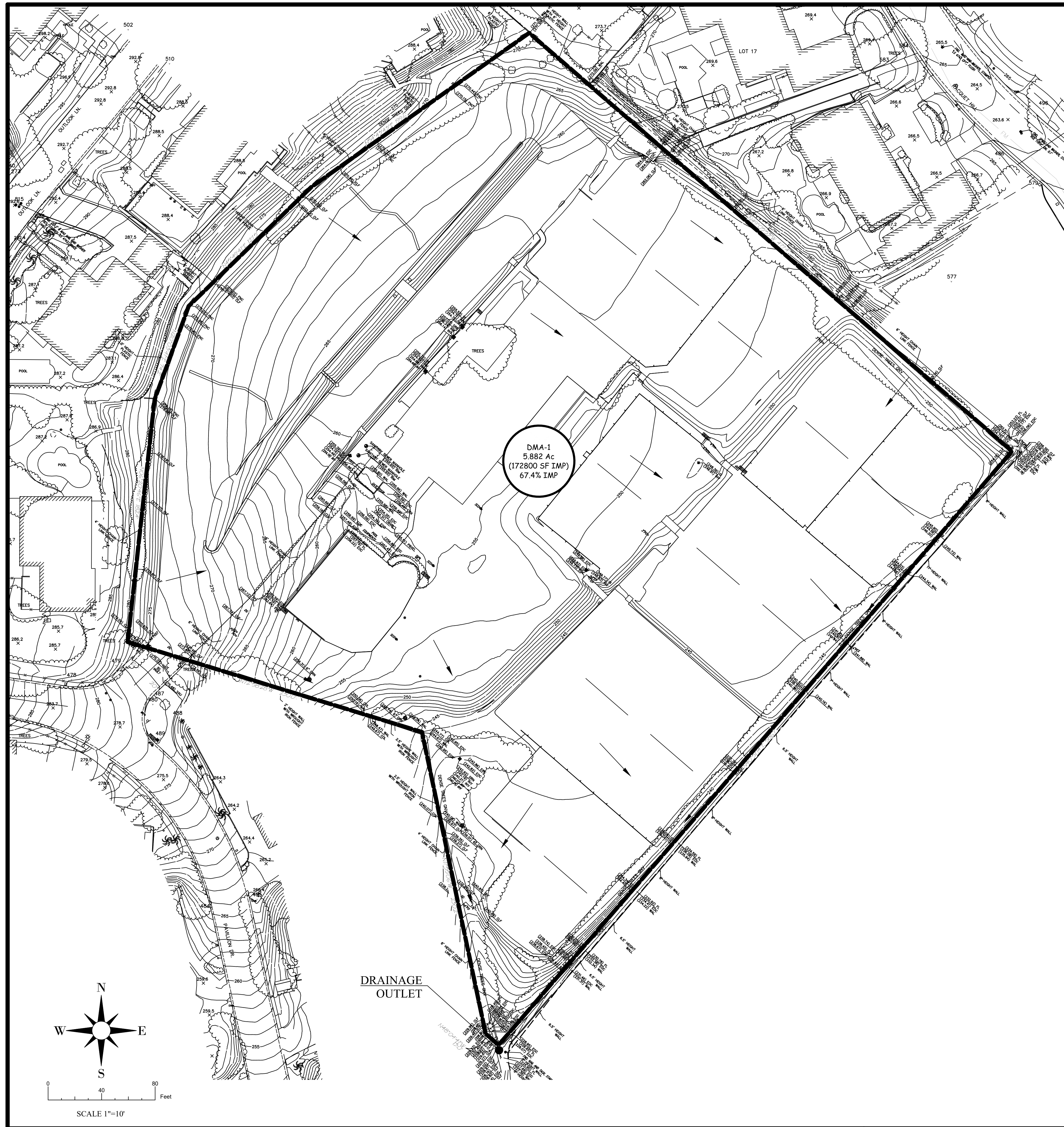
The following materials from the Orange County Stormwater Program are included herein:

- The Ocean Begins at Your Front Door
- Tips for the Home Mechanic
- Household Tips
- Proper Disposal of Household Hazardous Waste
- Recycle at Your Local Used Oil Collection Center (North County)
- Responsible Pest Control
- Tips for the Home Improvement Projects
- Tips for Landscaping and Gardening
- Tips for Pet Care
- Tips for Pool Maintenance
- Tips for Residential Pool, Landscape and Hardscape Drains
- Tips for Projects Using Paint
- Tips for Using Concrete and Mortar

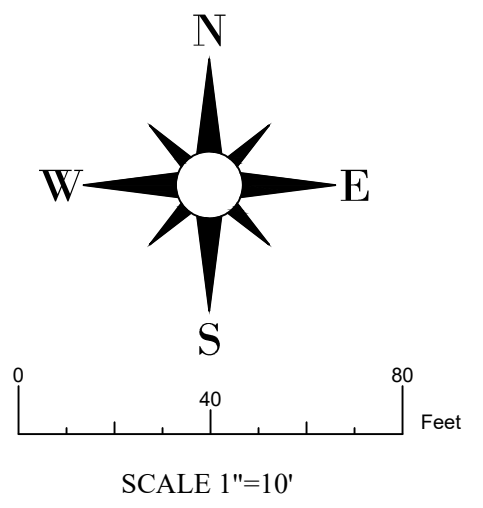
The following CASQA BMP fact sheets are included herein:

- SD-12 Efficient Irrigation
- TC-32 Bioretention

The educational materials will be included in the Final WQMP.



VICINITY MAP
Scale: 1"=400'



- LEGEND:**
- DMAA-1
0.1 AC
62.5% DRAINAGE MANAGEMENT AREA NO.
TRIBUTARY AREA
IMPERVIOUS COVERAGE
 - DMA BOUNDARY
 - DIRECTION OF FLOW

NO.	DATE	DESCRIPTION
REVISIONS		

OWNER/DEVELOPER:



Prepared By: **ROBIN B. HAMERS & ASSOC., INC.**
 CIVIL ENGINEERS
 234 E. 17TH STREET, SUITE 205
 COSTA MESA, CA 92627
 (949) 548-1192

[Signature]
 MICHAEL BENESH R.C.E. 37893

4/15/20
DATE

Tract No. 18119
Preliminary WQMP Site Plan
Existing Condition

11782 SIMON RANCH ROAD, TUSTIN, CA

SHEET
2
 OF 2

Appendix K
Traffic Analysis

Traffic Analysis Ranch Hills



PREPARED FOR
**Ranch Hills
Partners, L.P.**

September 2021





TRAFFIC ANALYSIS
RANCH HILLS
ORANGE COUNTY, CA

PREPARED FOR

RANCH HILLS PARTNERS, L.P.

PREPARED BY

PSOMAS

PSOMAS PROJECT No. 3RHPO10200

SEPTEMBER 2021

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APPENDIX C – DRIVEWAY TRAFFIC VOLUME DATA

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APPENDIX E – ICU SPREADSHEETS AND SYNCHRO REPORTS (CONSTRUCTION)

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1. PROJECT DESCRIPTION

The Ranch Hills Planned Development Project (project) will include construction of 37 age-targeted (NOT age-restricted) residential units, including 34 single-family townhomes and 3 single family detached units on an approximately 5.88-acre site. The project will replace the existing Tustin Hills Racquet Club, which includes 11 full-sized and 1 half-size tennis courts, a swimming pool, a lawn/outdoor event area, and two buildings with banquet, special event, and meeting facilities. Access to the site is via Pavillion Drive east of Simon Ranch Road. Simon Ranch Road becomes Browning Avenue south of the project at Beverly Glen Drive approximately one-quarter mile west of the site and likely serves between 85% and 95% of site traffic. The project location is shown in Figure 1 and the site plan is included as Figure 2.

This Traffic Analysis was prepared as part of and to support the transportation analysis in the Environmental Impact Report (EIR). This Traffic Analysis replaces the February 2020 *Road Trip Generation Analysis*¹ prepared by RK Engineering Group, Inc.

The following sections describe this Traffic Analysis.

1.1. STUDY AREA

The Study Area includes the following six intersections, also shown in Figure 3:

- 17th Street and Newport Avenue (unincorporated North Tustin)
- La Colina Drive and Newport Avenue (unincorporated North Tustin)
- La Colina Drive and Red Hill Avenue (unincorporated North Tustin)
- La Colina Drive and Browning Avenue (unincorporated North Tustin)
- La Colina Drive and Tustin Ranch Road (City of Tustin)
- Irvine Boulevard and Tustin Ranch Road (City of Tustin)

Figure 1. Project Location



Figure 3. Study Intersections



1.2. ANALYSIS METHODOLOGY

Although Level of Service (LOS) is no longer required for CEQA analysis, jurisdictions are provided the opportunity to require LOS analyses to evaluate local conditions. Because LOS analyses were provided in the previously circulated MND for the Project, those analyses are provided again in this report for consistency.

LOS is the typical measure used to characterize the quality of traffic operations at an intersection or roadway segment. LOS A represents relatively free operating conditions, whereas LOS F has unstable flow and congestion with volumes at or near the capacity of the facility. Excessive delays and queues can occur when the LOS is not acceptable. The County and City both have a standard of operation of LOS D.

Study Area intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology including assumptions included in the *County of Orange 2020 Updated Transportation Implementation Manual*². This methodology requires the calculation of the intersection volume/capacity (V/C) ratio, which is the summation of critical lane group flow ratios with a yellow light clearance adjustment. The LOS estimated by the ICU methodology is directly related to the intersection V/C ratio. The ICU methodology for unsignalized intersections was calculated using *Synchro*.

For County intersections, a project is determined to have an impact if any intersection currently operating at better than LOS D is projected to operate at worse than LOS D with the project, if an intersection is already operating at LOS D and the project is expected to add traffic, or if a project adds traffic to a Deficient Intersection. Per the County guidelines, there are no existing Deficient Intersections. For intersections located in the City of Tustin, a project is determined to have an impact if any intersection falls below LOS D.

2. EXISTING CONDITIONS

2.1. ROADWAY NETWORK

The roadways in the Study Area include:

Newport Avenue is a five lane roadway (two travel lanes per direction and a two-way left turn lane) with bike lanes on both sides in the project vicinity. The roadway is classified as an other principal arterial³ and has a posted speed limit of 45 mph.

Red Hill Avenue is a two lane undivided roadway north of La Colina Drive with a striped bike lane on the east side of the roadway. South of La Colina Drive, Red Hill Avenue is a three lane roadway (one travel lane per direction and a two-way left turn lane) with bike lanes on both sides of the roadway. The roadway is classified as a minor arterial in the project area and has a posted speed limit of 35 mph north of La Colina Drive and 40 mph south of La Colina Drive.

Browning Avenue is a two lane undivided roadway in the project vicinity. The roadway is classified as a major collector south of Simon Ranch Road and serves as the main major access roadway to/from the project site. The roadway has a posted speed limit of 25 mph.

Tustin Ranch Road is a six lane divided roadway with bike lanes on both sides of the roadway in the project vicinity. The roadway is classified as an other principal arterial and is also classified as a major roadway by the City of Tustin⁴. The posted speed limit in the project vicinity is 50 mph.

17th Street is a four lane divided roadway west of Newport Avenue with bike lanes on both sides of the roadway. The roadway is classified as an other principal arterial and has a posted speed limit of 45 mph. East of Newport Avenue, El Camino Lane is directly across from 17th Street. El Camino Lane is a cul-de-sac residential roadway which serves 11 residential units.

La Colina Drive is a two lane undivided roadway with various bike facilities and on-street parking availability through most of the project vicinity. A short segment of the roadway is divided, between Ranchwood Road and Tustin Ranch Road. The roadway is classified as a minor arterial between Newport Avenue and Red Hill Avenue, as a major collector between Red Hill Avenue and Browning Avenue, and as a local street between Browning Avenue and Tustin Ranch Road. The posted speed limit is 30 mph.

Irvine Boulevard is a generally a four lane divided roadway, including some areas with a striped median and others with a two-way left turn lane. There are some areas with bike lanes on one or both sides of the roadway, and on-street parking is allowed in some areas. The roadway transitions to a six lane divided roadway near Tustin Ranch Road and to a seven lane roadway (three travel lanes per direction with a two-way left turn lane) near Red Hill Avenue. The roadway is classified as an other principal arterial and has a posted speed limit of 40 mph west of Red Hill Avenue and 45 mph east of Red Hill Avenue.

Pavillion Drive is a two lane undivided roadway which provides access to the project site. The roadway is classified as a local street and has a posted speed limit of 25 mph.

Simon Ranch Road is a two lane undivided roadway which serves as a connecting segment between the project site and Browning Avenue. The roadway is classified as a local street and has a posted speed limit of 25 mph.

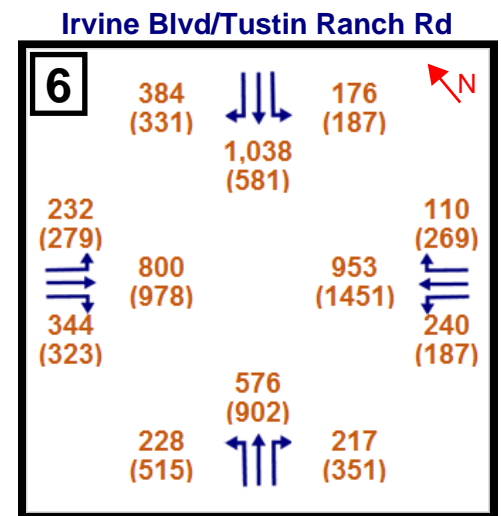
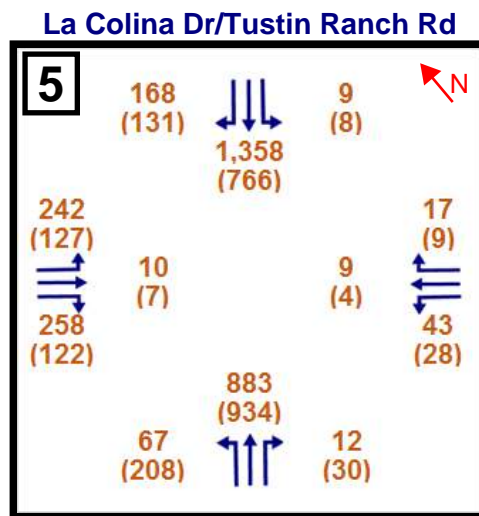
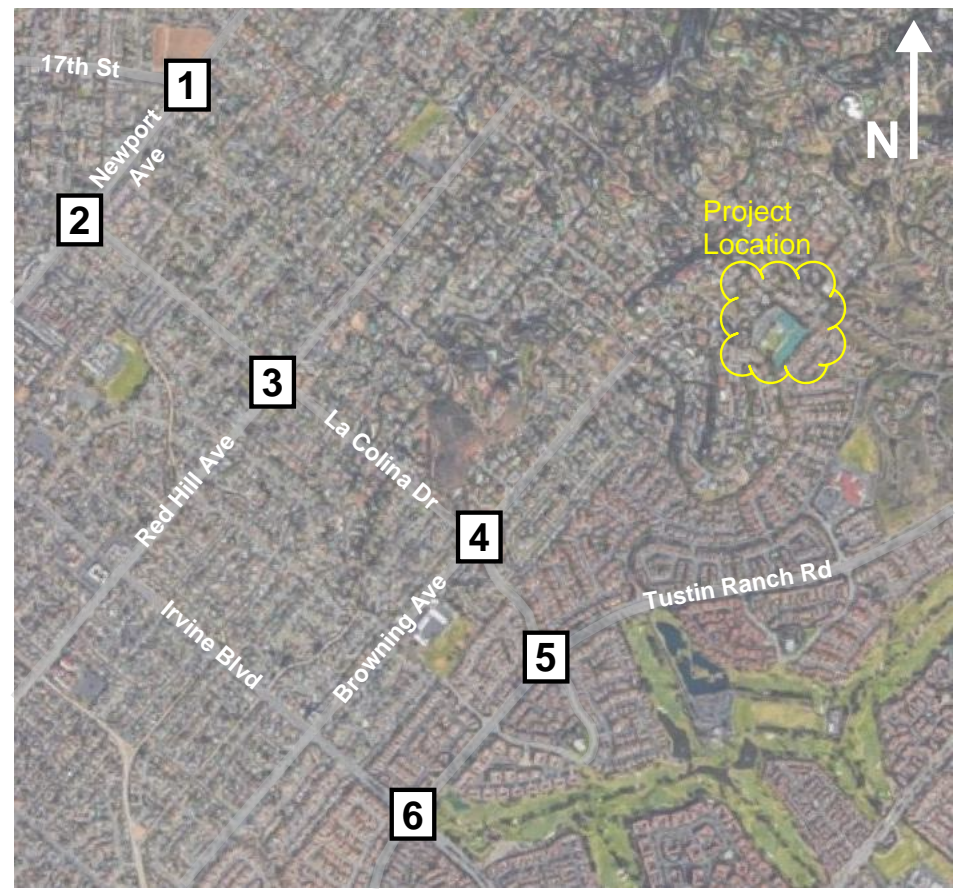
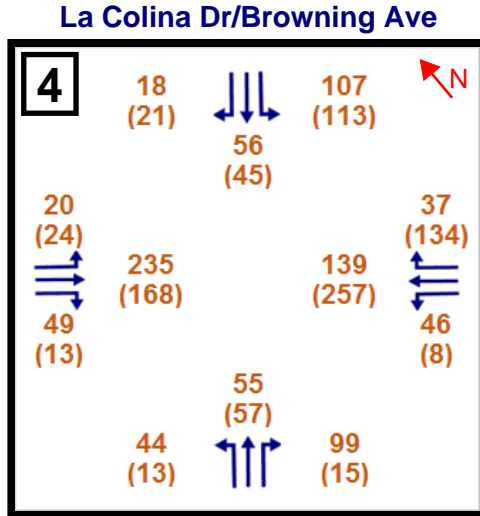
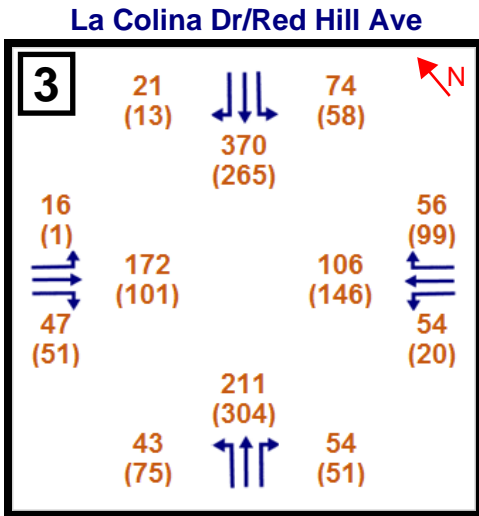
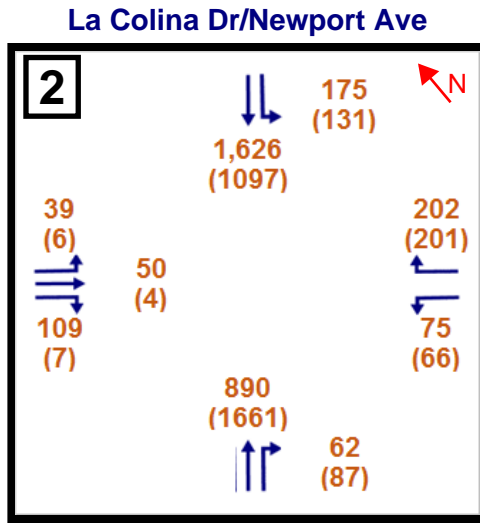
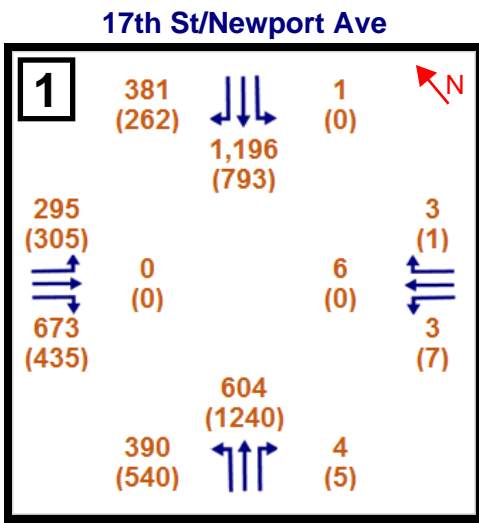
2.2. TRAFFIC VOLUMES

Traffic volume data was collected at each of the study intersections. Additionally, due to the ongoing Covid-19 pandemic, the traffic volumes were adjusted to represent 2021 existing, baseline¹ conditions without the effect of pandemic restrictions. The 2021 volumes were compared to available 2017 volumes from a previous analysis (2018 and 2019 volume data was not available). The 2021 volumes were found to be between 59% and 79% of the 2017 volumes in the AM peak hour and between 63% and 78% of the 2017 volumes in the PM peak hour.

¹ The Notice of Preparation was published on June 17, 2021.

Using that information, the 2021 volumes were adjusted upward to match 2017 volumes more closely, then an additional 0.5% per year growth rate was applied to account for growth which may have occurred since 2017. The growth rate is based on population growth estimates in the Southern California Association of Governments (SCAG) Regional Transportation Plan⁵ (RTP).

The adjusted 2021 traffic volumes were reviewed and approved by the Orange County Public Works, Traffic and Development Support and are shown in Figure 4. The collected traffic volume data and 2017 peak hour volumes are included in Appendix A.



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection

2.3. OPERATIONAL ANALYSIS

As discussed in Section 1.2, the study intersections were evaluated using the ICU methodology, including the methodologies and assumptions in the County *Transportation Implementation Manual*. Table 1 shows the LOS for the intersections under existing conditions. The ICU and Synchro reports are included in Appendix B.

Table 1. Existing Level of Service (LOS)

Signalized Intersection	Existing			
	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
17th St/ Newport Ave	0.861	D	0.694	B
La Colina Dr/ Newport Ave	0.699	B	0.740	C
La Colina Dr/ Tustin Ranch Rd	0.539	A	0.415	A
Irvine Blvd/ Tustin Ranch Rd	0.600	B	0.785	C

Unsignalized Intersection	Existing			
	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
La Colina Dr/ Red Hill Ave	0.736	C	0.696	B
La Colina Dr/ Browning Ave	0.590	A	0.515	A

As seen in the table, all of the intersections are currently operating at LOS D or better in both peak hours. All but one of the study intersections are operating at LOS C or better in both peak hours.

3. EXISTING AND FUTURE TRAFFIC VOLUMES

3.1. CUMULATIVE GROWTH AND TRAFFIC VOLUMES

The cumulative traffic volumes are the anticipated traffic volumes in a future year without the project traffic. The anticipated annual growth was assumed to be 0.5% per year based on the SCAG RTP, as previously discussed. Figure 5 on the following page shows the anticipated traffic volumes for 2024 without the Project.

3.2. EXISTING SITE TRAFFIC VOLUMES

3.2.1. Existing Site Trip Generation

Along with the peak hour data collected at each of the study intersections, a 24-hour count was conducted on April 15, 2021 on the access roadway for the existing Tustin Hills Racquet Club. Due to COVID-19 restrictions, only the tennis courts were open at the Club when the data was collected. The collected driveway volume data is included in Appendix C. Table 2 shows the trip generation rates for the tennis courts as calculated from the field data, and Table 3 shows the trip generation for the tennis courts based on the rates in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*⁶.

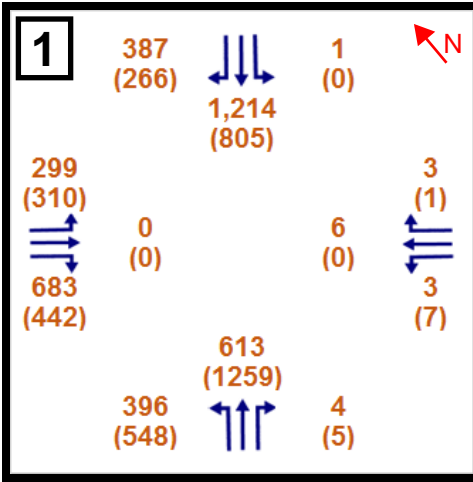
Table 2. Tennis Court Trip Generation (Field Data)

Field Counts - Courts Only						
Courts			11.5			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	1.65	19	89%	11%	17	2
PM Peak	3.65	42	52%	48%	22	20
Daily	30.35	349	50%	50%	175	174

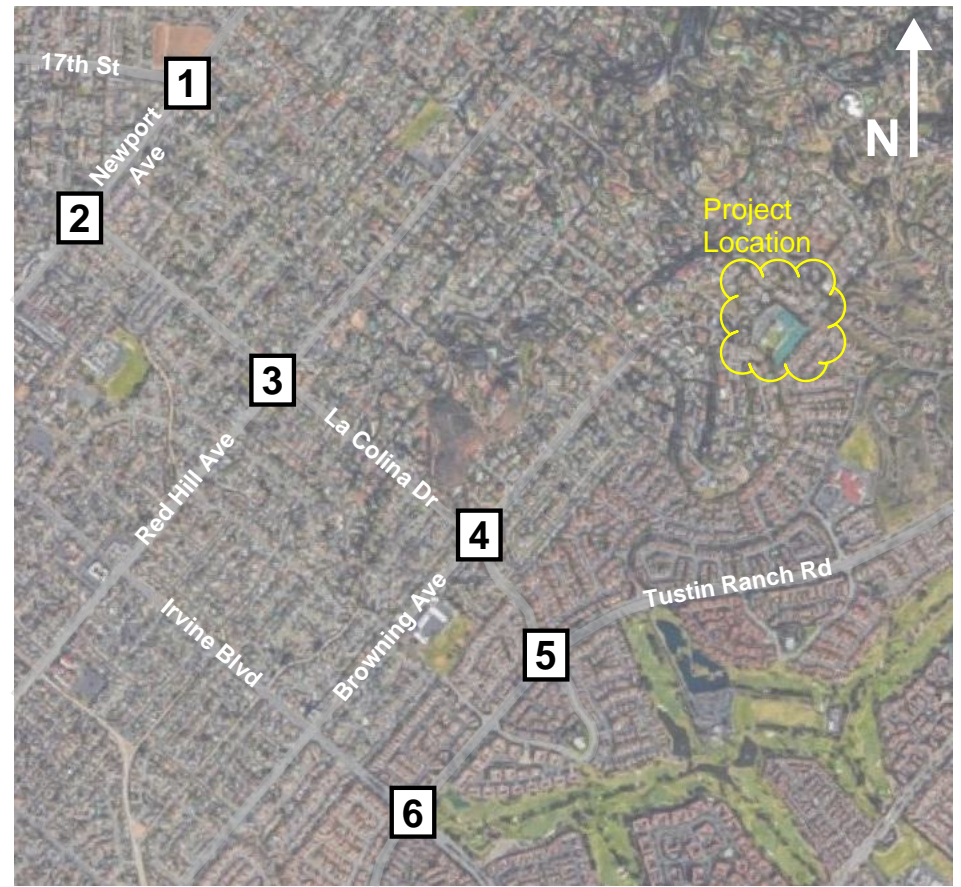
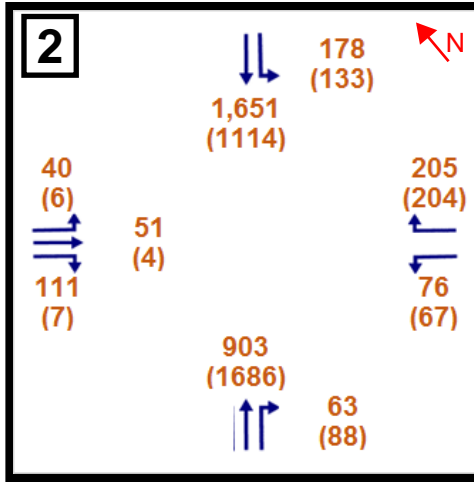
Table 3. Tennis Court Trip Generation (ITE Data)

ITE LU 490 Tennis Courts						
Courts			11.5			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	1.82	21	66%	34%	14	7
PM Peak	4.21	48	47%	53%	23	26
Daily	30.32	349	50%	50%	174	174

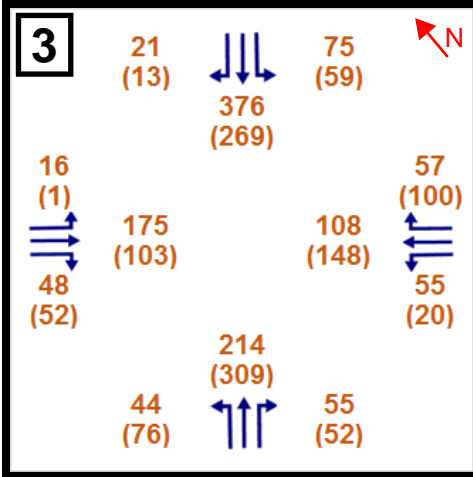
17th St/Newport Ave



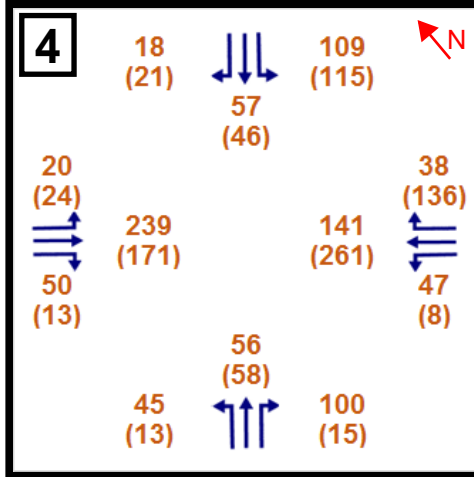
La Colina Dr/Newport Ave



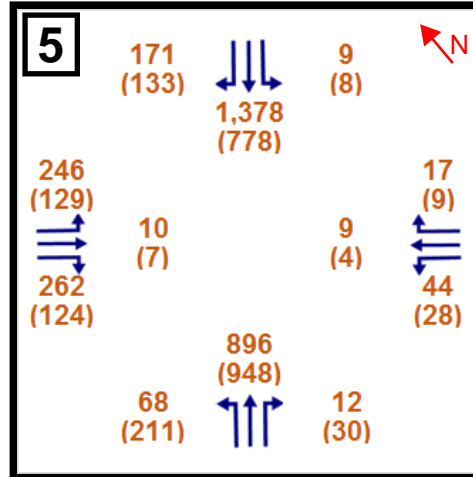
La Colina Dr/Red Hill Ave



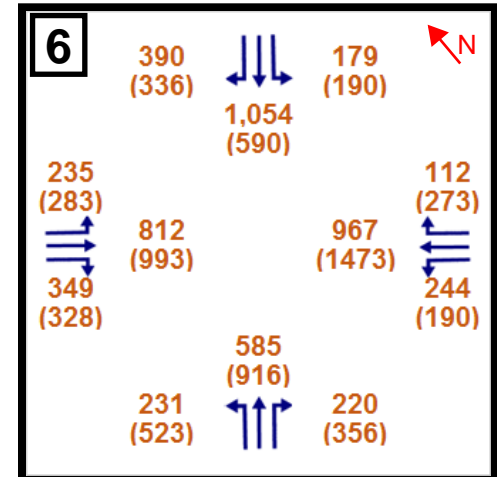
La Colina Dr/Browning Ave



La Colina Dr/Tustin Ranch Rd



Irvine Blvd/Tustin Ranch Rd



LEGEND

xx	AM Peak Hour Traffic Volume (veh/hr)
(xx)	PM Peak Hour Traffic Volume (veh/hr)
[x]	Study Intersection

The field data and ITE rates result in the same daily traffic volumes for the tennis courts, but the field data has fewer peak hour trips. Although the existing site includes a banquet facility, the banquet facility was closed due to COVID-19 at the time of data collection; therefore, existing trips and traffic volumes generated by the banquet facility could not be counted and were not used to determine existing site trip generation. However, for reference, the estimated traffic volumes generated by the banquet facility using ITE trip generation rates are shown in Table 4. Because most large events at the banquet facility would typically occur in the evenings or on weekends, outside of the typical peak hours of traffic on the surrounding roadways, trips generated by the banquet facilities are not expected to markedly increase the peak hour delay at any of the study intersections.

Table 4. Trip Generation for Banquet Facility

Banquet Facility						
Max Occupancy			330			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	0.040	14	65%	35%	9	5
PM Peak	0.087	29	47%	53%	14	15
Daily	0.667	220	50%	50%	110	110

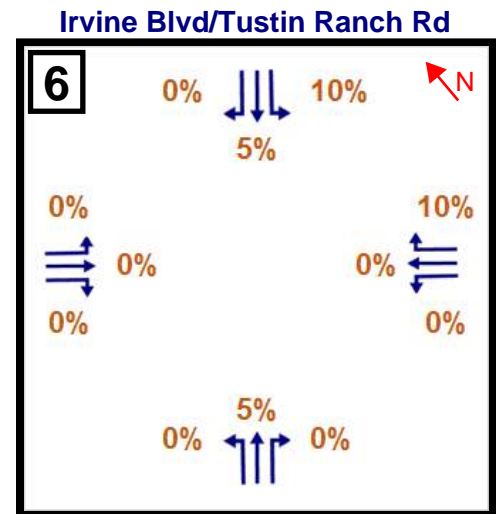
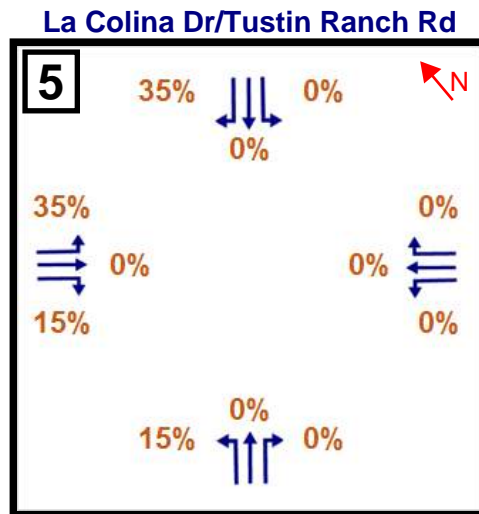
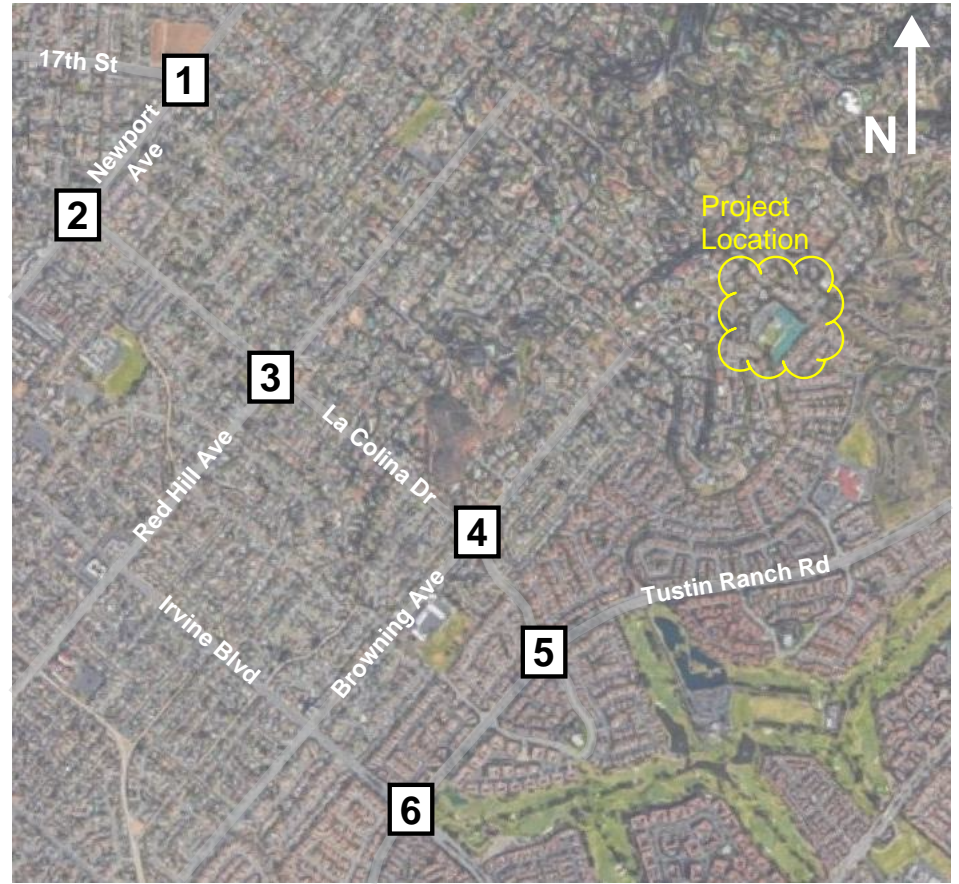
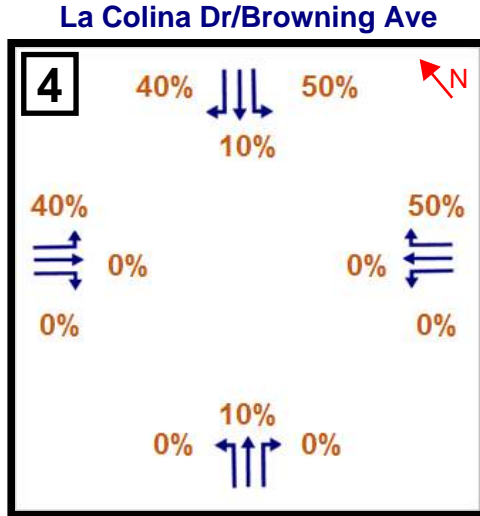
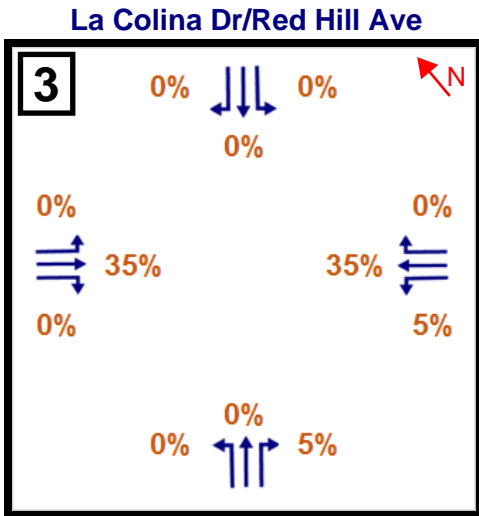
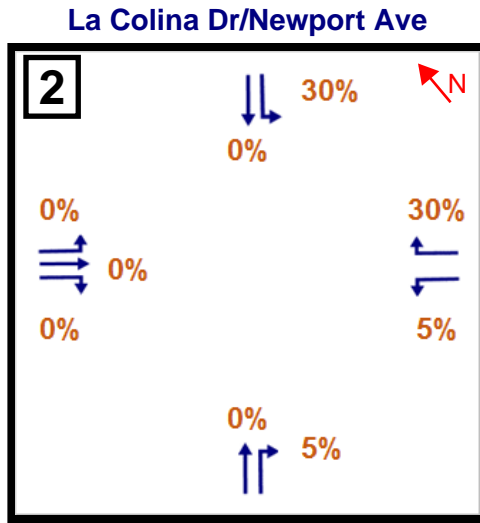
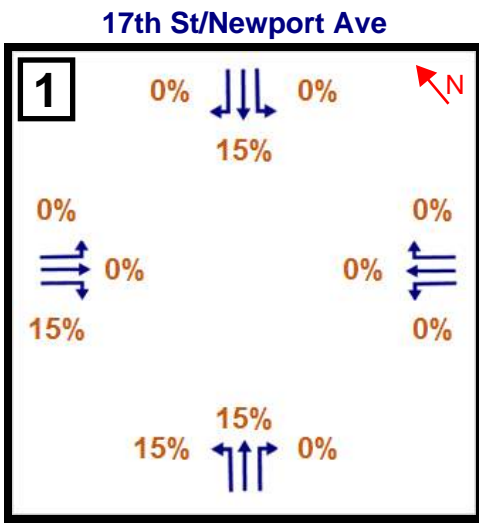
To be conservative, it was assumed that the banquet facility is closed. This results in fewer existing trips on site which will be replaced by the Project.

3.2.2. Existing Site Trip Distribution

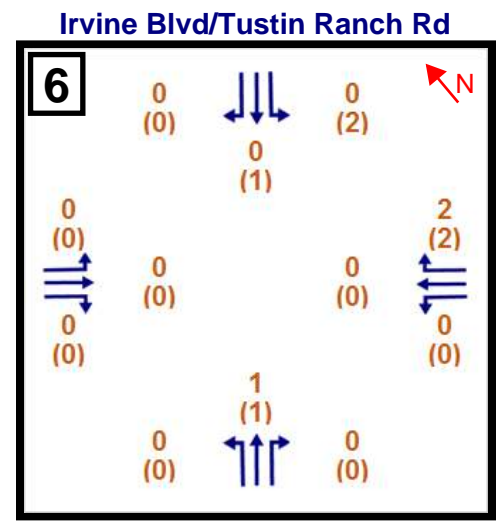
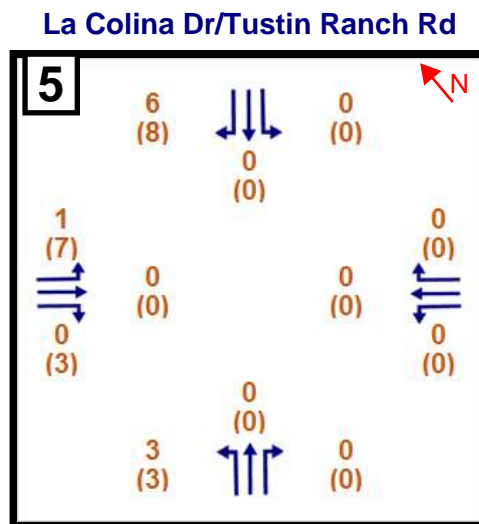
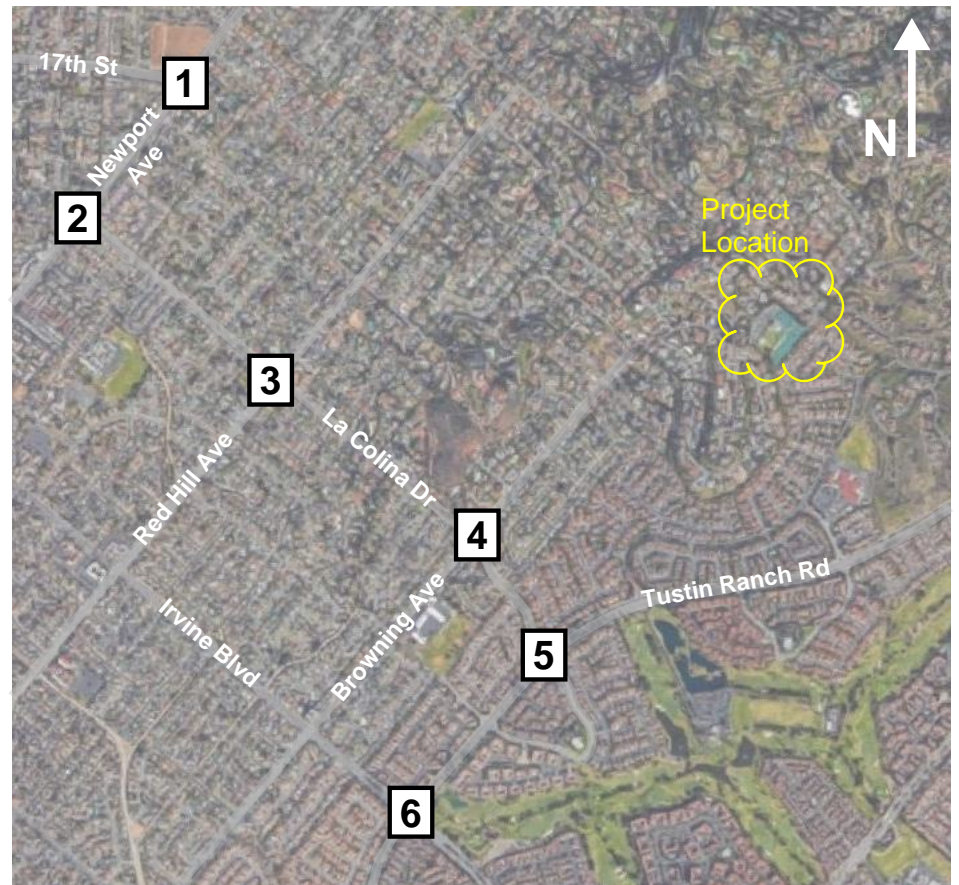
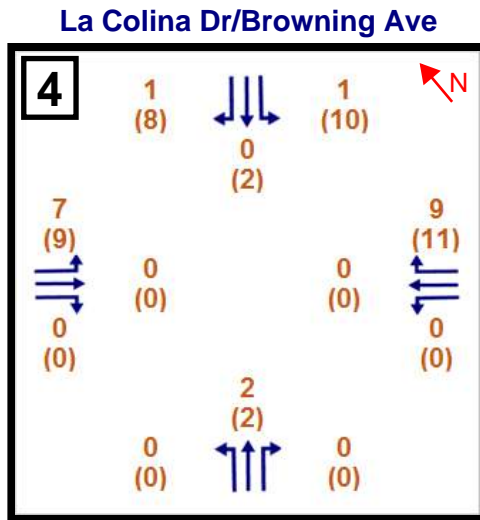
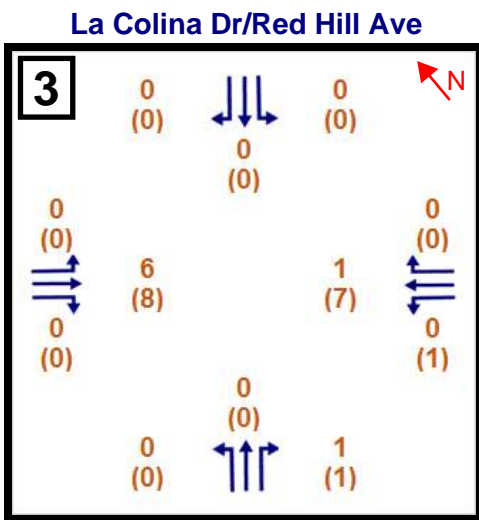
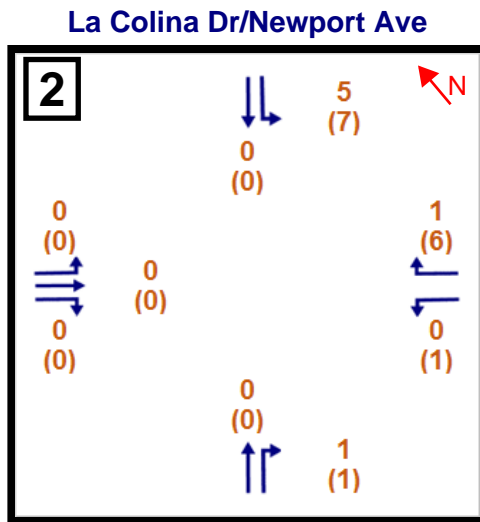
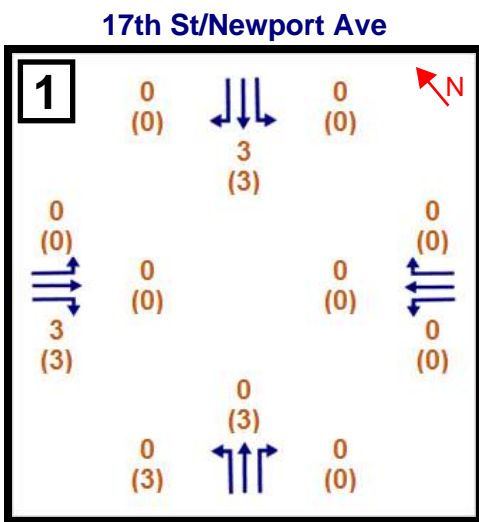
The estimated existing site trip distribution is assumed to be slightly different than the trip distribution for the proposed site and was therefore developed separately. The trip distribution for the existing site is shown in Figure 6.

3.2.3. Existing Site Traffic Volumes

Using the existing site trip generation and trip distribution, the existing site traffic volumes were calculated and are shown in Figure 7.



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection

3.3. PROJECT TRAFFIC VOLUMES

3.3.1. Project Trip Generation

The Project proposes 37 age-targeted residential units, including 34 attached units and 3 detached units. Table 5 shows the Project trip generation, which was estimated using trip generation rates in the ITE *Trip Generation Manual* for morning and afternoon weekday peak hour trips.

Table 5. Project Trip Generation

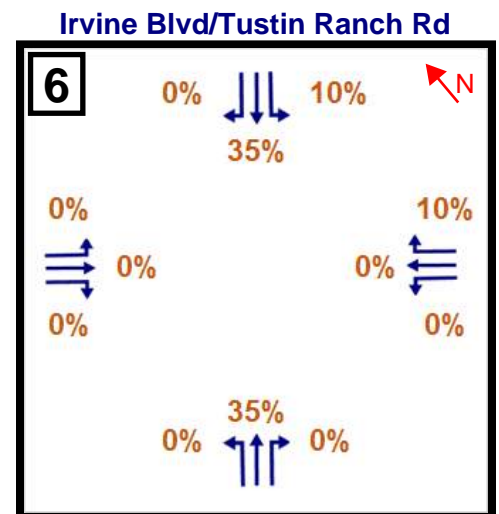
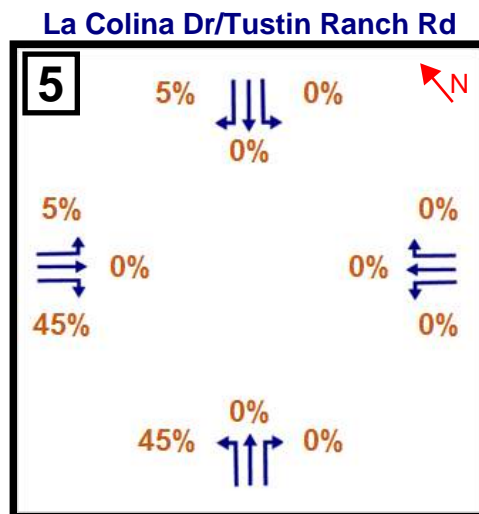
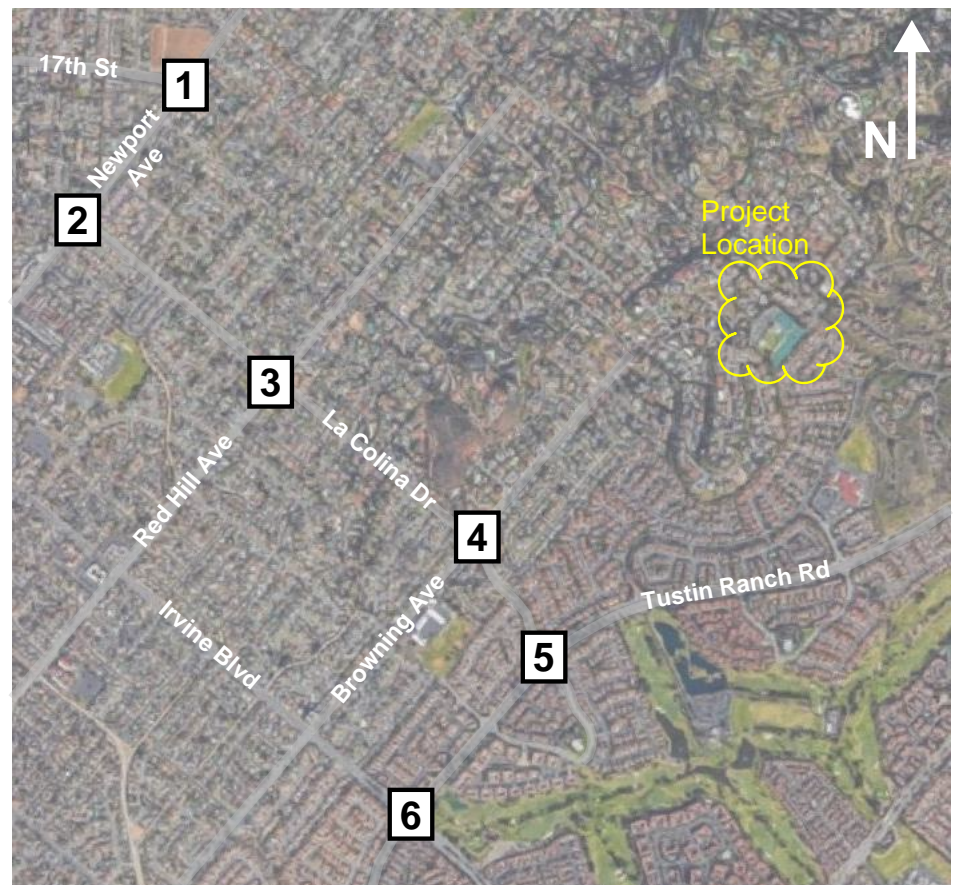
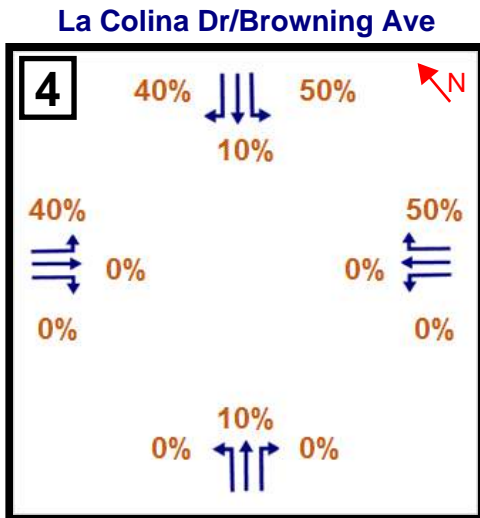
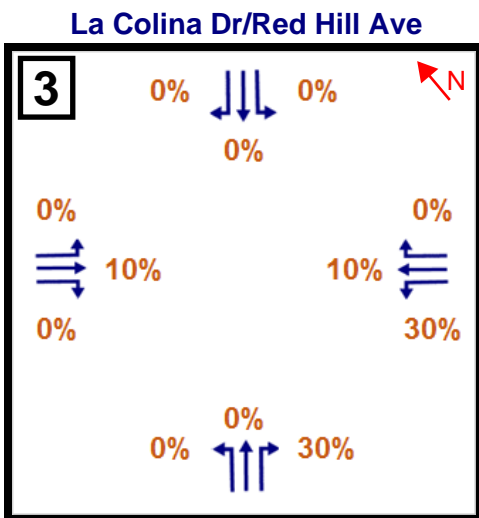
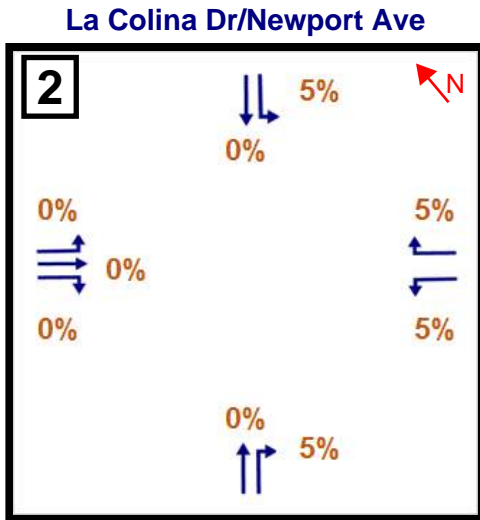
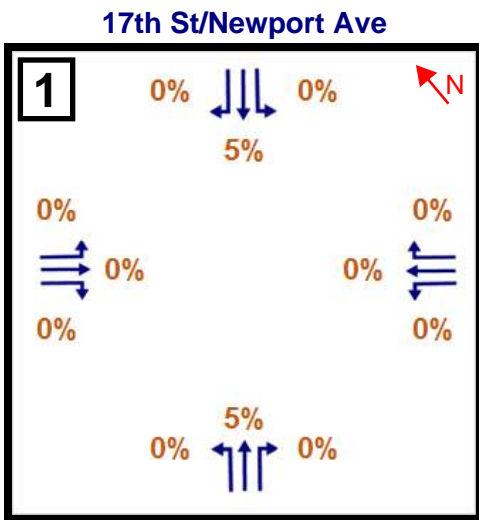
ITE LU 210 - Single-Family Detached Housing						
Units			3			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	0.74	2	25%	75%	1	2
PM Peak	0.99	3	63%	37%	2	1
Daily	9.44	28	50%	50%	14	14
ITE LU 220 - Multifamily Housing (Low-Rise)						
Units			34			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	0.46	16	23%	77%	4	12
PM Peak	0.56	19	63%	37%	12	7
Daily	7.32	249	50%	50%	124	124
Total						
Period	Daily Trips		Trips In		Trips Out	
AM Peak	18		4		14	
PM Peak	22		14		8	
Daily	277		139		139	

3.3.2. Project Trip Distribution

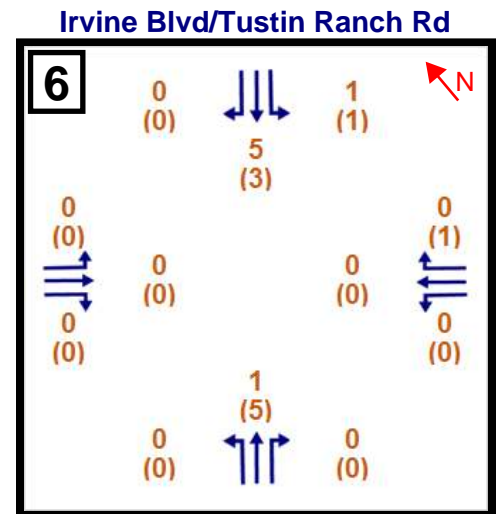
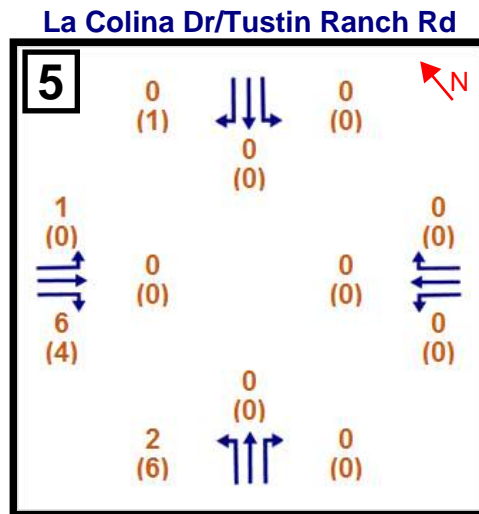
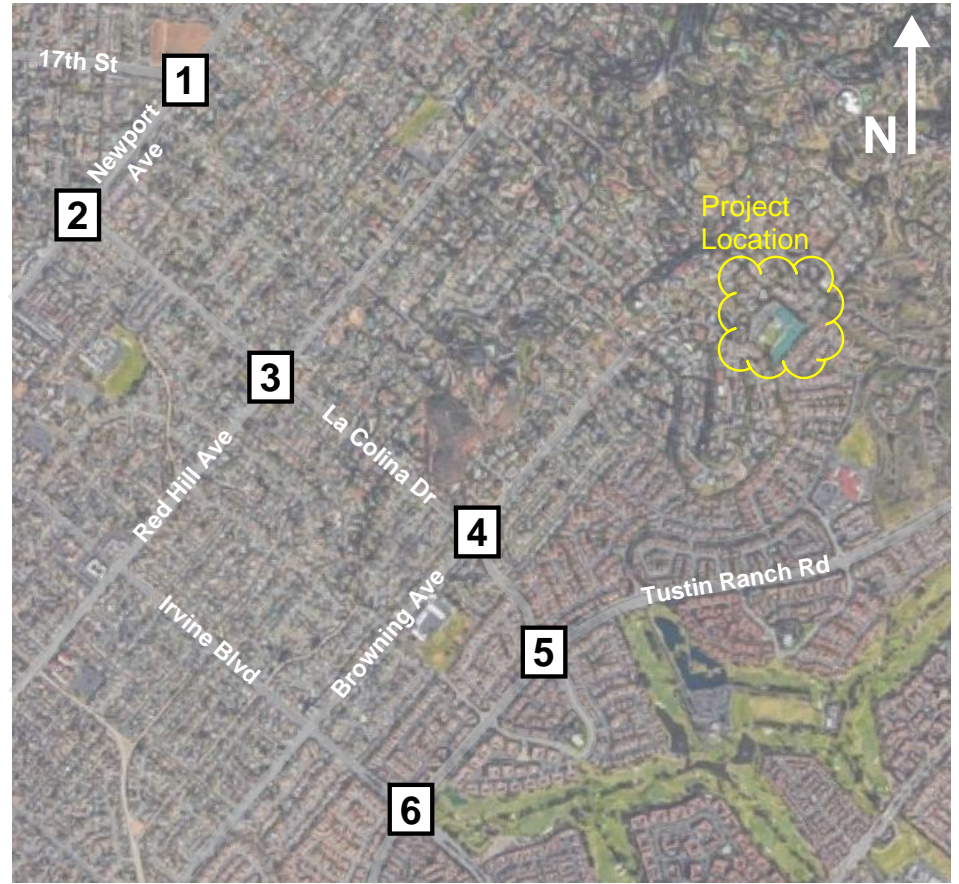
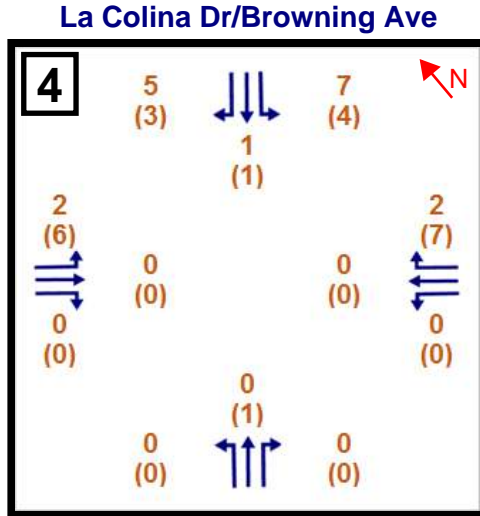
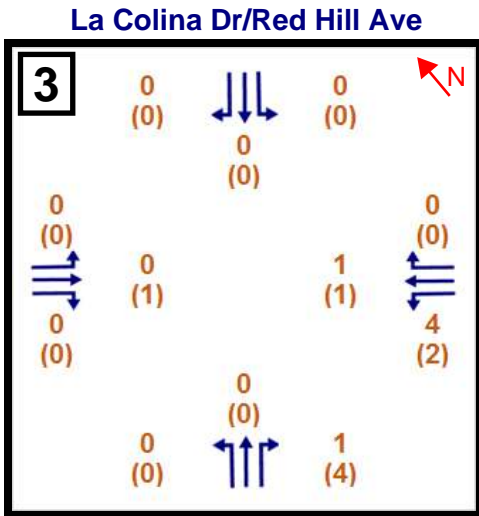
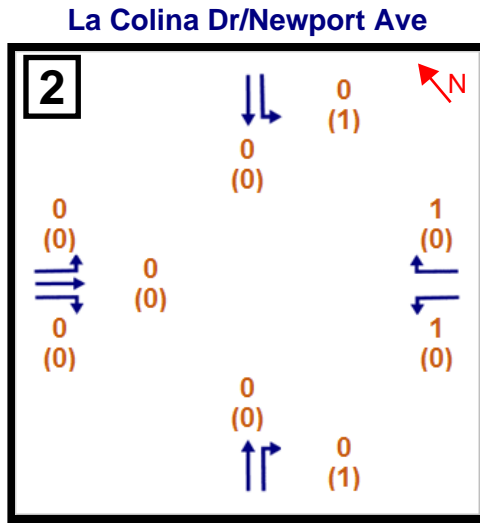
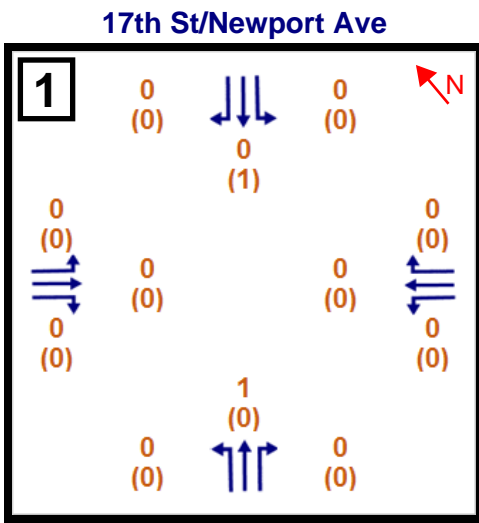
The project trip distribution is shown in Figure 8.

3.3.3. Project Traffic Volumes

Using the Project trip generation and trip distribution, the Project traffic volumes were calculated and are shown in Figure 9.



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection

3.4. NET SITE TRAFFIC VOLUMES

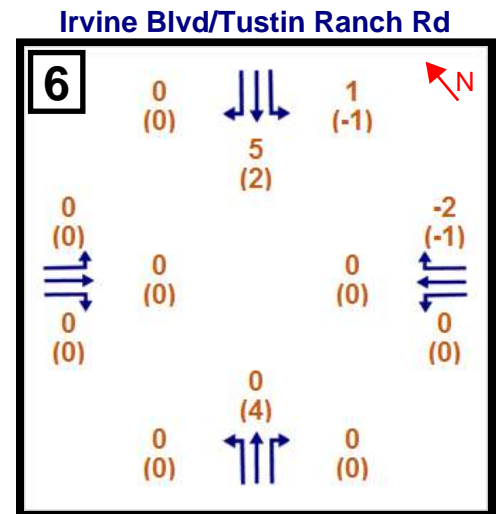
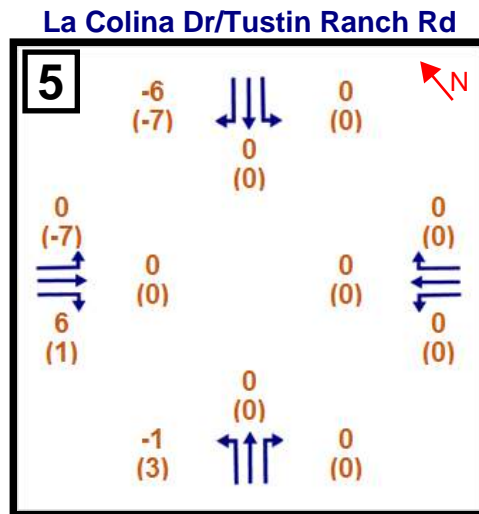
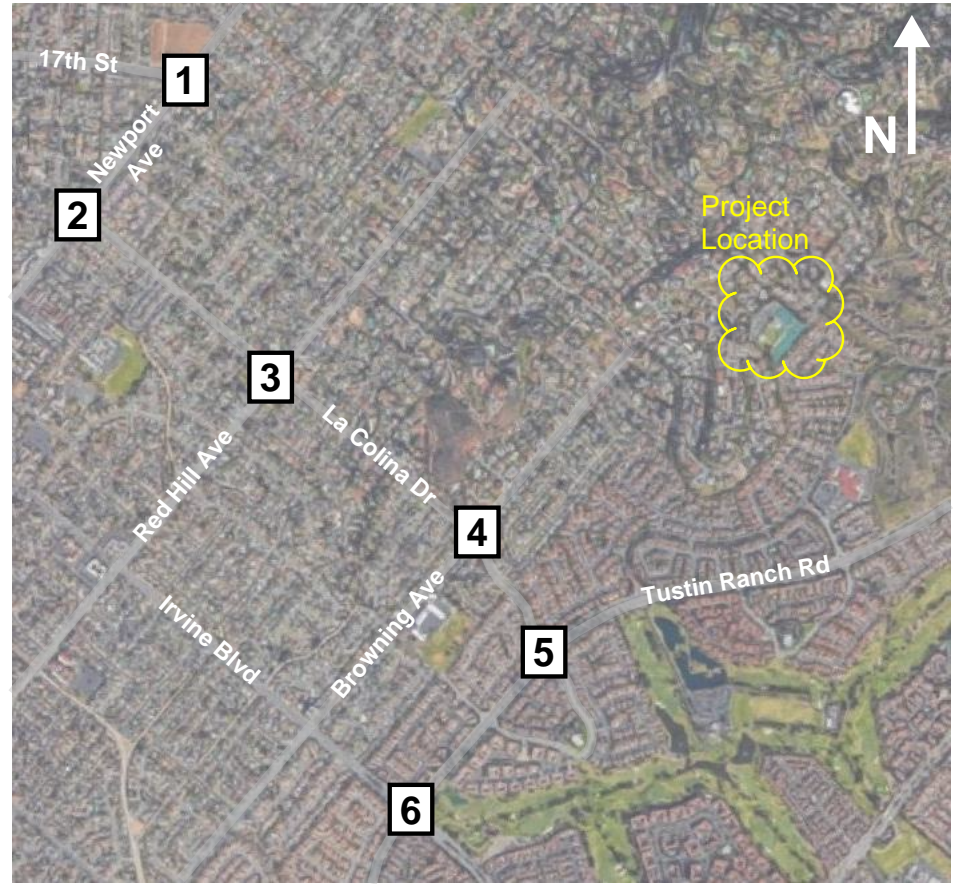
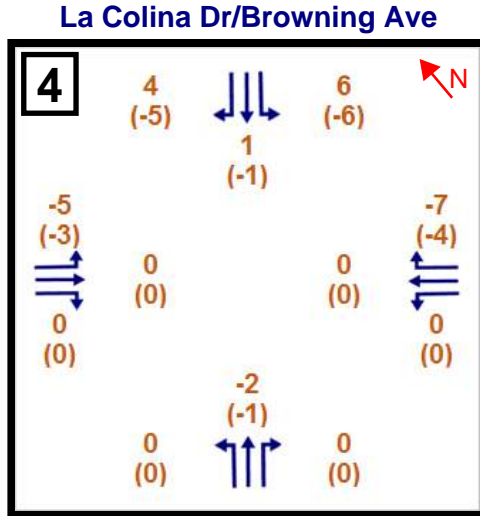
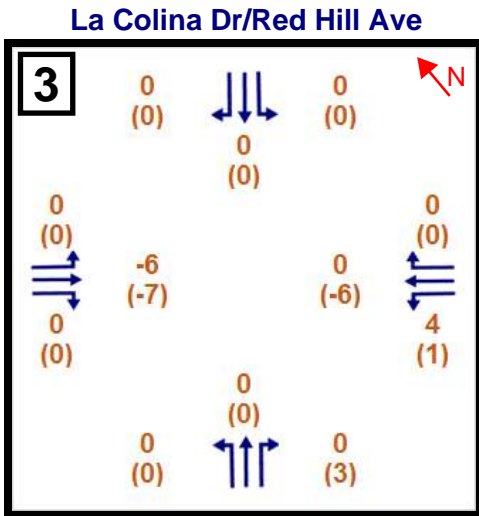
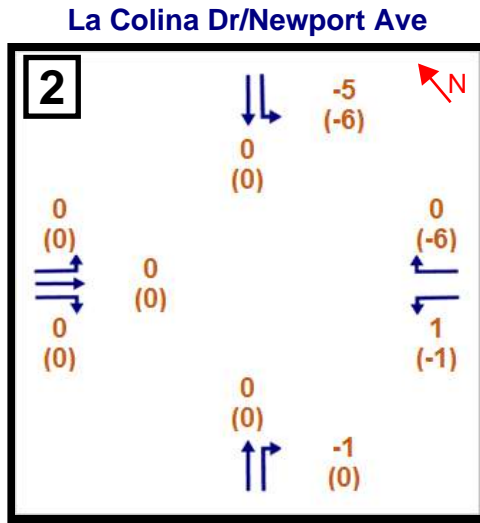
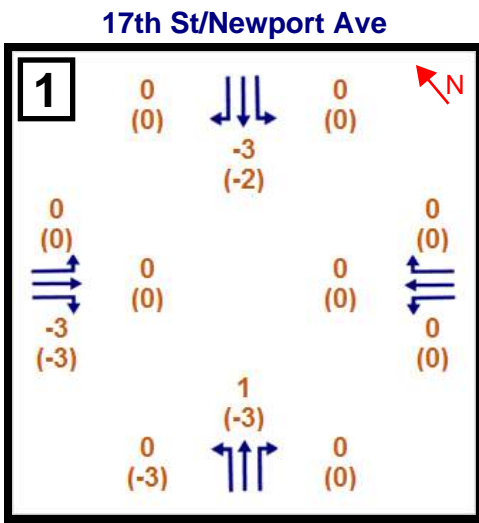
Table 6 shows a summary of the net site trips, which were calculated by subtracting the existing site trips from the Project trips. Recall that although the clubhouse/banquet facility could be operational, it was assumed to be closed to provide a conservative (lower) estimation of traffic generated by the existing site. However, overall traffic generated by the project daily and in both peak hours is expected to be lower than traffic generated by the existing site. When considering inbound and outbound trips separately, for inbound traffic in the AM peak hour and both inbound and outbound traffic in the PM peak hour, the Project is expected to generate fewer trips than the existing site. Figure 10 on the following page shows the distributed net site trips.

Table 6. Net Site Trips

Net Trips			
Period	Total Trips	Trips In	Trips Out
AM Peak	-1	-13	12
PM Peak	-20	-8	-12
Daily	-72	-36	-35

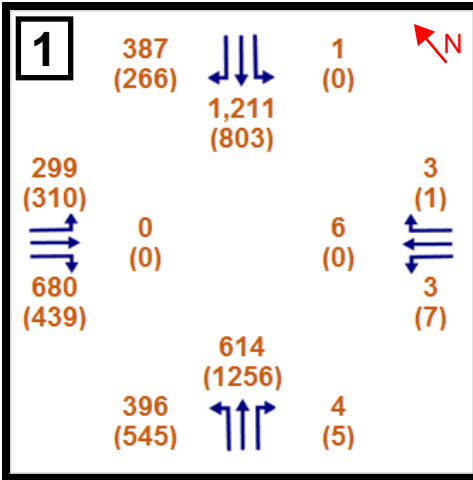
3.5. EXISTING + CUMULATIVE + PROJECT TRAFFIC VOLUMES

To estimate traffic volumes in a future year, traffic generated by cumulative growth and by the project must be considered. Future volumes with the project were calculated by adding the cumulative growth and the net site trips. Recall that for inbound traffic in the AM peak hour and both inbound and outbound traffic in the PM peak hour, the Project is expected to generate fewer trips than the existing site. Therefore, in many cases, traffic volumes for the opening year plus the project are expected to be lower than opening year without the project. Figure 11 shows the existing + cumulative + Project traffic volumes in 2024.

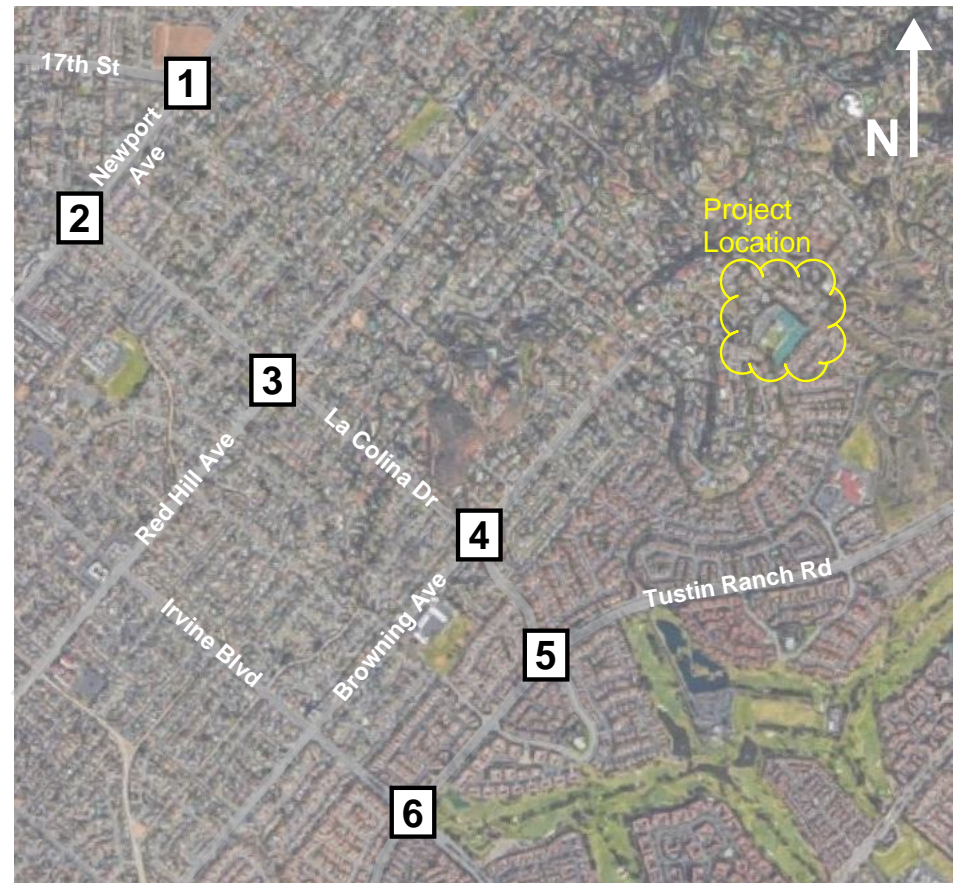
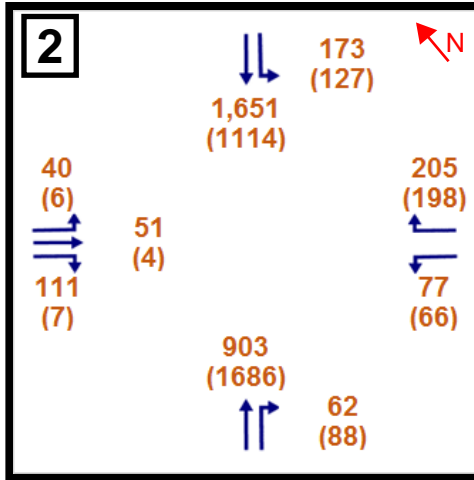


LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection

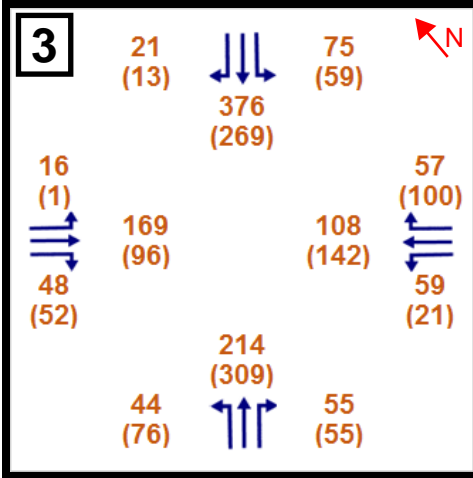
17th St/Newport Ave



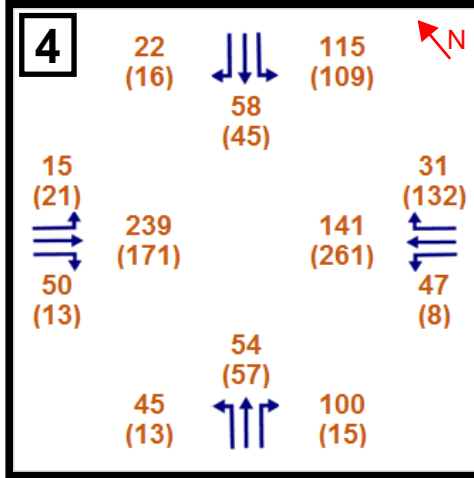
La Colina Dr/Newport Ave



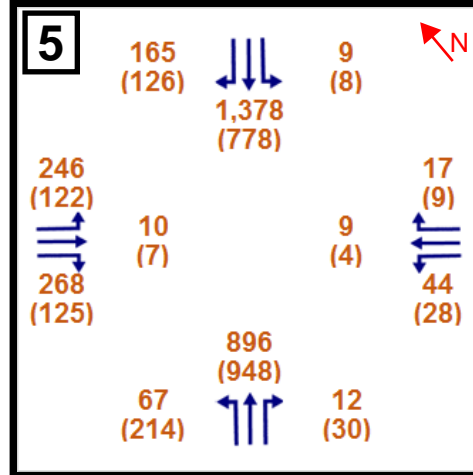
La Colina Dr/Red Hill Ave



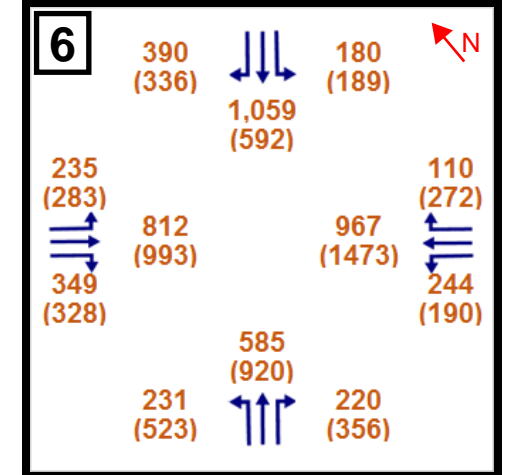
La Colina Dr/Browning Ave



La Colina Dr/Tustin Ranch Rd



Irvine Blvd/Tustin Ranch Rd



LEGEND

xx	AM Peak Hour Traffic Volume (veh/hr)
(xx)	PM Peak Hour Traffic Volume (veh/hr)
[x]	Study Intersection

4. INTERSECTION ANALYSIS

Recall that the study intersections were evaluated using the ICU methodology. The ICU spreadsheets and Synchro reports are included in Appendix B. Table 7 shows the resulting LOS for each of the study intersections in the opening year with and without the project.

Table 7. Opening Year Level of Service (LOS)

Signalized Intersection	2024 Without Project				2024 Plus Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
17th St/ Newport Ave	0.873	D	0.703	C	0.871	D	0.700	C
La Colina Dr/ Newport Ave	0.710	C	0.750	C	0.710	C	0.743	C
La Colina Dr/ Tustin Ranch Rd	0.546	A	0.420	A	0.549	A	0.423	A
Irvine Blvd/ Tustin Ranch Rd	0.608	B	0.797	C	0.609	B	0.797	C

Unsignalized Intersection	2024 Without Project				2024 Plus Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
La Colina Dr/ Red Hill Ave	0.745	C	0.703	C	0.744	C	0.701	C
La Colina Dr/ Browning Ave	0.597	A	0.520	A	0.589	A	0.502	A

As seen in the table, five of the intersections are expected to operate in both peak hours with or without the project in the opening year at LOS C or better. The sixth intersection of 17th Street and Newport Avenue will operate at LOS D with or without the project in the AM peak hour and at LOS C with or without the project in the PM peak hour. Because the intersection will continue to operate at LOS D with the project, the project is not expected to have any significant impacts on operations at any of the study intersections.

5. CONSTRUCTION TRAFFIC IMPACT ANALYSIS

A construction traffic impact analysis was conducted for the Project in 2019 and presented in the previously circulated Mitigated Negative Declaration; however, because this report includes analysis of an additional intersection (when compared to the 2019 analysis) and because the findings in this report are based on 2021 baseline volumes (instead of 2017 volumes), the construction analysis was updated and is presented in this section. The original analysis is included in Appendix D.

5.1. CONSTRUCTION TRIP GENERATION

As detailed in the 2019 analysis, construction traffic volumes were collected from two similar residential construction sites, both of which included construction of 11 residential units. The field data was increased by 10% to account for the phased construction of this Project, which is assumed to include approximately 12 units per phase. Based on that adjustment, Table 8 shows the estimated construction volumes, both in vehicles and in passenger car equivalents (PCEs). PCEs were estimated using truck volumes from one of the two surveyed construction sites; no trucks were observed in the PM peak hour.

Table 8. Estimated Construction Traffic Volumes – Field Data

Site	AM Peak Trips			PM Peak Trips			Total (12 hours)
	Total	In	Out	Total	In	Out	
Vehicles	15	12	3	6	1	4	97
PCEs*	21	15	6	6	1	4	112

*PCEs were calculated assuming a factor of 2.0 per truck

In addition to the field data, trip generation estimates were generated using CalEEMod, software which aids in environmental analysis. Table 9 shows the trip generation for the highest phase of development. The estimates do not indicate any truck trips during the busiest phase of construction, so the volumes are assumed to be PCEs. When comparing the results from Tables 2 and 3, it is clear that the volumes generated using CalEEMod are higher than those calculated based on field data. To be conservative, the higher traffic volumes were used in the analysis.

Table 9. Estimated Construction Traffic Volumes - CalEEMod

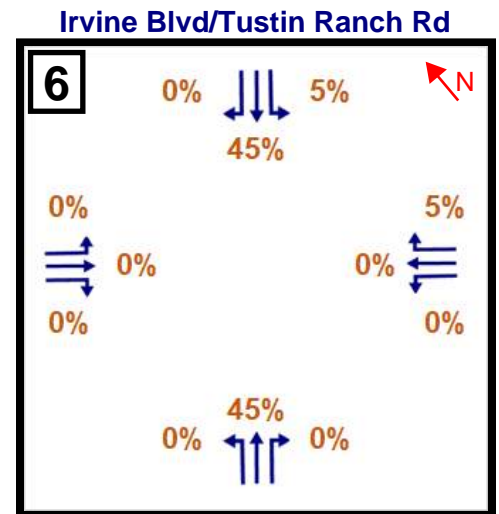
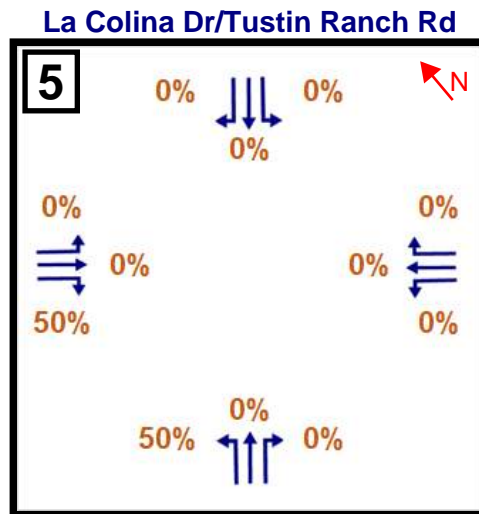
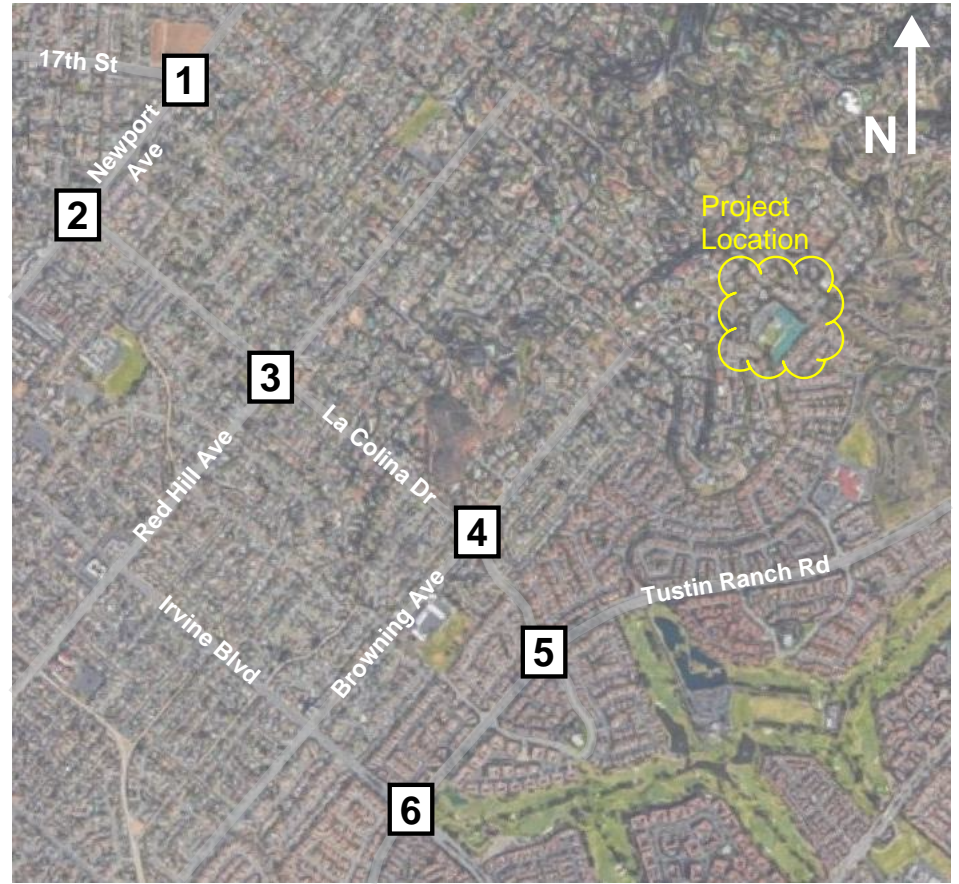
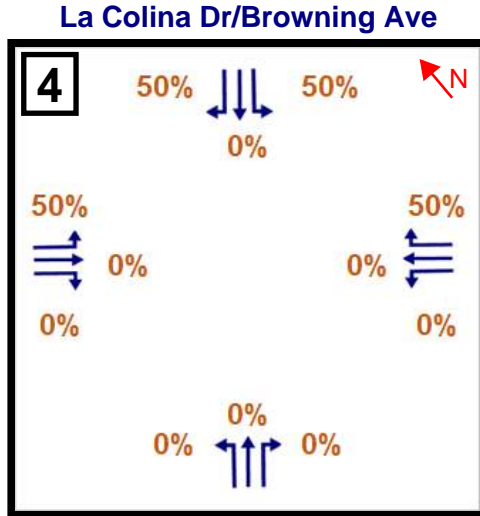
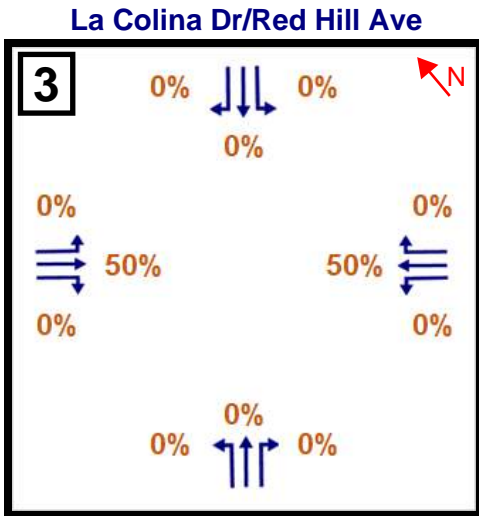
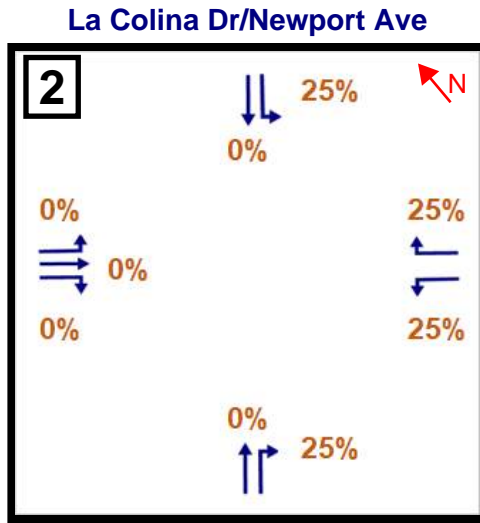
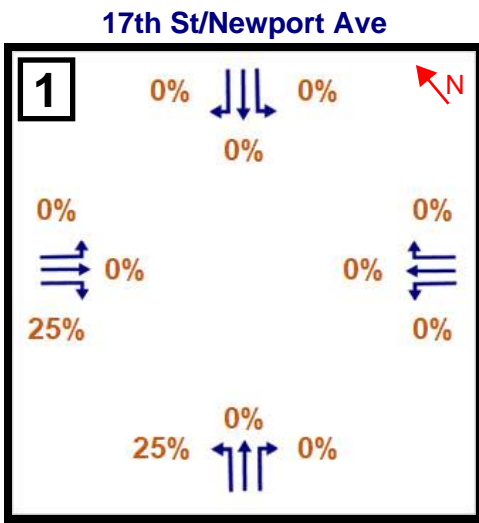
Site	AM Peak Trips			PM Peak Trips			Total (12 hours)
	Total	In	Out	Total	In	Out	
Vehicles/PCEs*	64	48	16	64	13	51	154

*Peak hour trips were calculated assuming workers enter in the AM peak and exit in the PM peak; all other trips are split evenly throughout the day.

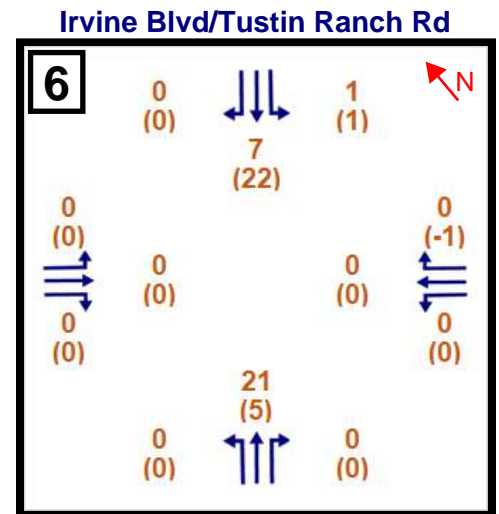
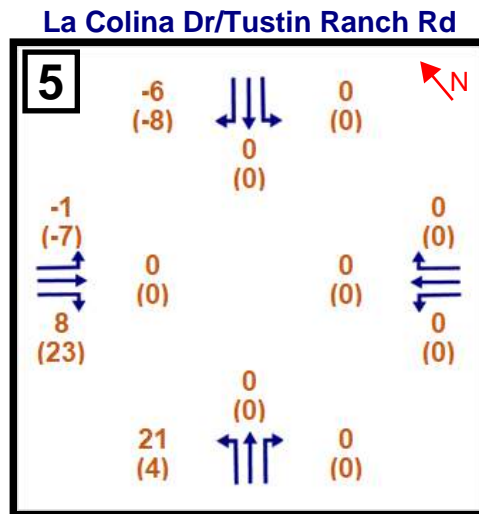
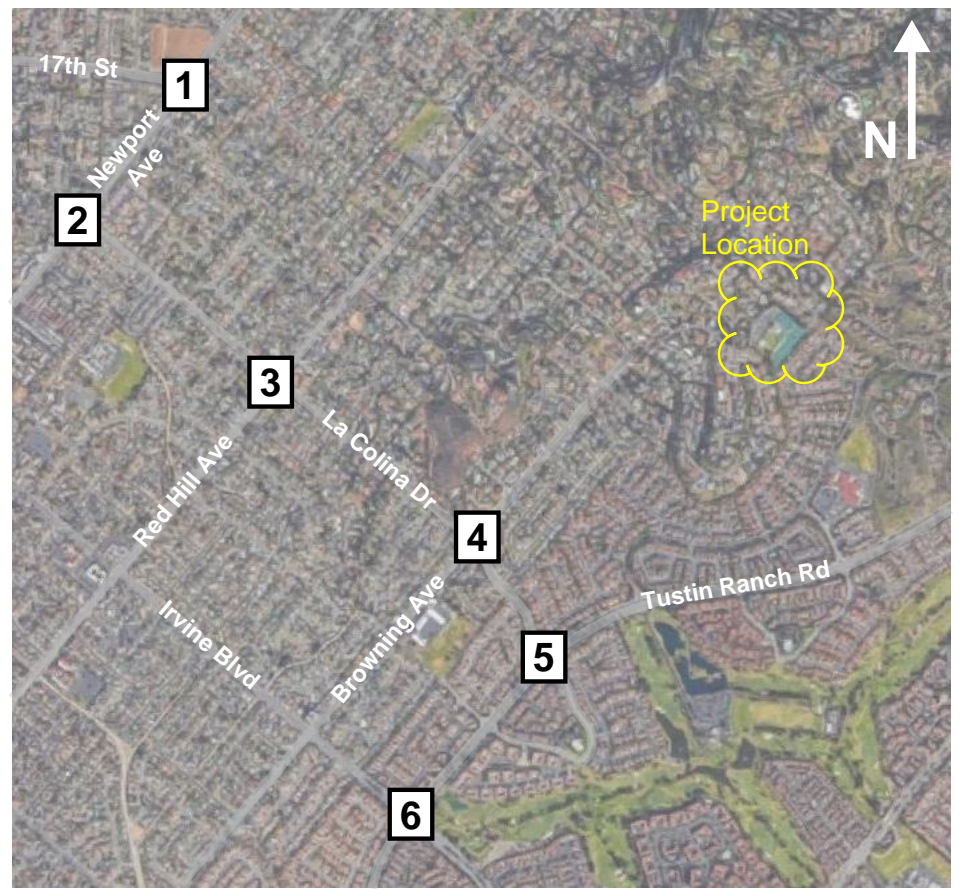
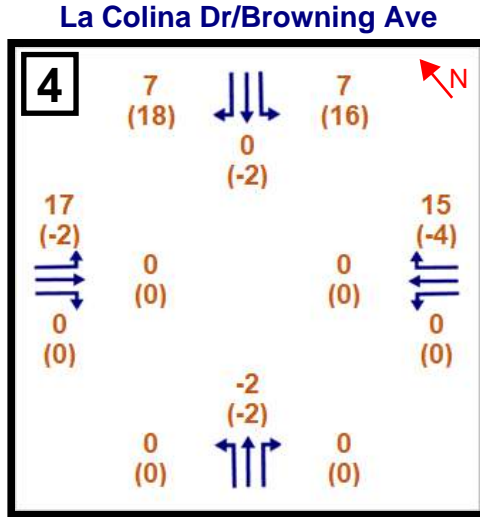
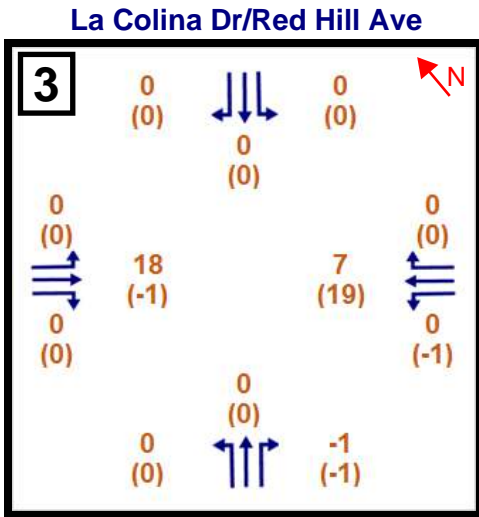
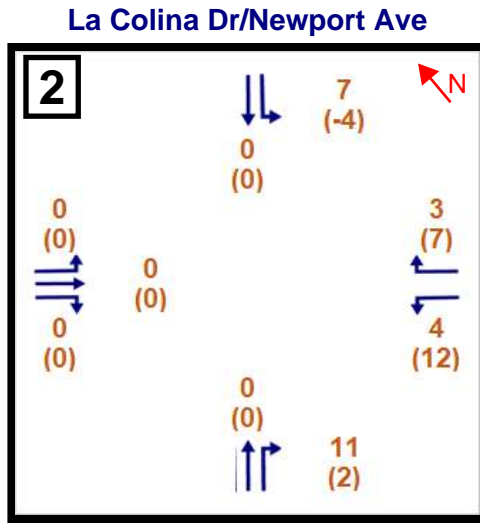
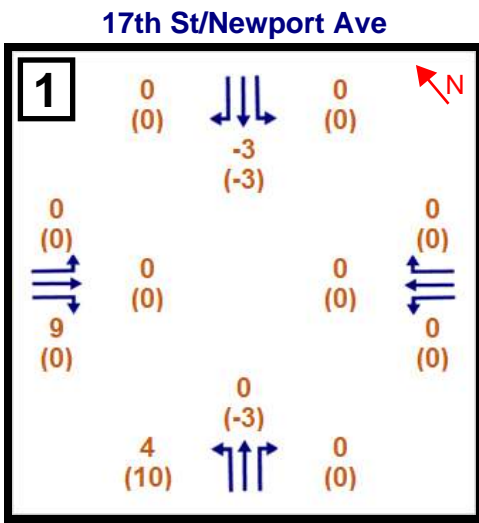
5.2. CONSTRUCTION TRIP DISTRIBUTION AND ASSIGNMENT

To remain consistent with the previous construction analysis, it was assumed that 50% of the construction traffic would access the site via I-5 while the other 50% would access the site via SR-55. Figure 12 shows the trip distribution for construction traffic.

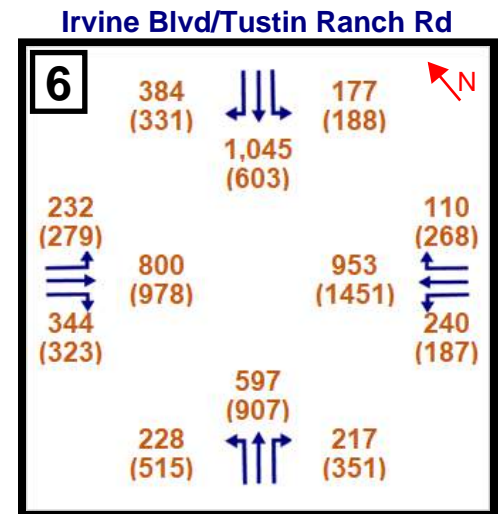
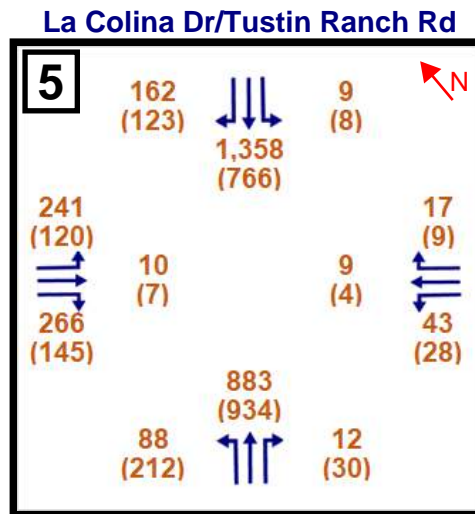
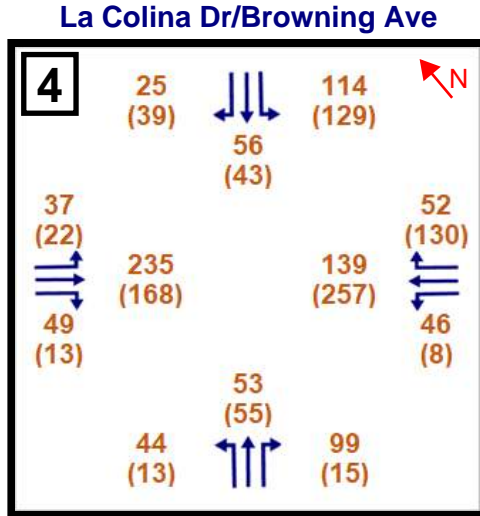
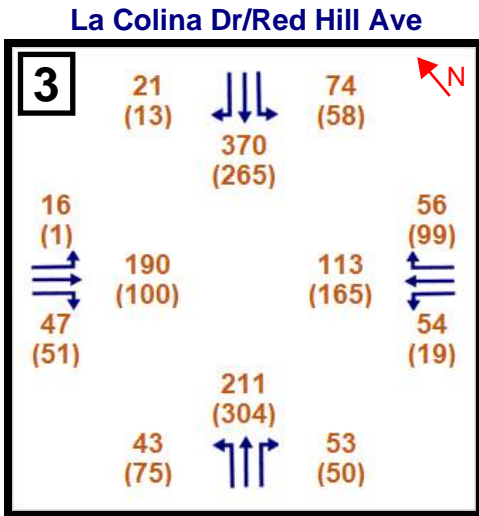
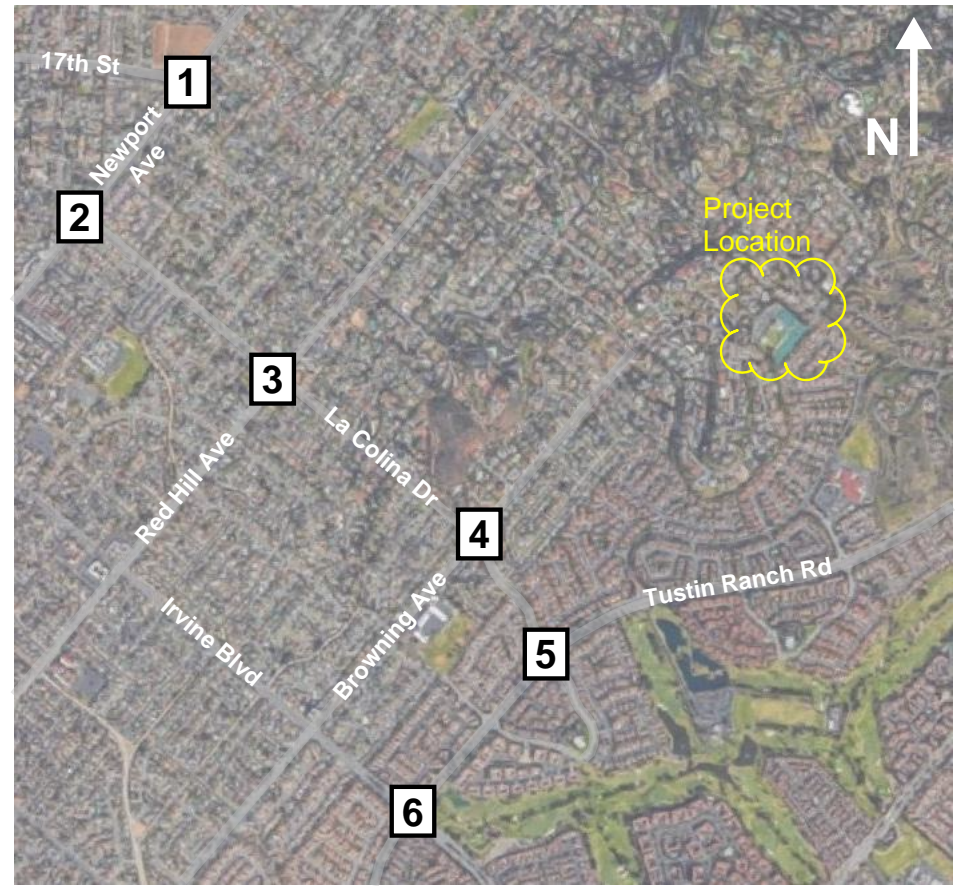
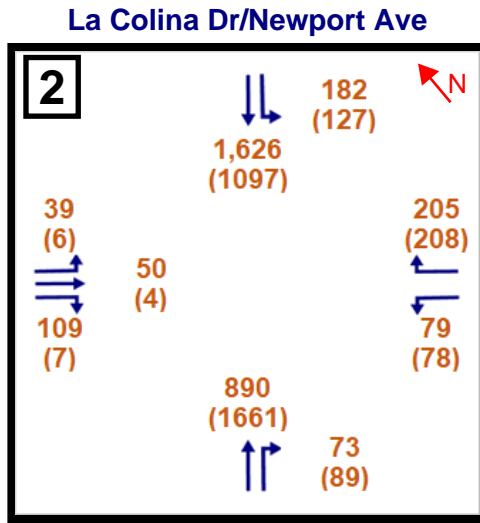
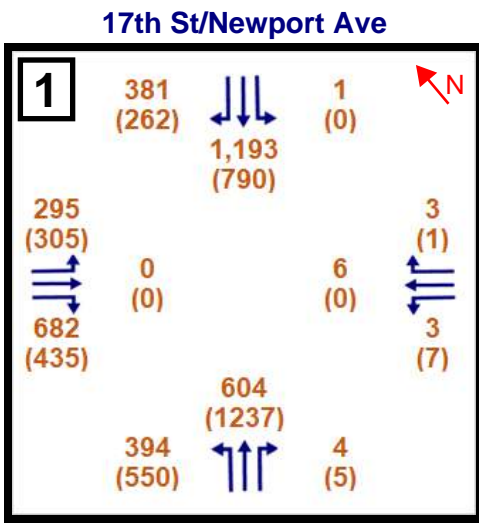
Figure 13 shows the net construction traffic volumes, assuming the existing site is completely vacated before construction. Figure 14 shows the existing plus net construction traffic volumes, which were used to evaluate the study intersections.



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection

5.3. INTERSECTION ANALYSIS

As with the project analysis, conditions during construction were evaluated using the ICU methodology. The ICU calculation sheets and Synchro reports are included in Appendix E. Recall that LOS D is considered the threshold for acceptable operations. Table 10 shows the results of the ICU analyses.

Table 10. Construction Level of Service (LOS)

Signalized Intersection	Existing				Existing Plus Construction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
17th St/ Newport Ave	0.861	D	0.694	B	0.866	D	0.696	B
La Colina Dr/ Newport Ave	0.699	B	0.740	C	0.701	C	0.741	C
La Colina Dr/ Tustin Ranch Rd	0.539	A	0.415	A	0.556	A	0.431	A
Irvine Blvd/ Tustin Ranch Rd	0.600	B	0.785	C	0.601	B	0.785	C

Unsignalized Intersection	Existing				Existing Plus Construction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
La Colina Dr/ Red Hill Ave	0.736	C	0.696	B	0.749	C	0.705	C
La Colina Dr/ Browning Ave	0.590	A	0.515	A	0.614	B	0.533	A

As shown in the table, all intersections will continue to operate at LOS D or better during construction, as they do under existing conditions. Therefore, the construction is not expected to have any significant impacts on any of the study intersections.

6. VEHICLE MILES TRAVELED

To determine if a detailed Vehicle Miles Traveled analysis was required, the screening criteria in the *2020 Updated Transportation Implementation Manual* were reviewed. Per the manual, if a project is expected to generate fewer than 500 daily trips, it is assumed to have a less-than significant impact on transportation and circulation. The manual explains that although the Governor's Office of Planning and Research (OPR) *Technical Advisory (TA) on Evaluating Transportation Impacts in CEQA*⁷ recommends a volume of 110 daily trips for screening out a project, the OPR recommendation was not based on any GHG analysis but was instead based on the potential trip generation of an office project that would already be categorically exempt under CEQA. LSA prepared a deeper analysis to correlate the effect of changes in project-related ADT to the resulting GHG emissions. The analysis was completed using the California Emissions Estimator Model (CalEEMod) because it was provided by the California Air Resources Board (CARB) to be used statewide for determining project-level GHG emissions.

The *2020 Updated Transportation Implementation Manual* reads:

“A common GHG emissions threshold is 3,000 metric tons (MT) of carbon dioxide equivalent (CO_{2e}) per year. Vehicle emissions are typically more than 50 percent of the total project GHG emissions. Thus, a project with 500 ADT would generally have total project emissions that could be less than 1,300 MT CO_{2e} /year (i.e. 50 percent or 643 MT CO_{2e} /year coming from vehicle emissions and the other 50 percent coming from other project activities). As this level of GHG emissions would be less than 3,000 MT CO_{2e} /year, the emissions of GHG from a project up to 500 ADT would typically be less than significant.

Based on this qualitative analysis, the County establishes a screening criteria for small projects of up to 500 ADT.”

The proposed Project is expected to generate 277 daily trips, falling well below the threshold. When considering the existing uses on site which would be replaced, the Project will result in a reduction in the number of daily trips, falling below the OPR threshold of 110 daily trips. Therefore, the Project is assumed to have a less-than-significant VMT impact and no further analysis is required.

7. CONCLUSION

The Ranch Hills project will replace the existing Tustin Hills Racquet Club with 37 residential units, including 34 attached units and 3 detached units. Using conservative trip generation estimates, the Project is expected to reduce overall traffic from the site, although the number of outbound trips in the AM peak hour will increase slightly (12 trips).

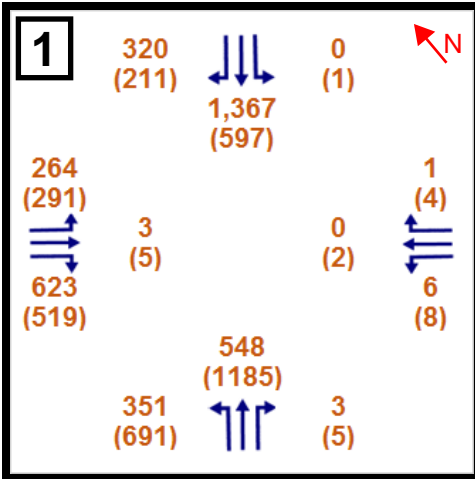
Based on the ICU analyses, the six study intersections currently operate with acceptable delays and are expected to continue to do so with or without the project in the opening year. The intersections will also continue to operate acceptably during construction. In addition, the project trip generation falls below the County threshold for requiring a detailed VMT analysis. Therefore, the Project is not expected to have a significant impact on traffic or the related transportation network and no improvements to the study network are required.

8. REFERENCES

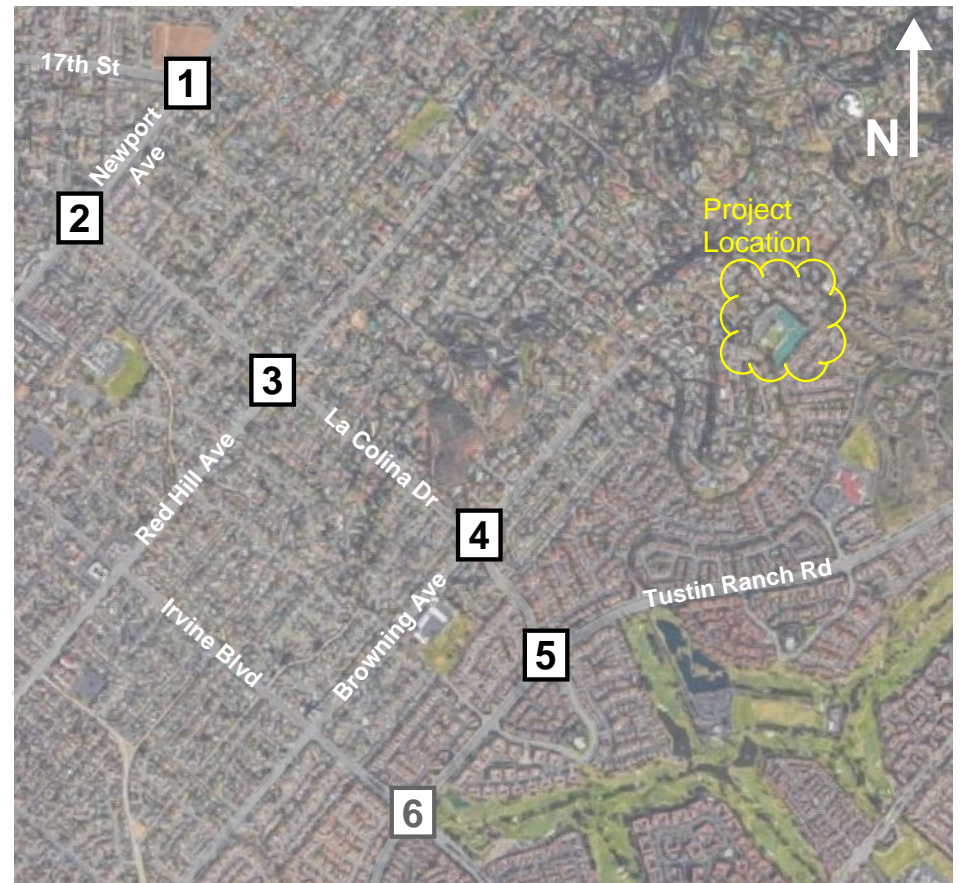
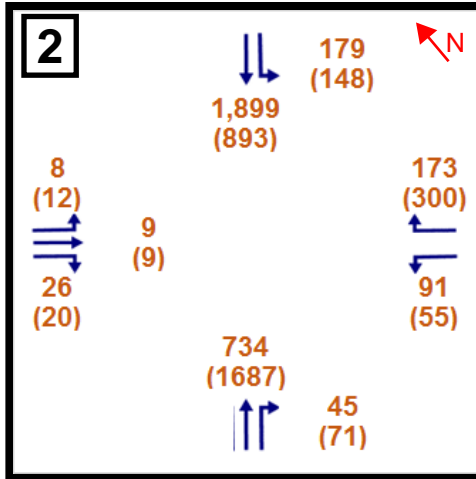
-
- ¹ *Road Trip Generation Analysis*. RK Engineering Group, Inc, February 2020.
- ² *2020 Updated Transportation Implementation Manual*. County of Orange, OC Public Works, OC Infrastructure Programs, November 2020.
- ³ FHWA Functional Classification, California.
<https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=026e830c914c495797c969a3e5668538>, accessed May 2021.
- ⁴ *City of Tustin General Plan*, November 2018.
- ⁵ *Connect SoCal Demographics and Growth Forecast*. Southern California Association of Governments, Adopted September 2020.
- ⁶ *Trip Generation, 10th Edition*. Institute of Transportation Engineers (ITE). Washington, D.C., 2017.
- ⁷ *Technical Advisory on Evaluating Transportation Impacts in CEQA*. State of California Governor's Office of Planning and Research, December 2018.

Appendix A – Intersection Traffic Volume Data (2017 and 2021)

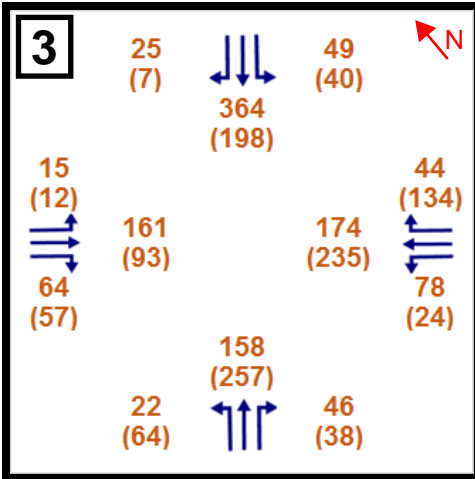
17th St/Newport Ave



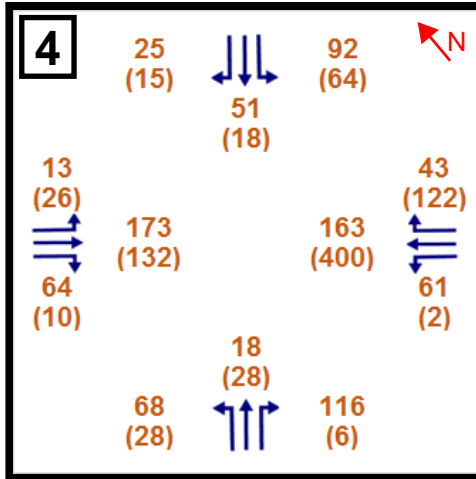
La Colina Dr/Newport Ave



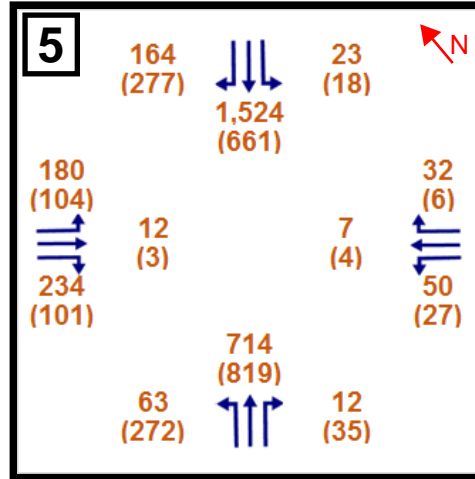
La Colina Dr/Red Hill Ave



La Colina Dr/Browning Ave



La Colina Dr/Tustin Ranch Rd



Irvine Blvd/Tustin Ranch Rd



LEGEND

xx	AM Peak Hour Traffic Volume (veh/hr)
(xx)	PM Peak Hour Traffic Volume (veh/hr)
x	Study Intersection

National Data & Surveying Services

Intersection Turning Movement Count

Location: Newport Ave & 17th St
City: Tustin
Control: Signalized

Project ID: 21-010033-001
Date: 4/15/2021

Total

NS/EW Streets:	Newport Ave				Newport Ave				17th St				17th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	2	0	0	1	2	1	0	1.5	0.5	1	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	29	63	1	0	0	123	33	0	28	0	51	0	2	0	0	0	330
7:15 AM	41	64	2	0	0	191	44	0	36	0	74	0	0	1	0	0	453
7:30 AM	55	78	2	0	0	199	45	0	35	0	98	0	1	1	0	0	514
7:45 AM	66	113	0	0	0	215	63	0	61	0	118	0	0	1	0	0	637
8:00 AM	66	114	1	0	0	213	65	0	58	0	117	0	1	0	0	0	635
8:15 AM	75	97	1	0	0	207	61	0	56	0	122	0	1	1	1	0	622
8:30 AM	60	90	1	0	1	184	72	0	27	0	104	0	0	2	1	0	542
8:45 AM	58	86	2	0	0	162	43	0	62	0	81	0	1	0	0	0	495
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	450	705	10	0	1	1494	426	0	363	0	765	0	6	6	2	0	4228
APPROACH %'s :	38.63%	60.52%	0.86%	0.00%	0.05%	77.77%	22.18%	0.00%	32.18%	0.00%	67.82%	0.00%	42.86%	42.86%	14.29%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	267	414	3	0	1	819	261	0	202	0	461	0	2	4	2	0	2436
PEAK HR FACTOR :	0.890	0.908	0.750	0.000	0.250	0.952	0.906	0.000	0.828	0.000	0.945	0.000	0.500	0.500	0.500	0.000	0.956
	0.945				0.972				0.926				0.667				

NS/EW Streets:	Newport Ave				Newport Ave				17th St				17th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	2	2	0	0	1	2	1	0	1.5	0.5	1	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	115	225	2	0	0	121	43	0	47	0	78	0	4	1	0	0	636
4:15 PM	91	207	2	0	0	175	55	0	48	1	90	0	2	0	0	0	671
4:30 PM	120	227	0	0	1	149	49	0	52	1	62	0	1	1	0	0	663
4:45 PM	102	225	1	0	0	127	47	0	42	0	83	0	1	0	0	0	628
5:00 PM	107	212	0	0	0	150	61	0	75	0	71	0	1	0	0	0	677
5:15 PM	91	264	0	0	0	173	48	0	44	0	89	0	2	0	0	0	711
5:30 PM	113	237	2	0	0	140	45	0	73	0	89	0	1	0	1	0	701
5:45 PM	101	233	2	0	0	142	46	0	41	0	83	0	1	0	0	0	649
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	840	1830	9	0	1	1177	394	0	422	2	645	0	13	2	1	0	5336
APPROACH %'s :	31.35%	68.31%	0.34%	0.00%	0.06%	74.87%	25.06%	0.00%	39.48%	0.19%	60.34%	0.00%	81.25%	12.50%	6.25%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	412	946	4	0	0	605	200	0	233	0	332	0	5	0	1	0	2738
PEAK HR FACTOR :	0.912	0.896	0.500	0.000	0.000	0.874	0.820	0.000	0.777	0.000	0.933	0.000	0.625	0.000	0.250	0.000	0.963
	0.959				0.911				0.872				0.750				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Newport Ave & La Colina Dr
City: Tustin
Control: Signalized

Project ID: 21-010033-002
Date: 4/15/2021

Total

NS/EW Streets:	Newport Ave				Newport Ave				La Colina Dr				La Colina Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	2	0	0	1	2	0	0	0	1	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	67	3	0	11	147	0	1	0	0	0	0	6	0	7	0	242
7:15 AM	0	93	8	0	15	228	0	0	0	0	0	0	18	0	10	0	372
7:30 AM	0	106	8	0	22	255	0	1	0	0	0	0	8	0	24	0	424
7:45 AM	0	160	11	0	24	276	0	0	12	10	22	0	10	0	45	0	570
8:00 AM	0	158	14	0	30	266	0	0	9	19	36	0	12	0	45	0	589
8:15 AM	0	146	11	0	31	292	0	0	5	4	14	0	16	0	29	0	548
8:30 AM	0	126	5	0	31	244	0	0	0	0	0	0	12	0	15	0	433
8:45 AM	0	113	10	0	13	225	0	0	0	0	0	0	17	0	14	0	392
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	969	70	0	177	1933	0	2	26	33	72	0	99	0	189	0	3570
APPROACH %'s :	0.00%	93.26%	6.74%	0.00%	8.38%	91.52%	0.00%	0.09%	19.85%	25.19%	54.96%	0.00%	34.38%	0.00%	65.63%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	590	41	0	116	1078	0	0	26	33	72	0	50	0	134	0	2140
PEAK HR FACTOR :	0.000	0.922	0.732	0.000	0.935	0.923	0.000	0.000	0.542	0.434	0.500	0.000	0.781	0.000	0.744	0.000	0.908
	0.917				0.924				0.512				0.807				

NS/EW Streets:	Newport Ave				Newport Ave				La Colina Dr				La Colina Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	2	0	0	1	2	0	0	0	1	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	289	14	0	16	192	0	0	2	2	0	0	9	0	39	0	563
4:15 PM	0	274	18	0	21	225	0	0	1	2	4	0	16	0	42	0	603
4:30 PM	0	309	18	0	27	167	0	3	3	3	7	0	6	0	35	0	578
4:45 PM	0	297	10	0	17	190	0	0	2	2	1	0	6	0	28	0	553
5:00 PM	0	284	13	0	16	177	0	0	2	3	1	0	11	0	36	0	543
5:15 PM	0	304	14	0	25	244	0	0	1	0	0	0	15	0	38	0	641
5:30 PM	0	317	15	0	27	185	0	1	1	0	3	0	10	0	35	0	594
5:45 PM	0	285	20	0	25	180	0	0	0	0	1	0	11	0	35	0	557
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	2359	122	0	174	1560	0	4	12	12	17	0	84	0	288	0	4632
APPROACH %'s :	0.00%	95.08%	4.92%	0.00%	10.01%	89.76%	0.00%	0.23%	29.27%	29.27%	41.46%	0.00%	22.58%	0.00%	77.42%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1190	62	0	93	786	0	1	4	3	5	0	47	0	144	0	2335
PEAK HR FACTOR :	0.000	0.938	0.775	0.000	0.861	0.805	0.000	0.250	0.500	0.250	0.417	0.000	0.783	0.000	0.947	0.000	0.911
	0.943				0.818				0.500				0.901				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Red Hill Ave & La Colina Dr
City: Tustin
Control: 4-Way Stop

Project ID: 21-010033-003
Date: 4/15/2021

Total

NS/EW Streets:	Red Hill Ave				Red Hill Ave				La Colina Dr				La Colina Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	3	20	0	0	9	22	0	0	1	10	2	0	2	2	5	0	76
7:15 AM	3	22	5	0	7	32	2	0	1	15	13	0	4	7	4	0	115
7:30 AM	9	23	3	0	10	51	1	0	1	19	7	0	7	13	6	0	150
7:45 AM	13	42	13	0	13	57	4	0	1	31	12	0	7	26	12	0	231
8:00 AM	4	70	12	0	19	94	3	0	7	41	10	0	10	27	14	0	311
8:15 AM	12	33	7	0	16	97	9	0	4	38	9	0	19	21	13	0	278
8:30 AM	4	18	10	0	9	37	0	0	0	23	5	0	6	8	4	0	124
8:45 AM	9	28	5	0	8	42	6	0	3	10	7	0	8	11	2	0	139
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	57	256	55	0	91	432	25	0	18	187	65	0	63	115	60	0	1424
APPROACH %'s :	15.49%	69.57%	14.95%	0.00%	16.61%	78.83%	4.56%	0.00%	6.67%	69.26%	24.07%	0.00%	26.47%	48.32%	25.21%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	38	168	35	0	58	299	17	0	13	129	38	0	43	87	45	0	970
PEAK HR FACTOR :	0.731	0.600	0.673	0.000	0.763	0.771	0.472	0.000	0.464	0.787	0.792	0.000	0.566	0.806	0.804	0.000	0.780
	0.701				0.766				0.776				0.825				

NS/EW Streets:	Red Hill Ave				Red Hill Ave				La Colina Dr				La Colina Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	13	41	7	0	3	35	3	0	2	12	18	0	5	29	17	0	185
4:15 PM	10	67	7	0	6	43	3	0	3	12	16	0	7	37	16	0	227
4:30 PM	9	59	7	0	11	52	2	0	4	19	10	0	5	25	15	0	218
4:45 PM	7	52	9	0	12	45	1	0	1	10	10	0	11	21	16	0	195
5:00 PM	10	50	11	0	8	52	2	0	0	16	4	0	4	25	19	0	201
5:15 PM	18	62	10	0	12	52	3	0	0	21	9	0	2	28	19	0	236
5:30 PM	12	63	7	0	12	49	3	0	0	16	9	0	5	27	15	0	218
5:45 PM	13	41	8	0	9	35	1	0	1	19	14	0	3	24	17	0	185
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	92	435	66	0	73	363	18	0	11	125	90	0	42	216	134	0	1665
APPROACH %'s :	15.51%	73.36%	11.13%	0.00%	16.08%	79.96%	3.96%	0.00%	4.87%	55.31%	39.82%	0.00%	10.71%	55.10%	34.18%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	44	223	37	0	43	201	8	0	5	66	33	0	22	99	69	0	850
PEAK HR FACTOR :	0.611	0.899	0.841	0.000	0.896	0.966	0.667	0.000	0.313	0.786	0.825	0.000	0.500	0.884	0.908	0.000	0.900
	0.844				0.940				0.788				0.969				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Browning Ave & La Colina Dr
City: Tustin
Control: 4-Way Stop

Project ID: 21-010033-004
Date: 4/15/2021

Total

NS/EW Streets:	Browning Ave				Browning Ave				La Colina Dr				La Colina Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	3	2	0	9	3	1	0	0	19	0	0	0	6	3	0	46
7:15 AM	1	3	0	0	11	6	1	0	1	16	1	0	1	9	0	0	50
7:30 AM	0	2	3	0	16	7	1	0	2	23	3	0	1	16	6	0	80
7:45 AM	1	7	4	0	14	8	2	0	2	39	8	0	6	32	8	0	131
8:00 AM	8	2	9	0	19	13	6	0	4	46	7	0	13	32	4	0	163
8:15 AM	20	14	50	0	12	11	3	0	6	37	15	0	9	17	8	0	202
8:30 AM	0	13	2	0	25	5	1	0	1	32	2	0	2	10	4	0	97
8:45 AM	1	4	3	0	25	6	1	0	2	21	0	0	1	17	7	0	88
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	31	48	73	0	131	59	16	0	18	233	36	0	33	139	40	0	857
APPROACH %'s :	20.39%	31.58%	48.03%	0.00%	63.59%	28.64%	7.77%	0.00%	6.27%	81.18%	12.54%	0.00%	15.57%	65.57%	18.87%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	29	36	65	0	70	37	12	0	13	154	32	0	30	91	24	0	593
PEAK HR FACTOR :	0.363	0.643	0.325	0.000	0.700	0.712	0.500	0.000	0.542	0.837	0.533	0.000	0.577	0.711	0.750	0.000	0.734
	0.387				0.783				0.858				0.740				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	3	4	5	0	12	9	2	0	1	18	1	0	2	41	14	0	112
4:15 PM	1	8	1	0	6	7	4	0	4	15	2	0	3	45	14	0	110
4:30 PM	5	5	2	0	10	7	4	0	2	24	2	0	3	36	11	0	111
4:45 PM	2	9	1	0	15	10	2	0	5	22	4	0	1	41	12	0	124
5:00 PM	3	13	3	0	21	6	1	0	2	23	1	0	2	45	23	0	143
5:15 PM	3	10	3	0	13	7	3	0	5	27	2	0	0	38	16	0	127
5:30 PM	0	3	1	0	15	7	5	0	4	28	2	0	0	43	25	0	133
5:45 PM	2	9	2	0	21	8	4	0	4	26	3	0	3	33	19	0	134
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	19	61	18	0	113	61	25	0	27	183	17	0	14	322	134	0	994
APPROACH %'s :	19.39%	62.24%	18.37%	0.00%	56.78%	30.65%	12.56%	0.00%	11.89%	80.62%	7.49%	0.00%	2.98%	68.51%	28.51%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	8	35	9	0	70	28	13	0	15	104	8	0	5	159	83	0	537
PEAK HR FACTOR :	0.667	0.673	0.750	0.000	0.833	0.875	0.650	0.000	0.750	0.929	0.667	0.000	0.417	0.883	0.830	0.000	0.939
	0.684				0.841				0.934				0.882				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tustin Ranch Rd & La Colina Dr
City: Tustin
Control: Signalized

Project ID: 21-010033-005
Date: 4/15/2021

Total

NS/EW Streets:	Tustin Ranch Rd				Tustin Ranch Rd				La Colina Dr				La Colina Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	0	0	1	3	0	0	1	0.5	0.5	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	7	60	2	0	0	92	5	0	17	0	14	0	2	0	0	0	199
7:15 AM	6	75	2	0	0	126	6	0	13	1	14	0	8	1	1	0	253
7:30 AM	7	99	4	0	2	163	19	1	21	0	22	0	2	0	1	0	341
7:45 AM	10	146	0	0	1	149	32	0	34	1	27	0	5	3	4	0	412
8:00 AM	13	161	1	0	2	233	32	0	47	1	31	0	4	2	3	0	530
8:15 AM	7	114	4	0	2	238	22	0	40	2	57	0	5	0	1	0	492
8:30 AM	9	93	2	0	0	171	12	2	20	2	35	0	11	0	2	0	359
8:45 AM	13	83	2	0	0	153	11	0	15	1	28	0	7	3	1	0	317
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	72	831	17	0	7	1325	139	3	207	8	228	0	44	9	13	0	2903
	7.83%	90.33%	1.85%	0.00%	0.47%	89.89%	9.43%	0.20%	46.73%	1.81%	51.47%	0.00%	66.67%	13.64%	19.70%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	39	514	7	0	5	791	98	2	141	6	150	0	25	5	10	0	1793
PEAK HR FACTOR :	0.750	0.798	0.438	0.000	0.625	0.831	0.766	0.250	0.750	0.750	0.658	0.000	0.568	0.417	0.625	0.000	0.846
	0.800				0.839				0.750				0.769				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1	3	0	0	1	3	0	0	1	0.5	0.5	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	38	146	7	2	2	141	28	0	17	2	19	0	4	0	0	0	406
4:15 PM	36	126	7	0	1	146	29	0	12	0	10	0	6	1	1	0	375
4:30 PM	36	150	7	0	4	166	14	0	19	3	17	0	7	1	1	0	425
4:45 PM	30	169	4	0	1	129	28	0	14	3	21	0	6	0	0	0	405
5:00 PM	43	173	7	0	1	163	26	0	26	0	28	0	5	1	0	0	473
5:15 PM	33	182	6	0	1	151	31	0	25	2	17	0	7	0	4	0	459
5:30 PM	42	193	5	0	2	134	22	0	22	1	21	0	5	2	1	0	450
5:45 PM	39	157	5	0	2	130	20	0	23	2	26	0	4	0	2	0	410
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	297	1296	48	2	14	1160	198	0	158	13	159	0	44	5	9	0	3403
	18.08%	78.88%	2.92%	0.12%	1.02%	84.55%	14.43%	0.00%	47.88%	3.94%	48.18%	0.00%	75.86%	8.62%	15.52%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	157	705	23	0	6	578	99	0	96	5	92	0	21	3	7	0	1792
PEAK HR FACTOR :	0.913	0.913	0.821	0.000	0.750	0.887	0.798	0.000	0.923	0.625	0.821	0.000	0.750	0.375	0.438	0.000	0.947
	0.922				0.899				0.894				0.705				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tustin Ranch Rd & Irvine Blvd
City: Tustin
Control: Signalized

Project ID: 21-010033-006
Date: 4/15/2021

Total

NS/EW Streets:	Tustin Ranch Rd				Tustin Ranch Rd				Irvine Blvd				Irvine Blvd				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	21	50	18	6	10	89	41	0	20	63	41	0	30	61	4	0	454
7:15 AM	15	54	20	6	11	104	43	0	22	87	29	0	24	105	9	0	529
7:30 AM	24	68	20	11	21	142	58	1	29	116	52	0	35	138	12	0	727
7:45 AM	31	102	45	7	17	136	60	0	51	129	53	0	37	161	21	0	850
8:00 AM	36	108	44	10	30	187	64	0	51	137	63	0	42	169	21	0	962
8:15 AM	30	97	28	5	43	193	80	0	33	175	74	0	50	173	16	0	997
8:30 AM	25	80	29	9	28	181	54	0	21	96	41	0	32	137	16	0	749
8:45 AM	28	63	20	9	20	149	51	1	25	107	48	0	29	102	25	0	677
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	210	622	224	63	180	1181	451	2	252	910	401	0	279	1046	124	0	5945
APPROACH %'s :	18.77%	55.59%	20.02%	5.63%	9.92%	65.10%	24.86%	0.11%	16.12%	58.22%	25.66%	0.00%	19.25%	72.19%	8.56%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	122	387	146	31	118	697	258	0	156	537	231	0	161	640	74	0	3558
PEAK HR FACTOR :	0.847	0.896	0.811	0.775	0.686	0.903	0.806	0.000	0.765	0.767	0.780	0.000	0.805	0.925	0.881	0.000	0.892
	0.866				0.849				0.819				0.915				

NS/EW Streets:	Tustin Ranch Rd				Tustin Ranch Rd				Irvine Blvd				Irvine Blvd				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	87	138	63	5	24	87	74	0	58	149	51	0	23	291	41	0	1091
4:15 PM	67	114	44	2	20	99	69	0	43	152	55	0	33	273	39	0	1010
4:30 PM	86	130	52	2	28	97	63	1	58	174	53	0	35	240	41	0	1060
4:45 PM	74	127	56	1	28	96	57	0	40	169	51	0	29	285	42	0	1055
5:00 PM	99	176	57	8	42	120	56	0	42	154	59	0	27	225	43	0	1108
5:15 PM	86	135	69	6	36	96	73	1	67	193	70	0	45	300	45	0	1222
5:30 PM	89	189	69	2	22	100	53	0	47	188	50	0	28	235	59	0	1131
5:45 PM	71	143	55	6	33	98	52	1	43	162	51	0	33	274	45	0	1067
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	659	1152	465	32	233	793	497	3	398	1341	440	0	253	2123	355	0	8744
APPROACH %'s :	28.55%	49.91%	20.15%	1.39%	15.27%	51.97%	32.57%	0.20%	18.27%	61.54%	20.19%	0.00%	9.26%	77.74%	13.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	345	643	250	22	133	414	234	2	199	697	230	0	133	1034	192	0	4528
PEAK HR FACTOR :	0.871	0.851	0.906	0.688	0.792	0.863	0.801	0.500	0.743	0.903	0.821	0.000	0.739	0.862	0.814	0.000	0.926
	0.903				0.898				0.853				0.871				

Appendix B – ICU Spreadsheets and Synchro Reports

E-W Street: 17th St
 N-S Street: Newport Ave
 Lane Capacity: 1700
 Dual Lefts Capacity (per lane): 1440

Overlap Reduce 20% Overlap Reduce 20% Overlap Reduce 20% Overlap Reduce 15% Overlap Reduce 15% Overlap Reduce 15%

Movement	AM Existing				AM 2024 without Project				AM 2024 Plus Project				PM Existing				PM 2024 without Project				PM 2024 Plus Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	295	1	1.99	0.09	299	1	1.99	0.09	299	1	1.99	0.09	305	1	1.99	0.09	310	1	1.99	0.09	310	1	1.99	0.09
Comb. L-T		1				1				1				1				1				1		
EB Thru	1		0.01	0.09	1	0	0.01	0.09	1	0	0.01	0.09	1	0	0.01	0.09	1	0	0.01	0.09	1	0	0.01	0.09
Comb. T-R						0				0				0				0				0		
EB Right	538	1	1.00	0.32	546	1	1.00	0.32	544	1	1.00	0.32	370	1	1.00	0.22	376	1	1.00	0.22	373	1	1.00	0.22
Comb. L-T-R						0				0				0				0				0		
WB Left	3		0.25	0.01	3	0	0.25	0.01	3	0	0.25	0.01	7	0	0.78	0.01	7	0	0.78	0.01	7	0	0.78	0.01
Comb. L-T						0				0				0				0				0		
WB Thru	6		0.50	0.01	6	0	0.50	0.01	6	0	0.50	0.01	1	0	0.11	0.01	1	0	0.11	0.01	1	0	0.11	0.01
Comb. T-R						0				0				0				0				0		
WB Right	3		0.25	0.01	3	0	0.25	0.01	3	0	0.25	0.01	1	0	0.11	0.01	1	0	0.11	0.01	1	0	0.11	0.01
Comb. L-T-R		1				1				1				1				1				1		
NB Left	390	2	2.00	0.14	396	2	2.00	0.14	396	2	2.00	0.14	540	2	2.00	0.19	548	2	2.00	0.19	545	2	2.00	0.19
Comb. L-T						0				0				0				0				0		
NB Thru	604	1	1.99	0.18	613	1	1.99	0.18	614	1	1.99	0.18	1240	1	1.99	0.37	1259	1	1.99	0.37	1256	1	1.99	0.37
Comb. T-R		1				1				1				1				1				1		
NB Right	4		0.01	0.18	4	0	0.01	0.18	4	0	0.01	0.18	5	0	0.01	0.37	5	0	0.01	0.37	5	0	0.01	0.37
Comb. L-T-R						0				0				0				0				0		
SB Left	1	1	1.00	0.00	1	1	1.00	0.00	1	1	1.00	0.00	0	1	1.00	0.00	0	1	1.00	0.00	0	1	1.00	0.00
Comb. L-T						0				0				0				0				0		
SB Thru	1196	2	2.00	0.35	1214	2	2.00	0.36	1211	2	2.00	0.36	793	2	2.00	0.23	805	2	2.00	0.24	803	2	2.00	0.24
Comb. T-R						0				0				0				0				0		
SB Right	381	1	1.00	0.22	387	1	1.00	0.23	387	1	1.00	0.23	262	1	1.00	0.15	266	1	1.00	0.16	266	1	1.00	0.16
Comb. L-T-R						0				0				0				0				0		

Critical Volumes	E-W:	0.32	E-W:	0.33	E-W:	0.33	E-W:	0.22	E-W:	0.23	E-W:	0.22
	N-S:	0.49	N-S:	0.49	N-S:	0.49	N-S:	0.42	N-S:	0.43	N-S:	0.43
	Total:	0.81	Total:	0.82	Total:	0.82	Total:	0.64	Total:	0.65	Total:	0.65

Lost Time	0.05	0.05	0.05	0.05	0.05
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


V/C	0.861	0.873	0.871	0.694	0.703	0.700
Level of Service	D	D	D	B	C	C

E-W Street: La Colina Dr
 N-S Street: Newport Ave
 Lane Capacity: 1700
 Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM 2024 without Project				AM 2024 Plus Project				PM Existing				PM 2024 without Project				PM 2024 Plus Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	39		0.44	0.05	40	0	0.44	0.05	40	0	0.44	0.05	6	0	0.60	0.01	6	0	0.60	0.01	6	0	0.60	0.01
Comb. L-T		1				1				1				1				1				1		
EB Thru	50		0.56	0.05	51	0	0.56	0.05	51	0	0.56	0.05	4	0	0.40	0.01	4	0	0.40	0.01	4	0	0.40	0.01
Comb. T-R						0				0				0				0				0		
EB Right	109	1	1.00	0.06	111	1	1.00	0.07	111	1	1.00	0.07	7	1	1.00	0.00	7	1	1.00	0.00	7	1	1.00	0.00
Comb. L-T-R						0				0				0				0				0		
WB Left	75	1	1.00	0.04	76	1	1.00	0.04	77	1	1.00	0.05	66	1	1.00	0.04	67	1	1.00	0.04	66	1	1.00	0.04
Comb. L-T						0				0				0				0				0		
WB Thru																								
Comb. T-R						0				0				0				0				0		
WB Right	202	1	1.00	0.12	205	1	1.00	0.12	205	1	1.00	0.12	201	1	1.00	0.12	204	1	1.00	0.12	198	1	1.00	0.12
Comb. L-T-R						0				0				0				0				0		
NB Left																								
Comb. L-T						0				0				0				0				0		
NB Thru	890	2	2.00	0.26	903	2	2.00	0.27	903	2	2.00	0.27	1661	2	2.00	0.49	1686	2	2.00	0.50	1686	2	2.00	0.50
Comb. T-R						0				0				0				0				0		
NB Right	62	1	1.00	0.04	63	1	1.00	0.04	62	1	1.00	0.04	87	1	1.00	0.05	88	1	1.00	0.05	88	1	1.00	0.05
Comb. L-T-R						0				0				0				0				0		
SB Left	175	1	1.00	0.10	178	1	1.00	0.10	173	1	1.00	0.10	131	1	1.00	0.08	133	1	1.00	0.08	127	1	1.00	0.07
Comb. L-T						0				0				0				0				0		
SB Thru	1626	2	2.00	0.48	1651	2	2.00	0.49	1651	2	2.00	0.49	1097	2	2.00	0.32	1114	2	2.00	0.33	1114	2	2.00	0.33
Comb. T-R						0				0				0				0				0		
SB Right																								
Comb. L-T-R						0				0				0				0				0		
Critical Volumes	E-W: 0.17				E-W: 0.17				E-W: 0.17				E-W: 0.12				E-W: 0.13				E-W: 0.12			
	N-S: 0.48				N-S: 0.49				N-S: 0.49				N-S: 0.57				N-S: 0.57				N-S: 0.57			
	Total: 0.65				Total: 0.66				Total: 0.66				Total: 0.69				Total: 0.70				Total: 0.69			
Lost Time	0.05				0.05				0.05				0.05				0.05				0.05			
V/C	0.699				0.710				0.710				0.740				0.750				0.743			
Level of Service	B				C				C				C				C				C			

Intersection Capacity Utilization
Red Hill Ave & La Colina Dr

05/21/2021




















													
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations													
Volume (vph)	16	172	47	54	106	56	43	211	54	74	370	21	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right			No			No			No			No	
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	0	188	47	0	216	0	0	254	54	0	465	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	0.99	0.85	
Saturated Flow (vph)	0	1892	1615	0	1803	0	0	1884	1615	0	1872	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00		
Protected Option Allowed		No			No			No			No		
Reference Time (s)			3.5			0.0			4.0			0.0	
Adj Reference Time (s)			8.0			0.0			8.0			0.0	
Permitted Option													
Adj Saturation A (vph)	0	1747		0	373		0	1379		0	552		
Reference Time A (s)	0.0	12.9		0.0	69.5		0.0	22.1		0.0	101.1		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time (s)		12.9			69.5			22.1			101.1		
Adj Reference Time (s)		16.9			73.5			26.1			105.1		
Split Option													
Ref Time Combined (s)	0.0	11.9		0.0	14.4		0.0	16.2		0.0	29.8		
Ref Time Seperate (s)	1.1	10.9		3.6	7.1		2.9	13.3		4.9	23.6		
Reference Time (s)	11.9	11.9		14.4	14.4		16.2	16.2		29.8	29.8		
Adj Reference Time (s)	15.9	15.9		18.4	18.4		20.2	20.2		33.8	33.8		
Summary		NW SE		NE SW		Combined							
Protected Option (s)		NA		NA									
Permitted Option (s)		73.5		105.1									
Split Option (s)		34.3		54.0									
Minimum (s)		34.3		54.0		88.3							
Right Turns		SER		NER									
Adj Reference Time (s)		8.0		8.0									
Cross Thru Ref Time (s)		33.8		15.9									
Oncoming Left Ref Time (s)		33.8		33.8									
Combined (s)		60.2		57.7									

Intersection Summary

Intersection Capacity Utilization 73.6% ICU Level of Service D
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
Red Hill Ave & La Colina Dr

05/21/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	1	101	51	20	146	99	75	304	51	58	265	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	102	51	0	265	0	0	379	51	0	336	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1899	1615	0	1787	0	0	1881	1615	0	1873	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			3.8			0.0			3.8			0.0
Adj Reference Time (s)			8.0			0.0			8.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	1833		0	851		0	1340		0	519	
Reference Time A (s)	0.0	6.7		0.0	37.4		0.0	33.9		0.0	77.6	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		9.3	25.8		NA	NA		NA	NA	
Reference Time (s)		6.7			25.8			33.9			77.6	
Adj Reference Time (s)		10.7			29.8			37.9			81.6	
Split Option												
Ref Time Combined (s)	0.0	6.4		0.0	17.8		0.0	24.2		0.0	21.5	
Ref Time Seperate (s)	0.1	6.4		1.3	9.8		5.0	19.2		3.9	16.9	
Reference Time (s)	6.4	6.4		17.8	17.8		24.2	24.2		21.5	21.5	
Adj Reference Time (s)	10.4	10.4		21.8	21.8		28.2	28.2		25.5	25.5	
Summary		NW SE		NE SW		Combined						
Protected Option (s)		NA		NA								
Permitted Option (s)		29.8		81.6								
Split Option (s)		32.2		53.7								
Minimum (s)		29.8		53.7		83.5						
Right Turns		SER		NER								
Adj Reference Time (s)		8.0		8.0								
Cross Thru Ref Time (s)		25.5		10.4								
Oncoming Left Ref Time (s)		17.8		25.5								
Combined (s)		55.3		44.0								
Intersection Summary												
Intersection Capacity Utilization			69.6%		ICU Level of Service					C		
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
Red Hill Ave & La Colina Dr

05/21/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↕		↕			↕	↕		↕	
Volume (vph)	16	175	48	55	108	57	44	214	55	75	376	21
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	191	48	0	220	0	0	258	55	0	472	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1892	1615	0	1803	0	0	1884	1615	0	1872	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			No			No		
Reference Time (s)	3.6			0.0			4.1			0.0		
Adj Reference Time (s)	8.0			0.0			8.1			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1749		0	373		0	1375		0	552	
Reference Time A (s)	0.0	13.1		0.0	70.8		0.0	22.5		0.0	102.5	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		13.1			70.8			22.5			102.5	
Adj Reference Time (s)		17.1			74.8			26.5			106.5	
Split Option												
Ref Time Combined (s)	0.0	12.1		0.0	14.6		0.0	16.4		0.0	30.3	
Ref Time Seperate (s)	1.1	11.1		3.7	7.2		2.9	13.5		5.0	23.9	
Reference Time (s)	12.1	12.1		14.6	14.6		16.4	16.4		30.3	30.3	
Adj Reference Time (s)	16.1	16.1		18.6	18.6		20.4	20.4		34.3	34.3	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	74.8		106.5									
Split Option (s)	34.8		54.7									
Minimum (s)	34.8		54.7		89.4							
Right Turns	SER		NER									
Adj Reference Time (s)	8.0		8.1									
Cross Thru Ref Time (s)	34.3		16.1									
Oncoming Left Ref Time (s)	34.3		34.3									
Combined (s)	60.9		58.5									

Intersection Summary

Intersection Capacity Utilization 74.5% ICU Level of Service D
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
Red Hill Ave & La Colina Dr




















05/21/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	1	103	52	20	148	100	76	309	52	59	269	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	104	52	0	268	0	0	385	52	0	341	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1899	1615	0	1787	0	0	1881	1615	0	1873	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			No			No		
Reference Time (s)	3.9			0.0			3.9			0.0		
Adj Reference Time (s)	8.0			0.0			8.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1834		0	856		0	1342		0	518	
Reference Time A (s)	0.0	6.8		0.0	37.6		0.0	34.4		0.0	78.9	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		9.3	26.0		NA	NA		NA	NA	
Reference Time (s)	6.8			26.0			34.4			78.9		
Adj Reference Time (s)	10.8			30.0			38.4			82.9		
Split Option												
Ref Time Combined (s)	0.0	6.6		0.0	18.0		0.0	24.6		0.0	21.8	
Ref Time Seperate (s)	0.1	6.5		1.3	9.9		5.1	19.5		3.9	17.1	
Reference Time (s)	6.6	6.6		18.0	18.0		24.6	24.6		21.8	21.8	
Adj Reference Time (s)	10.6	10.6		22.0	22.0		28.6	28.6		25.8	25.8	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	30.0		82.9									
Split Option (s)	32.6		54.4									
Minimum (s)	30.0		54.4		84.4							
Right Turns	SER		NER									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	25.8		10.6									
Oncoming Left Ref Time (s)	25.8		25.8									
Combined (s)	55.8		44.4									
Intersection Summary												
Intersection Capacity Utilization	70.3%				ICU Level of Service				C			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
Red Hill Ave & La Colina Dr

06/03/2021



















												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	169	48	59	108	57	44	214	55	75	376	21
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	185	48	0	224	0	0	258	55	0	472	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1892	1615	0	1803	0	0	1884	1615	0	1872	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			No			No		
Reference Time (s)	3.6			0.0			4.1			0.0		
Adj Reference Time (s)	8.0			0.0			8.1			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1756		0	357		0	1375		0	552	
Reference Time A (s)	0.0	12.6		0.0	75.3		0.0	22.5		0.0	102.5	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		12.6			75.3			22.5			102.5	
Adj Reference Time (s)		16.6			79.3			26.5			106.5	
Split Option												
Ref Time Combined (s)	0.0	11.7		0.0	14.9		0.0	16.4		0.0	30.3	
Ref Time Seperate (s)	1.1	10.7		3.9	7.2		2.9	13.5		5.0	23.9	
Reference Time (s)	11.7	11.7		14.9	14.9		16.4	16.4		30.3	30.3	
Adj Reference Time (s)	15.7	15.7		18.9	18.9		20.4	20.4		34.3	34.3	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	79.3		106.5									
Split Option (s)	34.6		54.7									
Minimum (s)	34.6		54.7		89.3							
Right Turns	SER		NER									
Adj Reference Time (s)	8.0		8.1									
Cross Thru Ref Time (s)	34.3		15.7									
Oncoming Left Ref Time (s)	34.3		34.3									
Combined (s)	61.2		58.1									

Intersection Summary

Intersection Capacity Utilization 74.4% ICU Level of Service D
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
Red Hill Ave & La Colina Dr

06/03/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	1	96	52	21	142	100	76	309	55	59	269	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	97	52	0	263	0	0	385	55	0	341	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1899	1615	0	1784	0	0	1881	1615	0	1873	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			No			No		
Reference Time (s)	3.9			0.0			4.1			0.0		
Adj Reference Time (s)	8.0			0.0			8.1			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1833		0	824		0	1342		0	518	
Reference Time A (s)	0.0	6.3		0.0	38.3		0.0	34.4		0.0	78.9	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		9.4	25.7		NA	NA		NA	NA	
Reference Time (s)	6.3			25.7			34.4			78.9		
Adj Reference Time (s)	10.3			29.7			38.4			82.9		
Split Option												
Ref Time Combined (s)	0.0	6.1		0.0	17.7		0.0	24.6		0.0	21.8	
Ref Time Seperate (s)	0.1	6.1		1.4	9.6		5.1	19.5		3.9	17.1	
Reference Time (s)	6.1	6.1		17.7	17.7		24.6	24.6		21.8	21.8	
Adj Reference Time (s)	10.1	10.1		21.7	21.7		28.6	28.6		25.8	25.8	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	29.7		82.9									
Split Option (s)	31.8		54.4									
Minimum (s)	29.7		54.4		84.1							
Right Turns	SER		NER									
Adj Reference Time (s)	8.0		8.1									
Cross Thru Ref Time (s)	25.8		10.1									
Oncoming Left Ref Time (s)	17.7		25.8									
Combined (s)	55.5		44.1									
Intersection Summary												
Intersection Capacity Utilization	70.1%				ICU Level of Service				C			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
Browning Ave & La Colina Dr

05/21/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	20	235	49	46	139	37	44	55	99	107	56	18
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	304	0	0	185	37	0	198	0	0	181	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.99	0.85	0.95	0.91	0.85	0.95	0.96	0.85
Saturated Flow (vph)	0	1848	0	0	1876	1615	0	1738	0	0	1816	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			2.7			0.0			0.0		
Adj Reference Time (s)	0.0			8.0			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	945	0	0	807	0	0	1719	0	0	799	0
Reference Time A (s)	0.0	38.6	0.0	0.0	27.5	0.0	0.0	13.8	0.0	0.0	27.2	0.0
Adj Saturation B (vph)	NA	NA	NA	NA	NA	0	0	0	NA	NA	NA	NA
Reference Time B (s)	NA	NA	NA	NA	NA	10.9	21.7	13.8	NA	NA	27.2	NA
Reference Time (s)	38.6		27.5			13.8			27.2			
Adj Reference Time (s)	42.6		31.5			17.8			31.2			
Split Option												
Ref Time Combined (s)	0.0	19.7	0.0	0.0	11.8	0.0	0.0	13.7	0.0	0.0	12.0	0.0
Ref Time Seperate (s)	1.3	15.2	3.1	3.1	8.8	2.9	2.9	3.8	7.1	7.1	3.7	3.7
Reference Time (s)	19.7	19.7	11.8	11.8	11.8	13.7	13.7	13.7	12.0	12.0	12.0	12.0
Adj Reference Time (s)	23.7	23.7	15.8	15.8	15.8	17.7	17.7	17.7	16.0	16.0	16.0	16.0
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	42.6		31.2									
Split Option (s)	39.6		33.6									
Minimum (s)	39.6		31.2		70.8							
Right Turns	NWR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	17.7											
Oncoming Left Ref Time (s)	17.7											
Combined (s)	49.4											

Intersection Summary

Intersection Capacity Utilization 59.0% ICU Level of Service B
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
 Browning Ave & La Colina Dr

05/21/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations		↕			↕	↕		↕			↕		
Volume (vph)	24	168	13	8	257	134	13	57	15	113	45	21	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	0	205	0	0	265	134	0	85	0	0	179	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.85	
Saturated Flow (vph)	0	1871	0	0	1897	1615	0	1836	0	0	1808	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			0.00	
Protected Option Allowed	No			No			No			No			
Reference Time (s)	0.0			10.0			0.0			0.0			
Adj Reference Time (s)	0.0			14.0			0.0			0.0			
Permitted Option													
Adj Saturation A (vph)	0	684	0		1766	0		1859	0		590		
Reference Time A (s)	0.0	36.0	0.0		18.0	0.0		5.5	0.0		36.4		
Adj Saturation B (vph)	NA	NA	NA		NA	0		0	0		0		
Reference Time B (s)	NA	NA	NA		NA	8.9		13.6	15.5		19.9		
Reference Time (s)	36.0		18.0			5.5			19.9				
Adj Reference Time (s)	40.0		22.0			9.5			23.9				
Split Option													
Ref Time Combined (s)	0.0	13.1	0.0		16.8	0.0		5.6	0.0		11.9		
Ref Time Seperate (s)	1.6	10.7	0.5		16.2	0.9		3.7	7.5		3.0		
Reference Time (s)	13.1	13.1	16.8		16.8	5.6		5.6	11.9		11.9		
Adj Reference Time (s)	17.1	17.1	20.8		20.8	9.6		9.6	15.9		15.9		
Summary	NW SE		NE SW		Combined								
Protected Option (s)	NA		NA										
Permitted Option (s)	40.0		23.9										
Split Option (s)	37.9		25.4										
Minimum (s)	37.9		23.9		61.8								
Right Turns	NWR												
Adj Reference Time (s)	14.0												
Cross Thru Ref Time (s)	9.5												
Oncoming Left Ref Time (s)	17.1												
Combined (s)	40.6												
Intersection Summary													
Intersection Capacity Utilization	51.5%				ICU Level of Service				A				
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection Capacity Utilization
Browning Ave & La Colina Dr

05/21/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	20	239	50	47	141	38	45	56	100	109	57	18
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	309	0	0	188	38	0	201	0	0	184	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.99	0.85	0.95	0.92	0.85	0.95	0.96	0.85
Saturated Flow (vph)	0	1848	0	0	1876	1615	0	1739	0	0	1817	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			2.8			0.0			0.0
Adj Reference Time (s)			0.0			8.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	953		0	798		0	1720		0	802	
Reference Time A (s)	0.0	38.9		0.0	28.3		0.0	14.0		0.0	27.5	
Adj Saturation B (vph)	NA	NA		NA	NA		0	0		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		11.0	21.9		NA	NA	
Reference Time (s)		38.9			28.3			14.0			27.5	
Adj Reference Time (s)		42.9			32.3			18.0			31.5	
Split Option												
Ref Time Combined (s)	0.0	20.1		0.0	12.0		0.0	13.9		0.0	12.2	
Ref Time Seperate (s)	1.3	15.5		3.1	8.9		3.0	3.9		7.2	3.7	
Reference Time (s)	20.1	20.1		12.0	12.0		13.9	13.9		12.2	12.2	
Adj Reference Time (s)	24.1	24.1		16.0	16.0		17.9	17.9		16.2	16.2	
Summary		NW SE		NE SW		Combined						
Protected Option (s)		NA		NA								
Permitted Option (s)		42.9		31.5								
Split Option (s)		40.1		34.0								
Minimum (s)		40.1		31.5		71.6						
Right Turns		NWR										
Adj Reference Time (s)		8.0										
Cross Thru Ref Time (s)		17.9										
Oncoming Left Ref Time (s)		49.9										
Combined (s)		49.9										

Intersection Summary

Intersection Capacity Utilization 59.7% ICU Level of Service B
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
Browning Ave & La Colina Dr

05/21/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	24	171	13	8	261	136	13	58	15	115	46	21
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	208	0	0	269	136	0	86	0	0	182	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1871	0	0	1897	1615	0	1836	0	0	1808	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			10.1			0.0			0.0		
Adj Reference Time (s)	0.0			14.1			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	690		0	1766		0	1860		0	585	
Reference Time A (s)	0.0	36.2		0.0	18.3		0.0	5.5		0.0	37.3	
Adj Saturation B (vph)	NA	NA		NA	NA		0	0		0	0	
Reference Time B (s)	NA	NA		NA	NA		8.9	13.6		15.6	20.1	
Reference Time (s)		36.2			18.3			5.5			20.1	
Adj Reference Time (s)		40.2			22.3			9.5			24.1	
Split Option												
Ref Time Combined (s)	0.0	13.3		0.0	17.0		0.0	5.6		0.0	12.1	
Ref Time Seperate (s)	1.6	10.9		0.5	16.5		0.9	3.8		7.6	3.0	
Reference Time (s)	13.3	13.3		17.0	17.0		5.6	5.6		12.1	12.1	
Adj Reference Time (s)	17.3	17.3		21.0	21.0		9.6	9.6		16.1	16.1	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	40.2		24.1									
Split Option (s)	38.4		25.7									
Minimum (s)	38.4		24.1		62.4							
Right Turns	NWR											
Adj Reference Time (s)	14.1											
Cross Thru Ref Time (s)	9.5											
Oncoming Left Ref Time (s)	17.3											
Combined (s)	41.0											

Intersection Summary

Intersection Capacity Utilization 52.0% ICU Level of Service A
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
 Browning Ave & La Colina Dr

06/03/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	15	239	50	47	141	31	45	54	100	115	58	22
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	304	0	0	188	31	0	199	0	0	195	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.99	0.85	0.95	0.91	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1849	0	0	1876	1615	0	1737	0	0	1813	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00		0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			2.3			0.0			0.0		
Adj Reference Time (s)	0.0			8.0			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1081	0		716	0		1715	0		808	
Reference Time A (s)	0.0	33.8	0.0		31.5	0.0		13.9	0.0		29.0	
Adj Saturation B (vph)	NA	NA	NA		NA	0		0	NA		NA	
Reference Time B (s)	NA	NA	NA		NA	11.0		21.7	NA		NA	
Reference Time (s)	33.8		31.5			13.9			29.0			
Adj Reference Time (s)	37.8		35.5			17.9			33.0			
Split Option												
Ref Time Combined (s)	0.0	19.7	0.0		12.0	0.0		13.7	0.0		12.9	
Ref Time Seperate (s)	1.0	15.5	3.1		8.9	3.0		3.8	7.6		3.8	
Reference Time (s)	19.7	19.7	12.0		12.0	13.7		13.7	12.9		12.9	
Adj Reference Time (s)	23.7	23.7	16.0		16.0	17.7		17.7	16.9		16.9	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	37.8		33.0									
Split Option (s)	39.8		34.7									
Minimum (s)	37.8		33.0		70.7							
Right Turns	NWR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	17.7											
Oncoming Left Ref Time (s)	17.7											
Combined (s)	49.5											

Intersection Summary

Intersection Capacity Utilization 58.9% ICU Level of Service B
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
Browning Ave & La Colina Dr

06/03/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	21	171	13	8	261	132	13	57	15	109	45	16
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	205	0	0	269	132	0	85	0	0	170	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1872	0	0	1897	1615	0	1836	0	0	1813	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00		0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			9.8			0.0			0.0		
Adj Reference Time (s)	0.0			13.8			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	746	0		1750	0		1863	0		584	
Reference Time A (s)	0.0	33.0	0.0		18.4	0.0		5.5	0.0		34.9	
Adj Saturation B (vph)	NA	NA	NA		NA	0		0	0		0	
Reference Time B (s)	NA	NA	NA		NA	8.9		13.6	15.2		19.3	
Reference Time (s)	33.0		18.4			5.5			19.3			
Adj Reference Time (s)	37.0		22.4			9.5			23.3			
Split Option												
Ref Time Combined (s)	0.0	13.1	0.0		17.0	0.0		5.6	0.0		11.3	
Ref Time Seperate (s)	1.4	10.9	0.5		16.5	0.9		3.7	7.2		3.0	
Reference Time (s)	13.1	13.1	17.0		17.0	5.6		5.6	11.3		11.3	
Adj Reference Time (s)	17.1	17.1	21.0		21.0	9.6		9.6	15.3		15.3	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	37.0		23.3									
Split Option (s)	38.2		24.8									
Minimum (s)	37.0		23.3		60.2							
Right Turns	NWR											
Adj Reference Time (s)	13.8											
Cross Thru Ref Time (s)	9.5											
Oncoming Left Ref Time (s)	17.1											
Combined (s)	40.4											

Intersection Summary

Intersection Capacity Utilization 50.2% ICU Level of Service A
Reference Times and Phasing Options do not represent an optimized timing plan.

E-W Street: La Colina Dr
 N-S Street: Tustin Ranch Rd
 Lane Capacity: 1700
 Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM 2024 without Project				AM 2024 Plus Project				PM Existing				PM 2024 without Project				PM 2024 Plus Project							
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	242	1	1.00	0.14	246	1	1.00	0.14	246	1	1.00	0.14	127	1	1.00	0.07	129	1	1.00	0.08	122	1	1.00	0.08	122	1	1.00	0.07
Comb. L-T					0				0				0				0				0				0			
EB Thru	10		0.04	0.16	10	0	0.04	0.16	10	0	0.04	0.16	7	0	0.05	0.08	7	0	0.05	0.08	7	0	0.05	0.08	7	0	0.05	0.08
Comb. T-R		1			1	1			1	1			1	1			1	1			1	1			1	1		
EB Right	258		0.96	0.16	262	0	0.96	0.16	268	0	0.96	0.16	122	0	0.95	0.08	124	0	0.95	0.08	125	0	0.95	0.08	125	0	0.95	0.08
Comb. L-T-R					0				0				0				0				0				0			
WB Left	43	1	1.00	0.03	44	1	1.00	0.03	44	1	1.00	0.03	28	1	1.00	0.02	28	1	1.00	0.02	28	1	1.00	0.02	28	1	1.00	0.02
Comb. L-T					0				0				0				0				0				0			
WB Thru	9		0.35	0.02	9	0	0.35	0.02	9	0	0.35	0.02	4	0	0.31	0.01	4	0	0.31	0.01	4	0	0.31	0.01	4	0	0.31	0.01
Comb. T-R		1			1	1			1	1			1	1			1	1			1	1			1	1		
WB Right	17		0.65	0.02	17	0	0.65	0.02	17	0	0.65	0.02	9	0	0.69	0.01	9	0	0.69	0.01	9	0	0.69	0.01	9	0	0.69	0.01
Comb. L-T-R					0				0				0				0				0				0			
NB Left	67	1	1.00	0.04	68	1	1.00	0.04	67	1	1.00	0.04	208	1	1.00	0.12	211	1	1.00	0.12	214	1	1.00	0.12	214	1	1.00	0.13
Comb. L-T					0				0				0				0				0				0			
NB Thru	883	3	3.00	0.17	896	3	3.00	0.18	896	3	3.00	0.18	934	3	3.00	0.18	948	3	3.00	0.19	948	3	3.00	0.19	948	3	3.00	0.19
Comb. T-R					0				0				0				0				0				0			
NB Right	12	1	1.00	0.01	12	1	1.00	0.01	12	1	1.00	0.01	30	1	1.00	0.02	30	1	1.00	0.02	30	1	1.00	0.02	30	1	1.00	0.02
Comb. L-T-R					0				0				0				0				0				0			
SB Left	9	1	1.00	0.01	9	1	1.00	0.01	9	1	1.00	0.01	8	1	1.00	0.00	8	1	1.00	0.00	8	1	1.00	0.00	8	1	1.00	0.00
Comb. L-T					0				0				0				0				0				0			
SB Thru	1358	3	3.00	0.27	1378	3	3.00	0.27	1378	3	3.00	0.27	766	3	3.00	0.15	778	3	3.00	0.15	778	3	3.00	0.15	778	3	3.00	0.15
Comb. T-R					0				0				0				0				0				0			
SB Right	168	1	1.00	0.10	171	1	1.00	0.10	165	1	1.00	0.10	131	1	1.00	0.08	133	1	1.00	0.08	126	1	1.00	0.08	126	1	1.00	0.07
Comb. L-T-R					0				0				0				0				0				0			
Critical Volumes			E-W: 0.18 N-S: 0.31 Total: 0.49				E-W: 0.19 N-S: 0.31 Total: 0.50					E-W: 0.19 N-S: 0.31 Total: 0.50				E-W: 0.09 N-S: 0.27 Total: 0.36				E-W: 0.09 N-S: 0.28 Total: 0.37				E-W: 0.09 N-S: 0.28 Total: 0.37				
Lost Time			0.05				0.05					0.05				0.05				0.05				0.05				0.05
V/C			0.539				0.546					0.549				0.415				0.420				0.423				0.423
Level of Service			A				A					A				A				A				A				A

E-W Street: Irvine Blvd
 N-S Street: Tustin Ranch Rd
 Lane Capacity: 1700
 Dual Lefts Capacity (per lane): 1440

Overlap Reduce
 NB SB
 10% 10%

Overlap Reduce
 NB SB
 10% 10%

Overlap Reduce
 NB SB
 10% 10%

Overlap Reduce
 NB SB
 5% 10%

Overlap Reduce
 NB SB
 5% 10%

Overlap Reduce
 NB SB
 5% 10%

Movement	AM Existing				AM 2024 without Project				AM 2024 Plus Project				PM Existing				PM 2024 without Project				PM 2024 Plus Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	232	2	2.00	0.08	235	2	2.00	0.08	235	2	2.00	0.08	279	2	2.00	0.10	283	2	2.00	0.10	283	2	2.00	0.10
Comb. L-T						0				0				0				0				0		
EB Thru	800	3	3.00	0.16	812	3	3.00	0.16	812	3	3.00	0.16	978	3	3.00	0.19	993	3	3.00	0.19	993	3	3.00	0.19
Comb. T-R						0				0				0				0				0		
EB Right	310	1	1.00	0.18	314	1	1.00	0.18	314	1	1.00	0.18	291	1	1.00	0.17	295	1	1.00	0.17	295	1	1.00	0.17
Comb. L-T-R						0				0				0				0				0		
WB Left	240	2	2.00	0.08	244	2	2.00	0.08	244	2	2.00	0.08	187	2	2.00	0.06	190	2	2.00	0.07	190	2	2.00	0.07
Comb. L-T						0				0				0				0				0		
WB Thru	953	3	3.00	0.19	967	3	3.00	0.19	967	3	3.00	0.19	1451	3	3.00	0.28	1473	3	3.00	0.29	1473	3	3.00	0.29
Comb. T-R						0				0				0				0				0		
WB Right	110	1	1.00	0.06	112	1	1.00	0.07	110	1	1.00	0.06	269	1	1.00	0.16	273	1	1.00	0.16	272	1	1.00	0.16
Comb. L-T-R						0				0				0				0				0		
NB Left	228	2	2.00	0.08	231	2	2.00	0.08	231	2	2.00	0.08	515	2	2.00	0.18	523	2	2.00	0.18	523	2	2.00	0.18
Comb. L-T						0				0				0				0				0		
NB Thru	576	3	3.00	0.11	585	3	3.00	0.11	585	3	3.00	0.11	902	3	3.00	0.18	916	3	3.00	0.18	920	3	3.00	0.18
Comb. T-R						0				0				0				0				0		
NB Right	195	1	1.00	0.11	198	1	1.00	0.12	198	1	1.00	0.12	333	1	1.00	0.20	338	1	1.00	0.20	338	1	1.00	0.20
Comb. L-T-R						0				0				0				0				0		
SB Left	176	2	2.00	0.06	179	2	2.00	0.06	180	2	2.00	0.06	187	2	2.00	0.06	190	2	2.00	0.07	189	2	2.00	0.07
Comb. L-T						0				0				0				0				0		
SB Thru	1038	3	3.00	0.20	1054	3	3.00	0.21	1059	3	3.00	0.21	581	3	3.00	0.11	590	3	3.00	0.12	592	3	3.00	0.12
Comb. T-R						0				0				0				0				0		
SB Right	346	1	1.00	0.20	351	1	1.00	0.21	351	1	1.00	0.21	298	1	1.00	0.18	302	1	1.00	0.18	302	1	1.00	0.18
Comb. L-T-R						0				0				0				0				0		

Critical Volumes	E-W:	0.27	E-W:	0.27	E-W:	0.27	E-W:	0.38	E-W:	0.39	E-W:	0.39
	N-S:	0.28	N-S:	0.29	N-S:	0.29	N-S:	0.35	N-S:	0.36	N-S:	0.36
	Total:	0.55	Total:	0.56	Total:	0.56	Total:	0.74	Total:	0.75	Total:	0.75

Lost Time	0.05	0.05	0.05	0.05	0.05
-----------	------	------	------	------	------

V/C	0.600	0.608	0.609	0.785	0.797	0.797
Level of Service	B	B	B	C	C	C

Appendix C – Driveway Traffic Volume Data

VOLUME

Tustin Hills Racquet Club Dwy N/O Pavillion Dr/Valhalla Dr

Day: Thursday
Date: 4/15/2021

City: North Tustin
Project #: CA21_010034_001

DAILY TOTALS					NB	SB	EB	WB	Total		
					175	174	0	0	349		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	3	9			12
00:15	0	0			0	12:15	0	22			22
00:30	0	0			0	12:30	0	3			3
00:45	0	0			0	12:45	1	4	1	35	2
01:00	0	0			0	13:00	0	1			1
01:15	0	0			0	13:15	3	1			4
01:30	0	0			0	13:30	1	1			2
01:45	0	0			0	13:45	0	4	3	6	3
02:00	0	0			0	14:00	1	1			2
02:15	0	0			0	14:15	2	0			2
02:30	0	0			0	14:30	1	3			4
02:45	0	0			0	14:45	5	9	1	5	6
03:00	0	0			0	15:00	10	2			12
03:15	0	0			0	15:15	7	0			7
03:30	0	0			0	15:30	0	1			1
03:45	0	0			0	15:45	7	24	2	5	9
04:00	0	0			0	16:00	1	7			8
04:15	0	0			0	16:15	4	2			6
04:30	0	0			0	16:30	4	6			10
04:45	0	0			0	16:45	11	20	6	21	17
05:00	0	0			0	17:00	3	5			8
05:15	0	0			0	17:15	4	3			7
05:30	0	0			0	17:30	3	3			6
05:45	0	0			0	17:45	10	20	6	17	16
06:00	1	0			1	18:00	3	4			7
06:15	0	0			0	18:15	1	4			5
06:30	0	0			0	18:30	5	1			6
06:45	0	1	0		0	18:45	5	14	14	23	19
07:00	1	2			3	19:00	0	9			9
07:15	0	0			0	19:15	0	1			1
07:30	3	0			3	19:30	0	1			1
07:45	6	10	0	2	6	19:45	0	0	11		0
08:00	4	0			4	20:00	1	1			2
08:15	3	1			4	20:15	0	0			0
08:30	4	1			5	20:30	0	0			0
08:45	2	13	0	2	2	20:45	0	1	0	1	0
09:00	9	0			9	21:00	0	6			6
09:15	7	2			9	21:15	0	0			0
09:30	8	1			9	21:30	0	0			0
09:45	12	36	6	9	18	21:45	0	0	6		0
10:00	1	2			3	22:00	0	0			0
10:15	4	1			5	22:15	0	0			0
10:30	3	3			6	22:30	0	0			0
10:45	3	11	3	9	6	22:45	0	0			0
11:00	2	4			6	23:00	0	0			0
11:15	1	6			7	23:15	0	0			0
11:30	4	7			11	23:30	0	0			0
11:45	1	8	5	22	6	23:45	0	0			0
TOTALS	79	44			123	TOTALS	96	130			226
SPLIT %	64.2%	35.8%			35.2%	SPLIT %	42.5%	57.5%			64.8%

DAILY TOTALS					NB	SB	EB	WB	Total
					175	174	0	0	349
AM Peak Hour	09:00	11:30			11:30	PM Peak Hour	15:00	12:00	16:30
AM Pk Volume	36	43			51	PM Pk Volume	24	35	42
Pk Hr Factor	0.750	0.489			0.580	Pk Hr Factor	0.600	0.398	0.618
7 - 9 Volume	23	4	0	0	27	4 - 6 Volume	40	38	78
7 - 9 Peak Hour	07:45	07:00			07:45	4 - 6 Peak Hour	16:15	16:00	16:30
7 - 9 Pk Volume	17	2	0	0	19	4 - 6 Pk Volume	22	21	42
Pk Hr Factor	0.708	0.250	0.000	0.000	0.792	Pk Hr Factor	0.500	0.750	0.618

Appendix D – 2019 Construction Traffic Impact Analysis

Technical Memorandum

To: Kevin Shannon, CGBP
From: Darlene Danehy, TE, PTOE, RSP₁
Date: October 31, 2019
Re: **Tustin Hills Racquet Club**
Construction Traffic Impact Analysis

Executive Summary

This memorandum provides a summary of the operational analyses for five intersections along the anticipated haul routes for the construction of a 37-unit residential development at the Tustin Hills Racquet Club. The construction is expected to occur in three phases, and projected construction volumes were estimated based on data collected at similar construction sites as well as CalEEMod trip generation. The CalEEMod estimates were higher and were therefore used in the analysis to be conservative. The construction is expected to generate 64 peak hour trips and 154 trips during an 8-hour period of the busiest period of construction.

Although the construction activities will likely fall below the 200 trip-per-day threshold to require a traffic impact analysis per the *County of Orange Growth Management Transportation Implementation Manual*, this memorandum provides a Level of Service (LOS) evaluation for each of the five study intersections. The LOS was found using the Intersection Capacity Utilization (ICU) methodology. It was found that all five intersections are currently operating at LOS D or better, and will continue to do so during construction. Therefore, the construction is not expected to have a significant impact on traffic operations, and no mitigation is needed.

Objectives

The objectives of this Technical Memorandum are to:

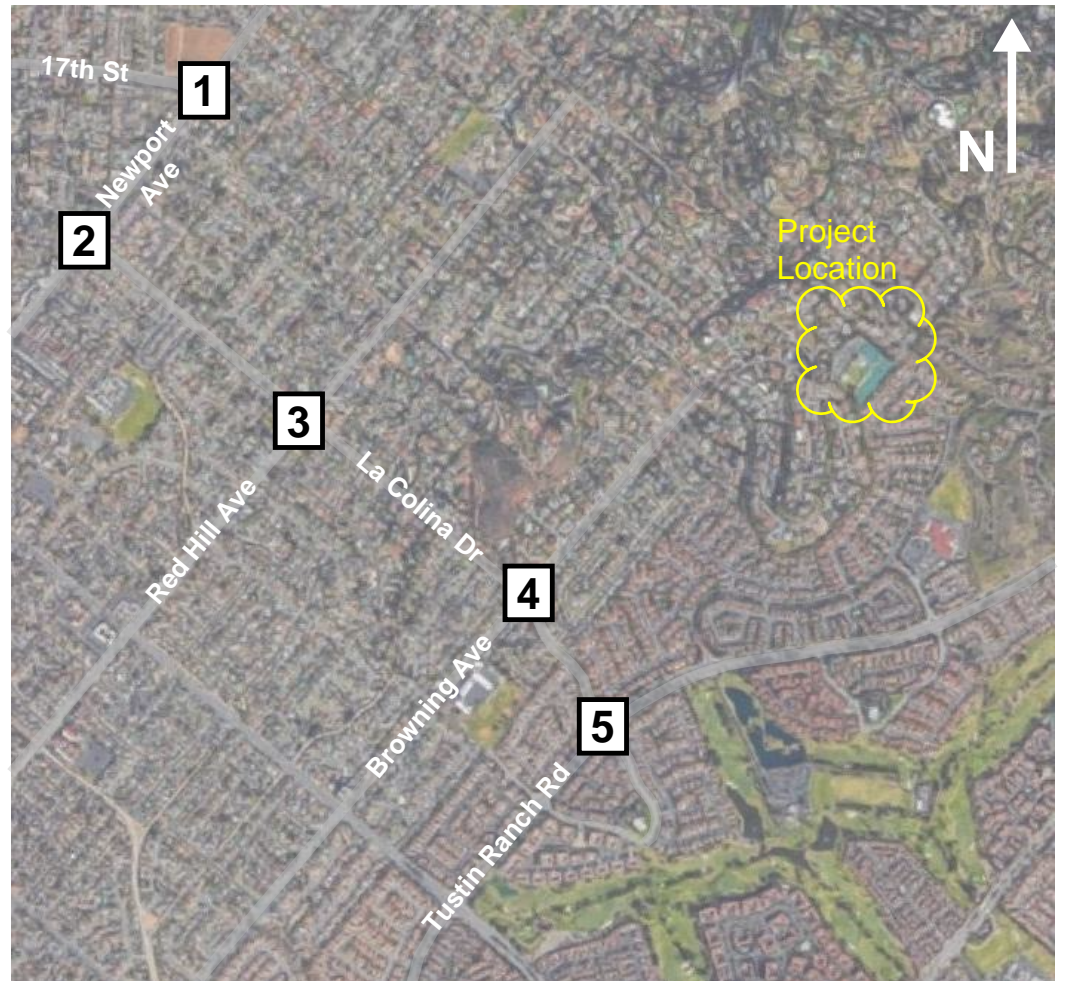
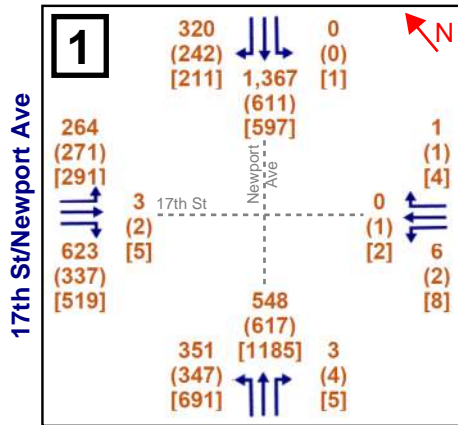
- Calculate the expected number of construction-generated trips for the project, and distribute those trips to the five study intersections, which include:
 - 17th Street/Newport Avenue
 - La Colina Drive/Newport Avenue
 - La Colina Drive/Red Hill Avenue
 - La Colina Drive/Browning Avenue
 - La Colina Drive/Tustin Ranch Road
- Evaluate traffic operations at the five study intersections and determine if the projected construction traffic will have a significant impact at any of the five locations
- Provide recommended mitigation measures, if needed

Existing Traffic Volumes

Existing traffic volumes were collected on Wednesday, December 13, 2017, at each of the five study intersections. Volumes were collected in the AM (7:00 – 9:00 AM), Midday (11:30 AM – 1:30 PM), and PM (4:00 – 6:00 PM) peak periods. Overall, the peak hours were found to be from 7:45 to 8:45 AM, 12:30 to 1:30 PM, and 5:00 to 6:00 PM, with the AM peak hour serving the highest overall volumes. However, to be conservative, the highest peak hour volumes at each individual intersection were used in the analysis. The existing traffic volumes are shown in Figure 1, and the data is included as an attachment to this memorandum.

Trip Generation

To determine the trip generation for the construction site, traffic volumes were collected at two similar residential construction sites in Costa Mesa on Wednesday, December 20, 2017, from 5:00 AM to 5:00 PM. Both sites include 11 residential homes, but are at different stages of construction. A summary of the sites and associated construction traffic volumes is shown in Table 1. Note that the peak hour traffic volumes shown occur within the peak periods for which data was collected at the study intersections (see previous section). This method will provide a conservative analysis because the observed peak hours may not coincide with the peak hours of the study intersections.



LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) Midday Peak Hour Traffic Volume (veh/hr)
 [xx] PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection

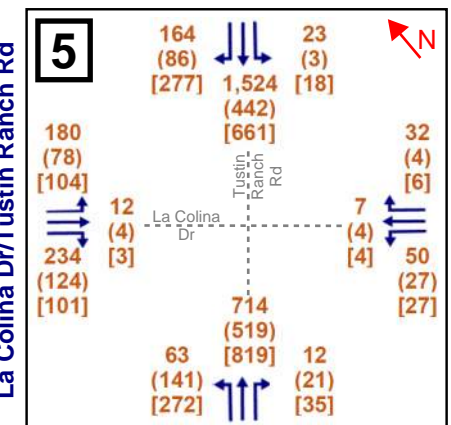
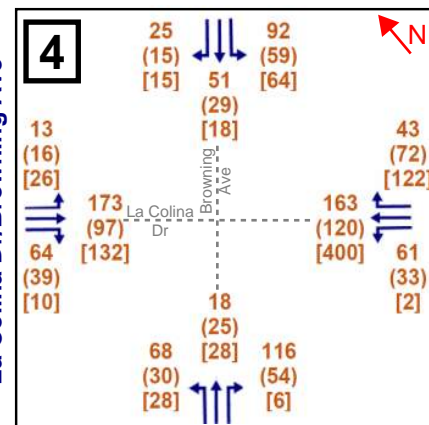
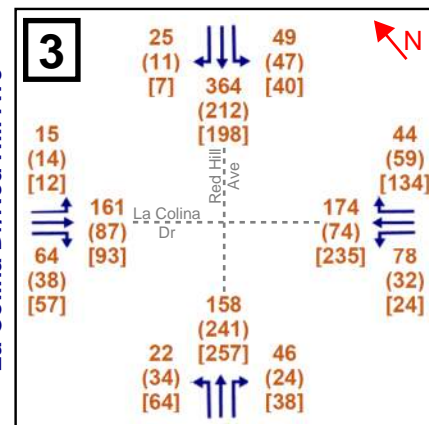
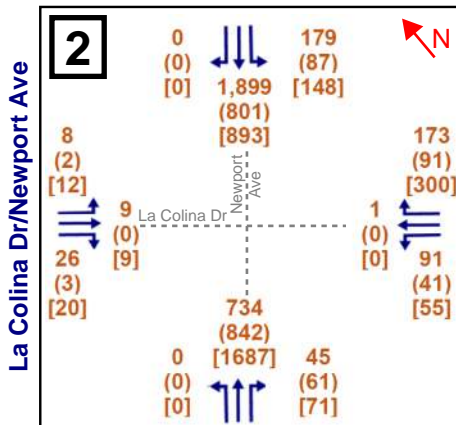


Figure 1. Existing Traffic Volumes (December 2017)

Table 1. Construction Traffic Volumes at Comparable Sites

Site	AM Peak Trips			Midday Peak Trips			PM Peak Trips			Total (12 hrs)
	Total	In	Out	Total	In	Out	Total	In	Out	
2850 Mesa Verde Drive East	4	3	1	2	1	1	0	0	0	8
301 Costa Bella	14	11	3	9	3	6	5	1	4	88

Because this project will include the construction of approximately 12 units per phase, the collected traffic volumes were increased by 10% to develop projected construction traffic volumes for this Tustin Hills project. Those volumes are shown in Table 2. The table also includes the projected volumes in passenger car equivalents (PCEs); truck trips have a 2:1 equivalence when compared operationally to a passenger car. Truck volumes were taken directly from the Costa Bella counts, which did not show any truck trips in the Midday or PM peak hours. Therefore, the AM peak hour is the only period (other than daily) for which the PCE volumes differ from the total volumes.

Table 2. Estimated Construction Traffic Volumes for Tustin Hills – Field Data

Site	AM Peak Trips			Midday Peak Trips			PM Peak Trips			Total (12 hrs)
	Total	In	Out	Total	In	Out	Total	In	Out	
Tustin Hills (Projected)	15	12	3	10	3	7	6	1	4	97
Tustin Hills (Projected PCEs)*	21	15	6	10	3	7	6	1	4	112

*PCEs were calculated assuming a factor of 2.0 per truck, and were calculated separately for each period.

In addition to the field data, trip generation estimates were generated using CalEEMod, software which aids in environmental analysis. The trip generation estimates for the highest phase of development based on CalEEMod are shown in Table 3. The estimates do not indicate any truck trips during the busiest phase of construction, so the volumes are assumed to be PCEs. When comparing the results in Tables 2 and 3, it was found that the trip generation estimates from CalEEMod are higher than those calculated based on the field data. Therefore, to be conservative, the higher traffic volumes were used to estimate the projected construction traffic for this project.

Table 3. Estimated Construction Traffic Volumes for Tustin Hills – CalEEMod

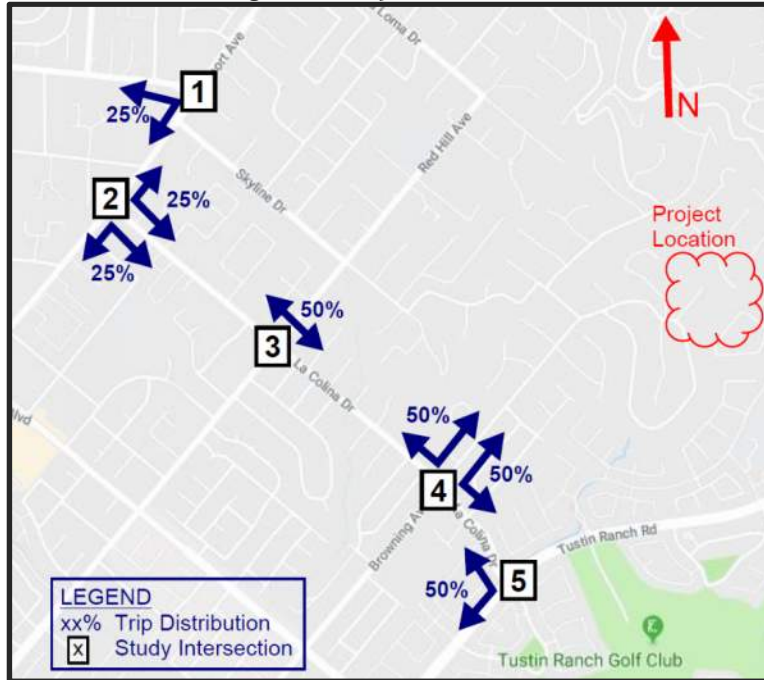
Site	AM Peak Trips			Midday Peak Trips			PM Peak Trips			Total (8 hrs)
	Total	In	Out	Total	In	Out	Total	In	Out	
Tustin Hills (Projected)*	64	48	16	4	1	3	64	13	51	154

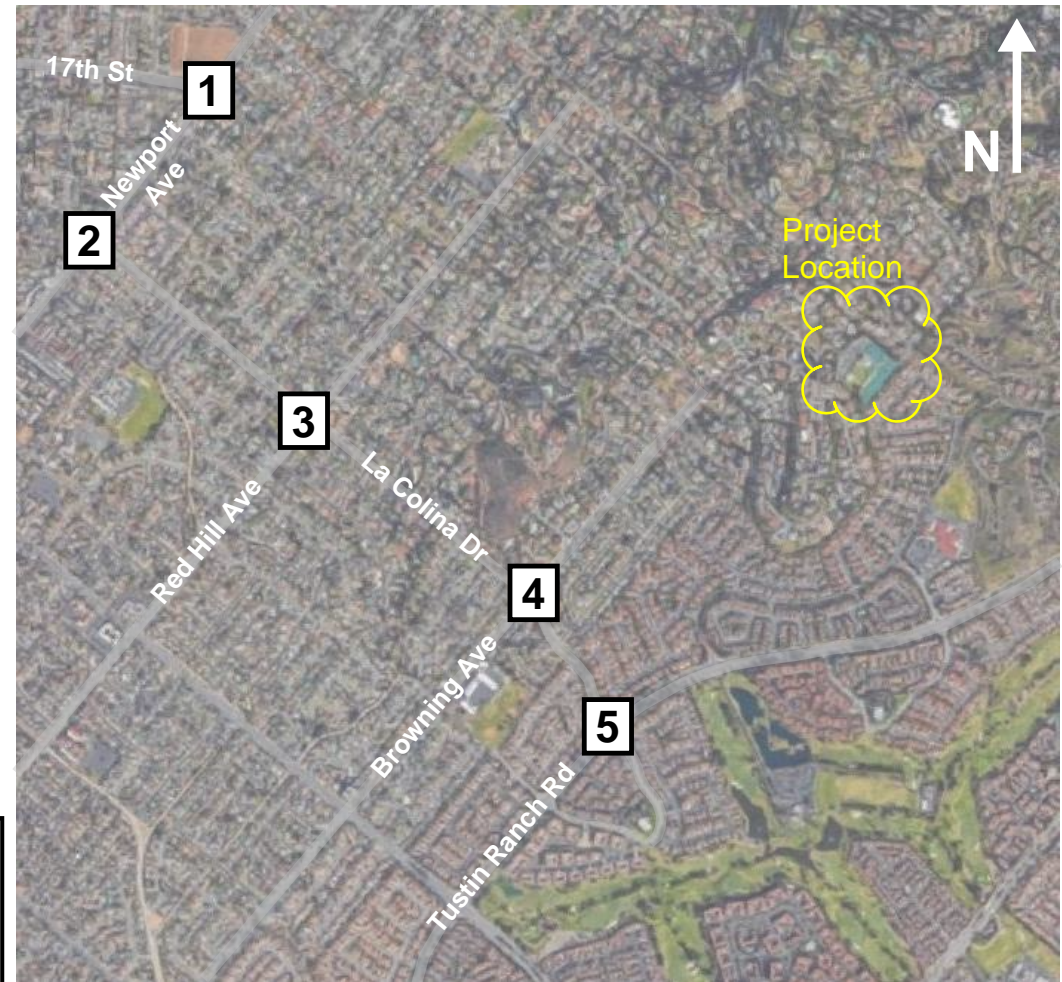
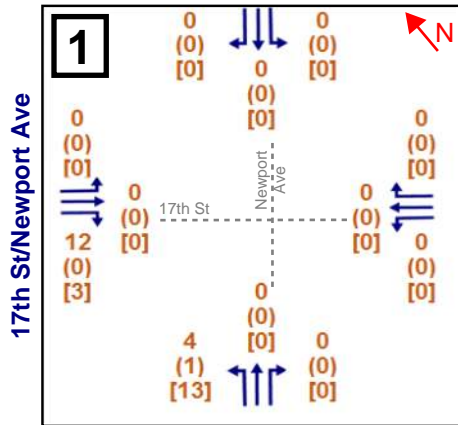
*Peak hour trips were calculated assuming workers enter in the AM peak and exit in the PM peak; all other trips are split evenly throughout the day.

Trip Distribution and Assignment

It was assumed that 50% of the construction traffic would access the site via I-5, while the other 50% would access the site via SR-55. Figure 2 shows the assumed trip distribution for construction traffic at the five study intersections, which was approved by the County traffic group. Figure 3 shows the projected construction traffic volumes at each of the study intersections, and Figure 4 shows the Existing Plus Construction traffic volumes.

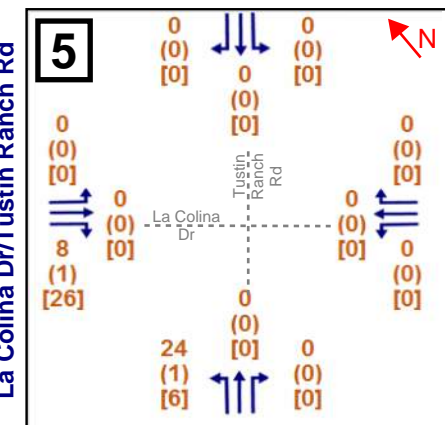
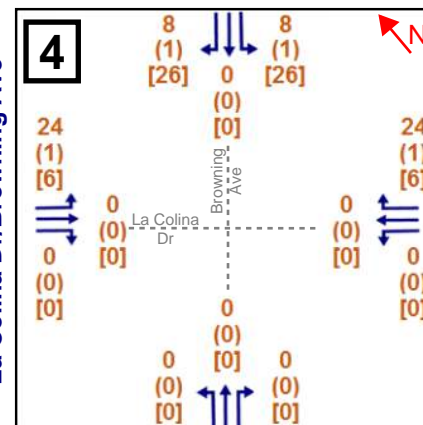
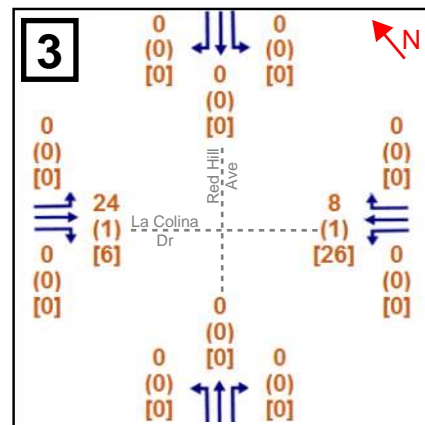
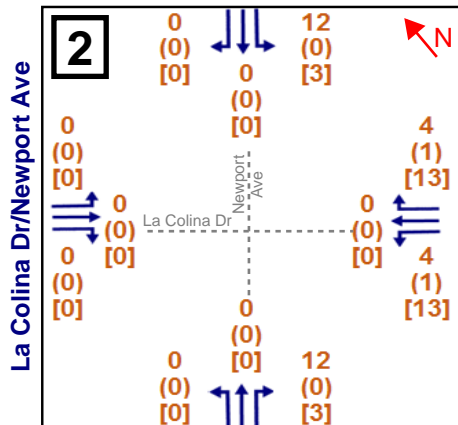
Figure 2. Trip Distribution

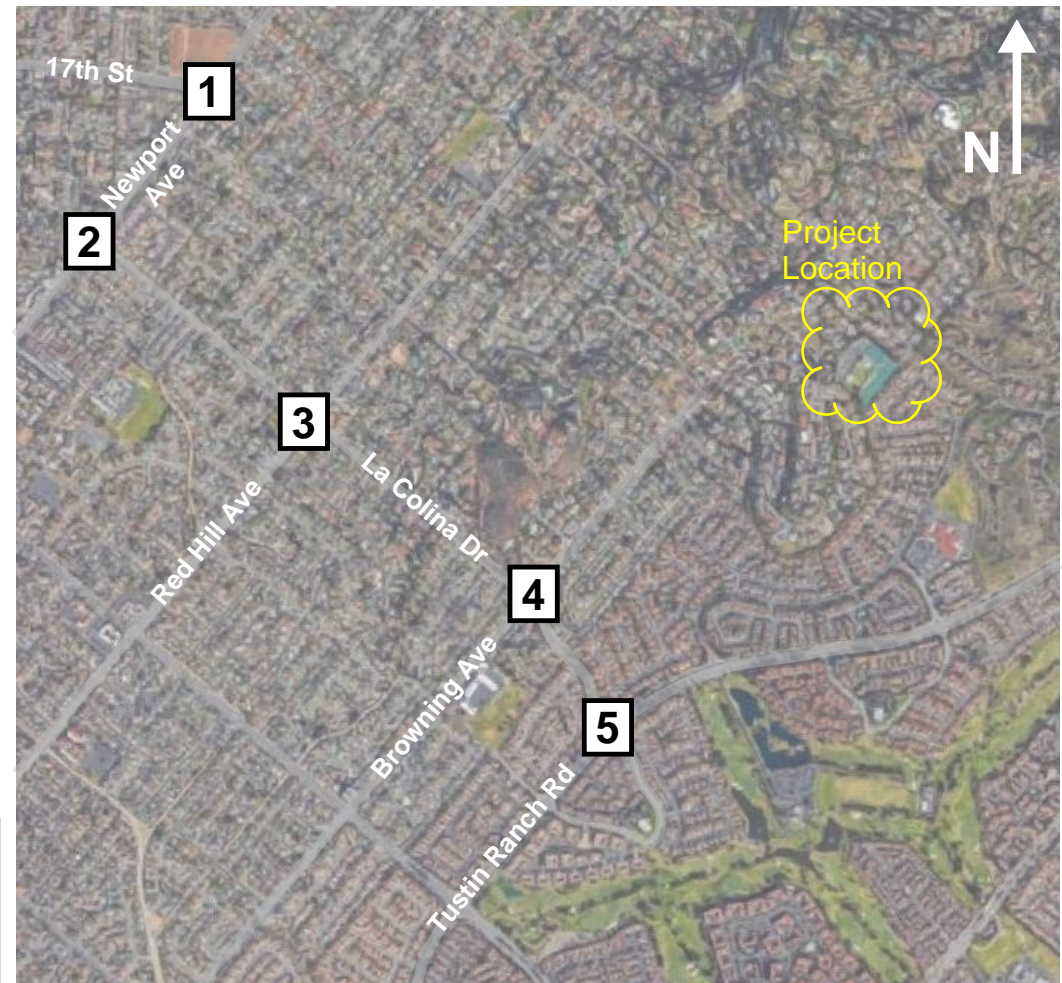
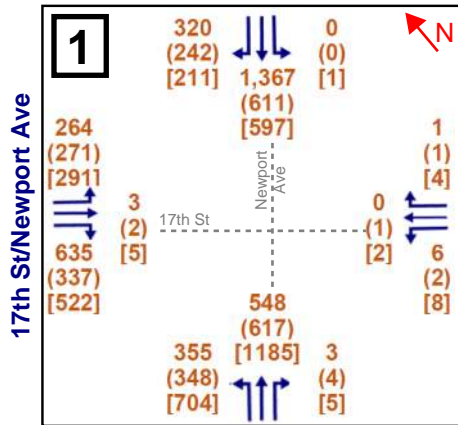




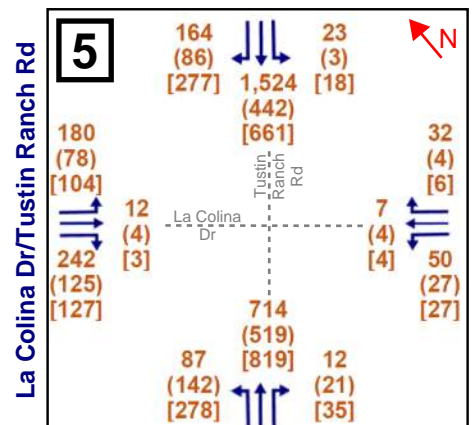
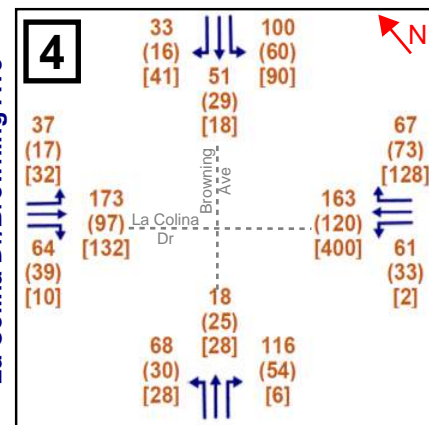
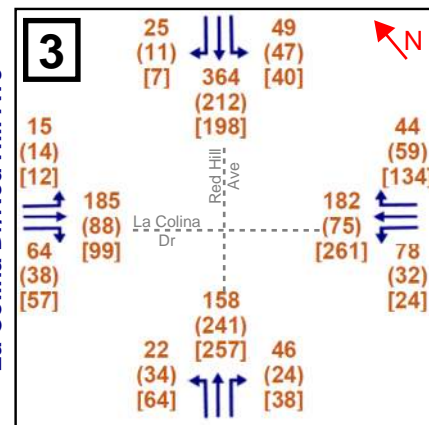
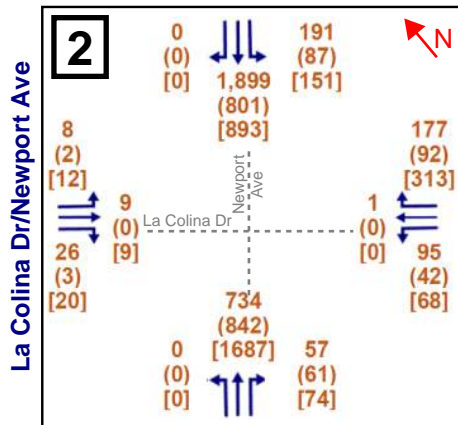
LEGEND

xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) Midday Peak Hour Traffic Volume (veh/hr)
 [xx] PM Peak Hour Traffic Volume (veh/hr)
 [x] Study Intersection





LEGEND
 xx AM Peak Hour Traffic Volume (veh/hr)
 (xx) Midday Peak Hour Traffic Volume (veh/hr)
 [xx] PM Peak Hour Traffic Volume (veh/hr)
 [X] Study Intersection



Level of Service (LOS) Analysis

Per the *County of Orange Growth Management Transportation Implementation Manual*, the Level of Service (LOS) for signalized intersections was determined using the Intersection Capacity Utilization (ICU) methodology and the guidelines included in the manual. LOS for unsignalized intersections was also evaluated using the ICU methodology, which was calculated using Synchro. The ICU calculation sheets and Synchro reports are included as attachments to this memorandum.

Based on the County Manual, significant adverse impact is noted when intersections degrade to a LOS worse than “D.” Table 3 shows the LOS for Existing and Existing Plus Construction conditions. As seen in the table, all study intersections currently operate at LOS D or better, and are expected to continue to do so during construction. Therefore, the construction is not expected to have any significant adverse impacts on the study intersections.

Table 3. LOS for Existing and Existing Plus Construction Conditions

Signalized Intersection	Existing						Existing Plus Construction					
	AM Peak Hour		Midday Peak		PM Peak Hour		AM Peak Hour		Midday Peak		PM Peak Hour	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
17th St/ Newport Ave	0.878	D	0.506	A	0.703	C	0.885	D	0.507	A	0.708	C
La Colina Dr/ Newport Ave	0.736	C	0.405	A	0.834	D	0.738	C	0.406	A	0.843	D
La Colina Dr/ Tustin Ranch Rd	0.560	A	0.311	A	0.450	A	0.579	A	0.312	A	0.469	A

Unsignalized Intersection	Existing						Existing Plus Construction					
	AM Peak Hour		Midday Peak		PM Peak Hour		AM Peak Hour		Midday Peak		PM Peak Hour	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
La Colina Dr/ Red Hill Ave	0.717	C	0.549	A	0.687	B	0.734	C	0.550	A	0.700	B
La Colina Dr/ Browning Ave	0.510	A	0.327	A	0.447	A	0.538	A	0.330	A	0.526	A

Findings and Recommendations

As discussed in the preceding sections, all five study intersections currently operate at LOS D or better, and are expected to continue to operate at LOS D or better during construction. Therefore, with no significant adverse impact, no mitigation is needed related to construction activities for this project.

Attachments:

Traffic Volume Data

ICU Calculation Sheets (Signalized Intersections)

Synchro Reports (Unsignalized Intersections)

Attachments

Traffic Volume Data

ICU Calculation Sheets (Signalized Intersections)

Synchro Reports (Unsignalized Intersections)

Traffic Volumes

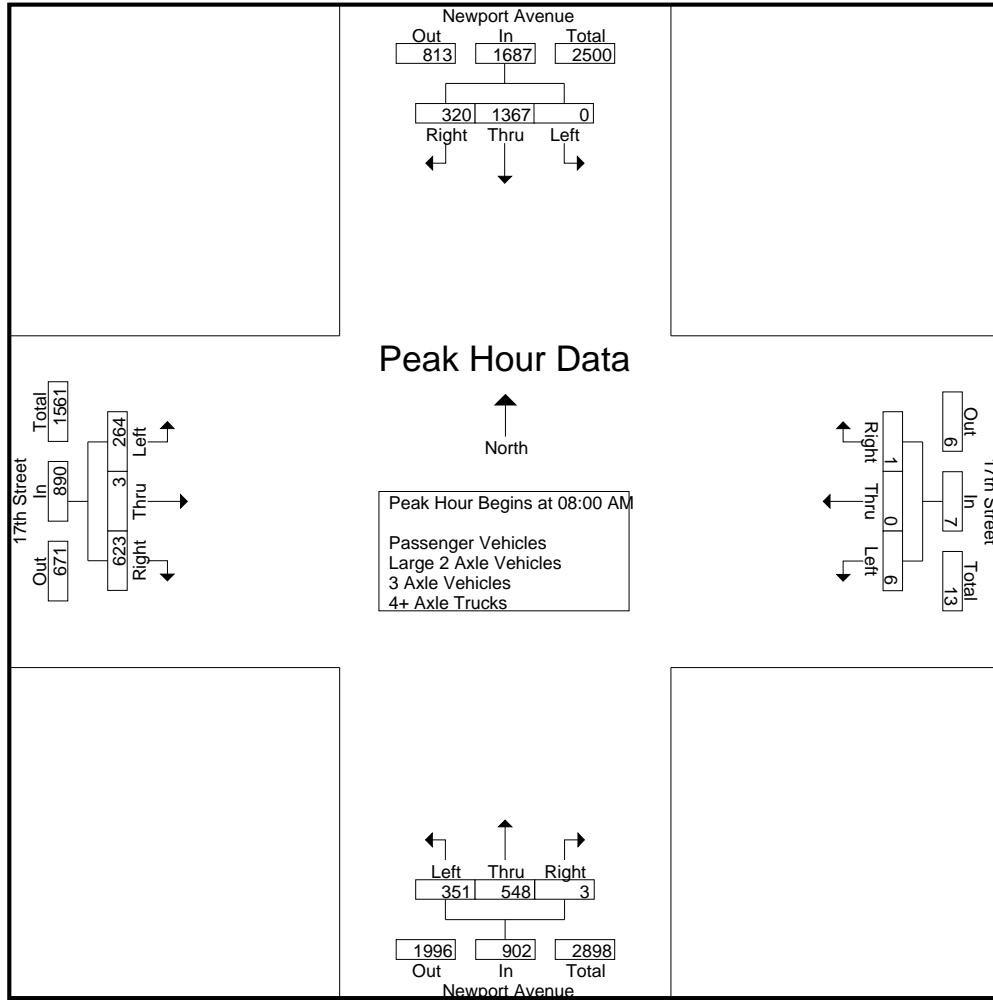
County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17AM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	213	53	266	0	0	0	0	39	78	0	117	44	0	87	131	514
07:15 AM	0	298	69	367	0	0	0	0	60	66	0	126	42	1	145	188	681
07:30 AM	0	291	55	346	1	0	2	3	73	78	1	152	51	0	133	184	685
07:45 AM	0	300	72	372	2	1	1	4	98	124	1	223	81	2	176	259	858
Total	0	1102	249	1351	3	1	3	7	270	346	2	618	218	3	541	762	2738
08:00 AM	0	321	91	412	2	0	0	2	107	109	1	217	71	0	156	227	858
08:15 AM	0	407	80	487	0	0	0	0	97	119	0	216	55	0	160	215	918
08:30 AM	0	262	79	341	3	0	0	3	77	168	2	247	76	2	163	241	832
08:45 AM	0	377	70	447	1	0	1	2	70	152	0	222	62	1	144	207	878
Total	0	1367	320	1687	6	0	1	7	351	548	3	902	264	3	623	890	3486
Grand Total	0	2469	569	3038	9	1	4	14	621	894	5	1520	482	6	1164	1652	6224
Apprch %	0	81.3	18.7		64.3	7.1	28.6		40.9	58.8	0.3		29.2	0.4	70.5		
Total %	0	39.7	9.1	48.8	0.1	0	0.1	0.2	10	14.4	0.1	24.4	7.7	0.1	18.7	26.5	
Passenger Vehicles	0	2440	560	3000	8	1	4	13	602	867	4	1473	461	5	1116	1582	6068
% Passenger Vehicles	0	98.8	98.4	98.7	88.9	100	100	92.9	96.9	97	80	96.9	95.6	83.3	95.9	95.8	97.5
Large 2 Axle Vehicles	0	26	7	33	0	0	0	0	16	24	0	40	16	1	38	55	128
% Large 2 Axle Vehicles	0	1.1	1.2	1.1	0	0	0	0	2.6	2.7	0	2.6	3.3	16.7	3.3	3.3	2.1
3 Axle Vehicles	0	3	2	5	1	0	0	1	3	3	1	7	4	0	8	12	25
% 3 Axle Vehicles	0	0.1	0.4	0.2	11.1	0	0	7.1	0.5	0.3	20	0.5	0.8	0	0.7	0.7	0.4
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	321	91	412	2	0	0	2	107	109	1	217	71	0	156	227	858
08:15 AM	0	407	80	487	0	0	0	0	97	119	0	216	55	0	160	215	918
08:30 AM	0	262	79	341	3	0	0	3	77	168	2	247	76	2	163	241	832
08:45 AM	0	377	70	447	1	0	1	2	70	152	0	222	62	1	144	207	878
Total Volume	0	1367	320	1687	6	0	1	7	351	548	3	902	264	3	623	890	3486
% App. Total	0	81	19		85.7	0	14.3		38.9	60.8	0.3		29.7	0.3	70		
PHF	.000	.840	.879	.866	.500	.000	.250	.583	.820	.815	.375	.913	.868	.375	.956	.923	.949



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:15 AM				07:45 AM				07:45 AM			
+0 mins.	0	321	91	412	0	0	0	0	98	124	1	223	81	2	176	259
+15 mins.	0	407	80	487	1	0	2	3	107	109	1	217	71	0	156	227
+30 mins.	0	262	79	341	2	1	1	4	97	119	0	216	55	0	160	215
+45 mins.	0	377	70	447	2	0	0	2	77	168	2	247	76	2	163	241
Total Volume	0	1367	320	1687	5	1	3	9	379	520	4	903	283	4	655	942
% App. Total	0	81	19		55.6	11.1	33.3		42	57.6	0.4		30	0.4	69.5	
PHF	.000	.840	.879	.866	.625	.250	.375	.563	.886	.774	.500	.914	.873	.500	.930	.909

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17AM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

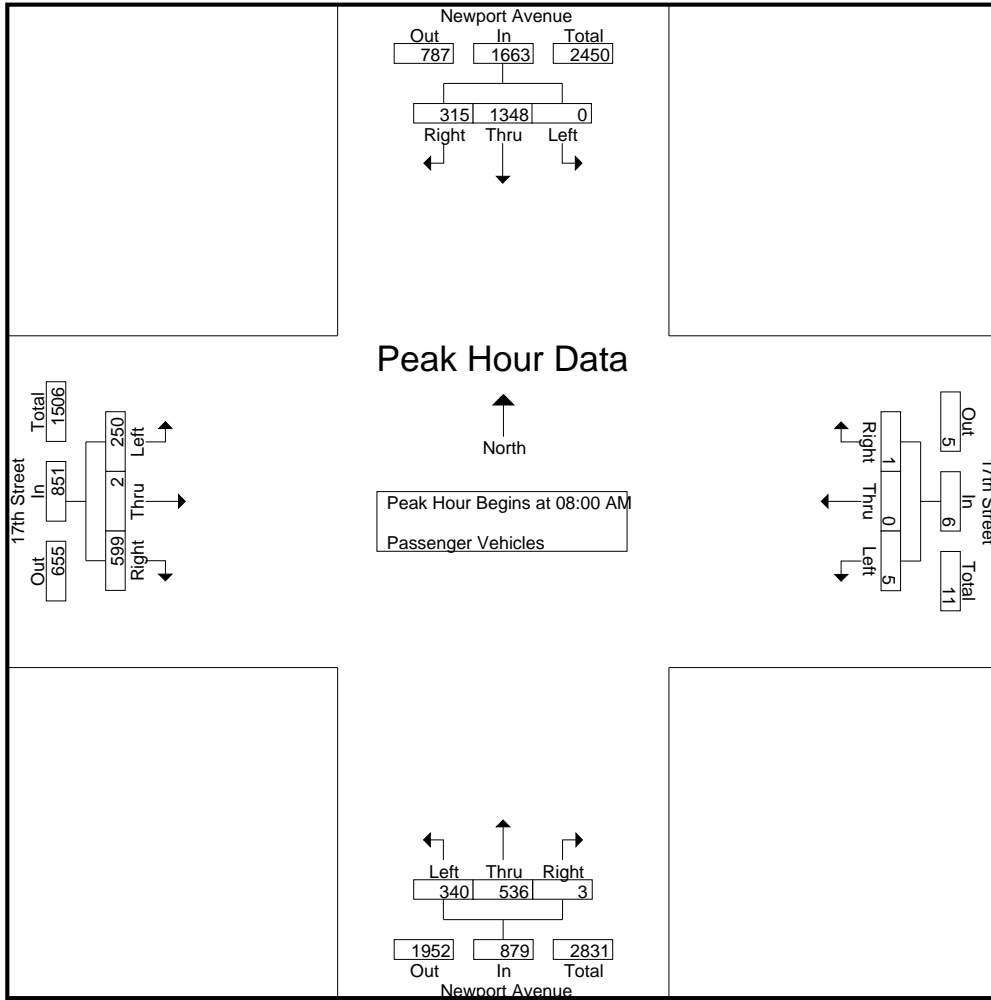
Groups Printed- Passenger Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	212	52	264	0	0	0	0	37	70	0	107	42	0	83	125	496
07:15 AM	0	294	69	363	0	0	0	0	59	63	0	122	38	1	138	177	662
07:30 AM	0	287	55	342	1	0	2	3	72	76	1	149	50	0	125	175	669
07:45 AM	0	299	69	368	2	1	1	4	94	122	0	216	81	2	171	254	842
Total	0	1092	245	1337	3	1	3	7	262	331	1	594	211	3	517	731	2669
08:00 AM	0	317	90	407	1	0	0	1	103	103	1	207	67	0	149	216	831
08:15 AM	0	400	80	480	0	0	0	0	96	118	0	214	50	0	158	208	902
08:30 AM	0	257	78	335	3	0	0	3	74	165	2	241	74	2	151	227	806
08:45 AM	0	374	67	441	1	0	1	2	67	150	0	217	59	0	141	200	860
Total	0	1348	315	1663	5	0	1	6	340	536	3	879	250	2	599	851	3399
Grand Total	0	2440	560	3000	8	1	4	13	602	867	4	1473	461	5	1116	1582	6068
Apprch %	0	81.3	18.7		61.5	7.7	30.8		40.9	58.9	0.3		29.1	0.3	70.5		
Total %	0	40.2	9.2	49.4	0.1	0	0.1	0.2	9.9	14.3	0.1	24.3	7.6	0.1	18.4	26.1	

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	0	317	90	407	1	0	0	1	103	103	1	207	67	0	149	216	831
08:15 AM	0	400	80	480	0	0	0	0	96	118	0	214	50	0	158	208	902
08:30 AM	0	257	78	335	3	0	0	3	74	165	2	241	74	2	151	227	806
08:45 AM	0	374	67	441	1	0	1	2	67	150	0	217	59	0	141	200	860
Total Volume	0	1348	315	1663	5	0	1	6	340	536	3	879	250	2	599	851	3399
% App. Total	0	81.1	18.9		83.3	0	16.7		38.7	61	0.3		29.4	0.2	70.4		
PHF	.000	.843	.875	.866	.417	.000	.250	.500	.825	.812	.375	.912	.845	.250	.948	.937	.942

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM



Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM							
+0 mins.	0	317	90	407	1	0	0	1	103	103	1	207	67	0	149	216
+15 mins.	0	400	80	480	0	0	0	0	96	118	0	214	50	0	158	208
+30 mins.	0	257	78	335	3	0	0	3	74	165	2	241	74	2	151	227
+45 mins.	0	374	67	441	1	0	1	2	67	150	0	217	59	0	141	200
Total Volume	0	1348	315	1663	5	0	1	6	340	536	3	879	250	2	599	851
% App. Total	0	81.1	18.9		83.3	0	16.7		38.7	61	0.3		29.4	0.2	70.4	
PHF	.000	.843	.875	.866	.417	.000	.250	.500	.825	.812	.375	.912	.845	.250	.948	.937

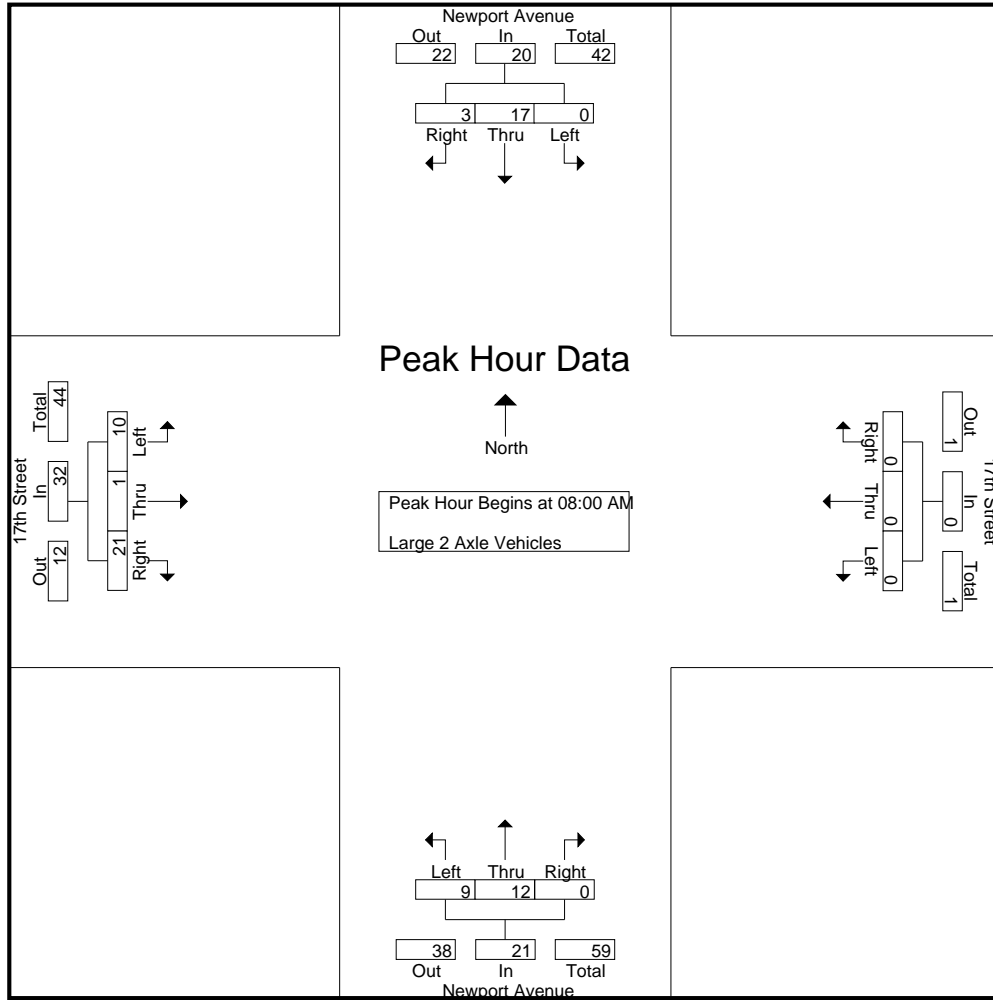
County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17AM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	1	2	0	0	0	0	2	6	0	8	2	0	2	4	14
07:15 AM	0	4	0	4	0	0	0	0	1	3	0	4	3	0	5	8	16
07:30 AM	0	4	0	4	0	0	0	0	0	1	0	1	1	0	6	7	12
07:45 AM	0	0	3	3	0	0	0	0	4	2	0	6	0	0	4	4	13
Total	0	9	4	13	0	0	0	0	7	12	0	19	6	0	17	23	55
08:00 AM	0	4	1	5	0	0	0	0	4	6	0	10	3	0	7	10	25
08:15 AM	0	7	0	7	0	0	0	0	1	1	0	2	3	0	0	3	12
08:30 AM	0	3	0	3	0	0	0	0	1	3	0	4	2	0	12	14	21
08:45 AM	0	3	2	5	0	0	0	0	3	2	0	5	2	1	2	5	15
Total	0	17	3	20	0	0	0	0	9	12	0	21	10	1	21	32	73
Grand Total	0	26	7	33	0	0	0	0	16	24	0	40	16	1	38	55	128
Apprch %	0	78.8	21.2		0	0	0		40	60	0		29.1	1.8	69.1		
Total %	0	20.3	5.5	25.8	0	0	0	0	12.5	18.8	0	31.2	12.5	0.8	29.7	43	

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	4	1	5	0	0	0	0	4	6	0	10	3	0	7	10	25
08:15 AM	0	7	0	7	0	0	0	0	1	1	0	2	3	0	0	3	12
08:30 AM	0	3	0	3	0	0	0	0	1	3	0	4	2	0	12	14	21
08:45 AM	0	3	2	5	0	0	0	0	3	2	0	5	2	1	2	5	15
Total Volume	0	17	3	20	0	0	0	0	9	12	0	21	10	1	21	32	73
% App. Total	0	85	15		0	0	0		42.9	57.1	0		31.2	3.1	65.6		
PHF	.000	.607	.375	.714	.000	.000	.000	.000	.563	.500	.000	.525	.833	.250	.438	.571	.730



Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM							
+0 mins.	0	4	1	5	0	0	0	0	4	6	0	10	3	0	7	10
+15 mins.	0	7	0	7	0	0	0	0	1	1	0	2	3	0	0	3
+30 mins.	0	3	0	3	0	0	0	0	1	3	0	4	2	0	12	14
+45 mins.	0	3	2	5	0	0	0	0	3	2	0	5	2	1	2	5
Total Volume	0	17	3	20	0	0	0	0	9	12	0	21	10	1	21	32
% App. Total	0	85	15		0	0	0		42.9	57.1	0		31.2	3.1	65.6	
PHF	.000	.607	.375	.714	.000	.000	.000	.000	.563	.500	.000	.525	.833	.250	.438	.571

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17AM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	2	2	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
07:30 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	1	3
07:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	0	1	0	1	0	0	0	0	1	3	1	5	1	0	5	6	12
08:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
08:30 AM	0	2	1	3	0	0	0	0	2	0	0	2	0	0	0	0	5
08:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	1	2	3
Total	0	2	2	4	1	0	0	1	2	0	0	2	3	0	3	6	13
Grand Total	0	3	2	5	1	0	0	1	3	3	1	7	4	0	8	12	25
Apprch %	0	60	40		100	0	0		42.9	42.9	14.3		33.3	0	66.7		
Total %	0	12	8	20	4	0	0	4	12	12	4	28	16	0	32	48	

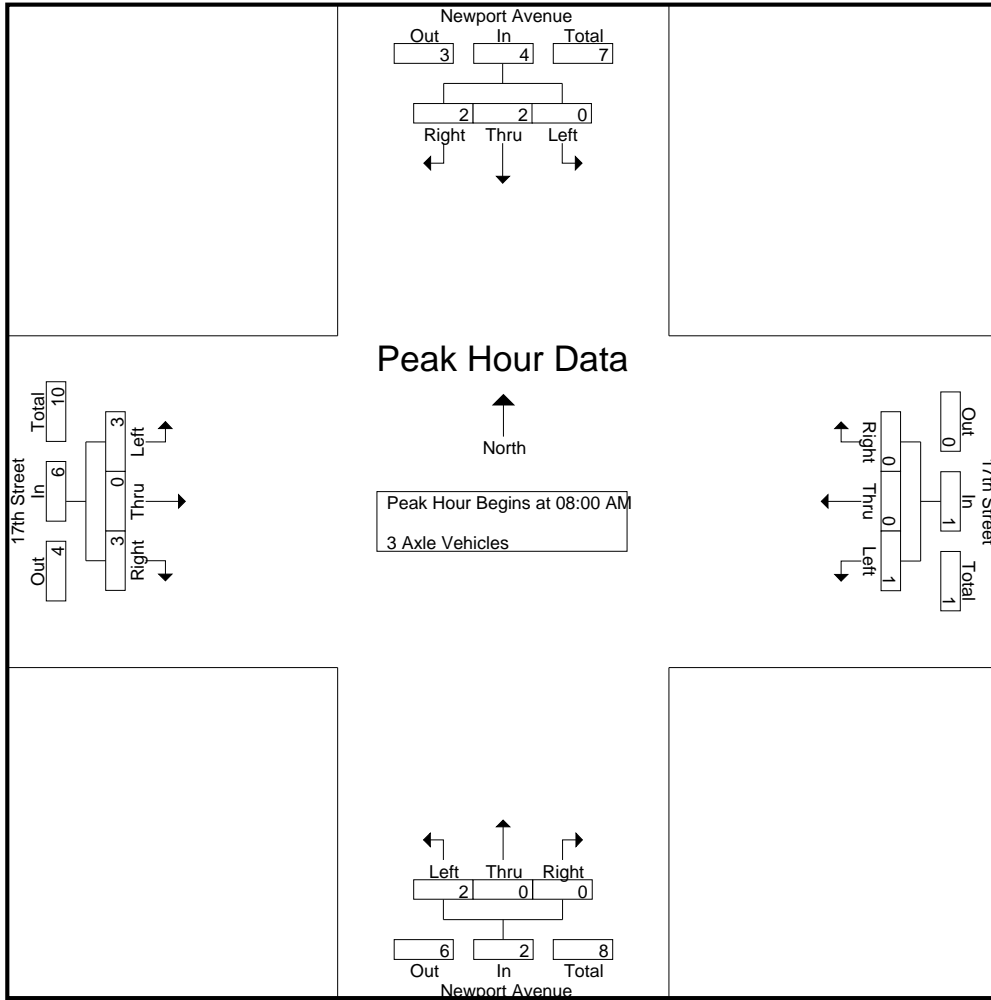
Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
08:30 AM	0	2	1	3	0	0	0	0	2	0	0	2	0	0	0	0	5
08:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	1	2	3
Total Volume	0	2	2	4	1	0	0	1	2	0	0	2	3	0	3	6	13
% App. Total	0	50	50		100	0	0		100	0	0		50	0	50		
PHF	.000	.250	.500	.333	.250	.000	.000	.250	.250	.000	.000	.250	.750	.000	.375	.500	.650

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17AM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 2



Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3
+30 mins.	0	2	1	3	0	0	0	0	2	0	0	2	0	0	0	0
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	2	2	4	1	0	0	1	2	0	0	2	3	0	3	6
% App. Total	0	50	50		100	0	0		100	0	0		50	0	50	
PHF	.000	.250	.500	.333	.250	.000	.000	.250	.250	.000	.000	.250	.750	.000	.375	.500

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17AM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

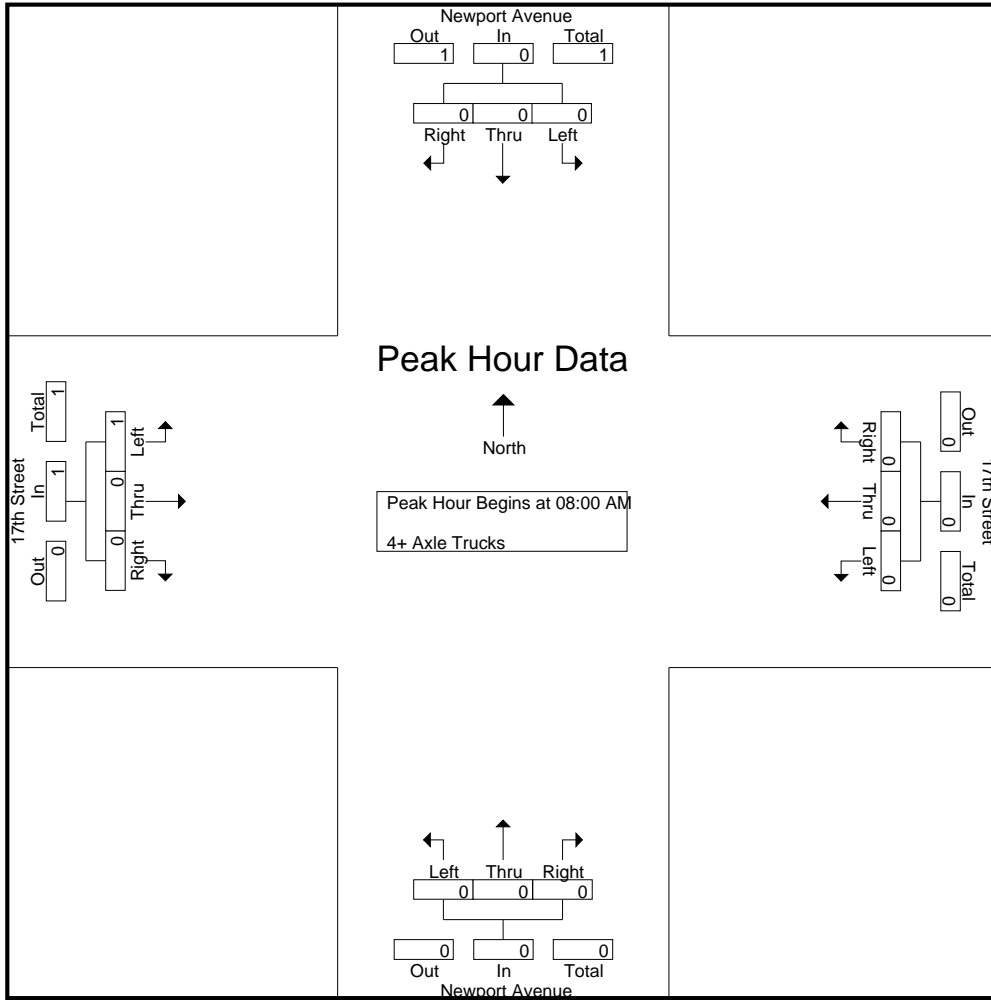
Groups Printed- 4+ Axle Trucks

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
Apprch %	0	0	0		0	0	0		0	0	0		33.3	0	66.7		
Total %	0	0	0		0	0	0		0	0	0		33.3	0	66.7	100	

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% App. Total	0	0	0		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM



Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17MD
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

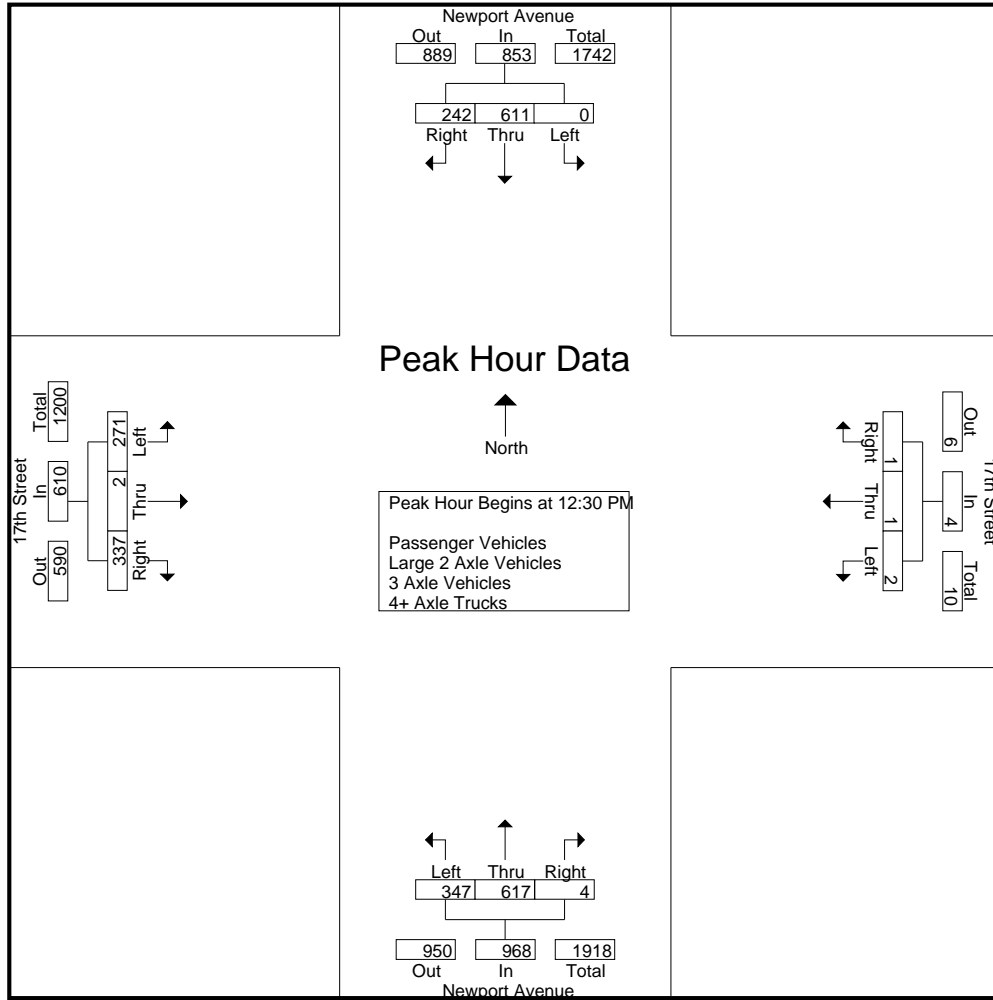
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	149	49	198	0	1	0	1	92	137	1	230	55	0	74	129	558
11:45 AM	0	154	55	209	2	1	0	3	73	131	2	206	51	0	74	125	543
Total	0	303	104	407	2	2	0	4	165	268	3	436	106	0	148	254	1101
12:00 PM	0	146	46	192	0	0	1	1	69	136	2	207	60	1	66	127	527
12:15 PM	0	118	53	171	1	3	0	4	95	140	2	237	65	1	60	126	538
12:30 PM	0	166	63	229	0	0	0	0	67	122	0	189	57	0	83	140	558
12:45 PM	0	154	58	212	2	1	0	3	85	130	2	217	68	2	74	144	576
Total	0	584	220	804	3	4	1	8	316	528	6	850	250	4	283	537	2199
01:00 PM	0	121	50	171	0	0	1	1	77	188	1	266	64	0	90	154	592
01:15 PM	0	170	71	241	0	0	0	0	118	177	1	296	82	0	90	172	709
Grand Total	0	1178	445	1623	5	6	2	13	676	1161	11	1848	502	4	611	1117	4601
Apprch %	0	72.6	27.4		38.5	46.2	15.4		36.6	62.8	0.6		44.9	0.4	54.7		
Total %	0	25.6	9.7	35.3	0.1	0.1	0	0.3	14.7	25.2	0.2	40.2	10.9	0.1	13.3	24.3	
Passenger Vehicles	0	1156	435	1591	5	6	2	13	663	1146	11	1820	490	4	594	1088	4512
% Passenger Vehicles	0	98.1	97.8	98	100	100	100	100	98.1	98.7	100	98.5	97.6	100	97.2	97.4	98.1
Large 2 Axle Vehicles	0	19	6	25	0	0	0	0	13	15	0	28	7	0	16	23	76
% Large 2 Axle Vehicles	0	1.6	1.3	1.5	0	0	0	0	1.9	1.3	0	1.5	1.4	0	2.6	2.1	1.7
3 Axle Vehicles	0	1	3	4	0	0	0	0	0	0	0	0	4	0	1	5	9
% 3 Axle Vehicles	0	0.1	0.7	0.2	0	0	0	0	0	0	0	0	0.8	0	0.2	0.4	0.2
4+ Axle Trucks	0	2	1	3	0	0	0	0	0	0	0	0	1	0	0	1	4
% 4+ Axle Trucks	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0.2	0	0	0.1	0.1

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	166	63	229	0	0	0	0	67	122	0	189	57	0	83	140	558
12:45 PM	0	154	58	212	2	1	0	3	85	130	2	217	68	2	74	144	576
01:00 PM	0	121	50	171	0	0	1	1	77	188	1	266	64	0	90	154	592
01:15 PM	0	170	71	241	0	0	0	0	118	177	1	296	82	0	90	172	709
Total Volume	0	611	242	853	2	1	1	4	347	617	4	968	271	2	337	610	2435
% App. Total	0	71.6	28.4		50	25	25		35.8	63.7	0.4		44.4	0.3	55.2		
PHF	.000	.899	.852	.885	.250	.250	.250	.333	.735	.820	.500	.818	.826	.250	.936	.887	.859

County of Orange
 N/S: Newport Avenue
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 Weather: Clear

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Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				11:30 AM				12:30 PM				12:30 PM			
+0 mins.	0	166	63	229	0	1	0	1	67	122	0	189	57	0	83	140
+15 mins.	0	154	58	212	2	1	0	3	85	130	2	217	68	2	74	144
+30 mins.	0	121	50	171	0	0	1	1	77	188	1	266	64	0	90	154
+45 mins.	0	170	71	241	1	3	0	4	118	177	1	296	82	0	90	172
Total Volume	0	611	242	853	3	5	1	9	347	617	4	968	271	2	337	610
% App. Total	0	71.6	28.4		33.3	55.6	11.1		35.8	63.7	0.4		44.4	0.3	55.2	
PHF	.000	.899	.852	.885	.375	.417	.250	.563	.735	.820	.500	.818	.826	.250	.936	.887

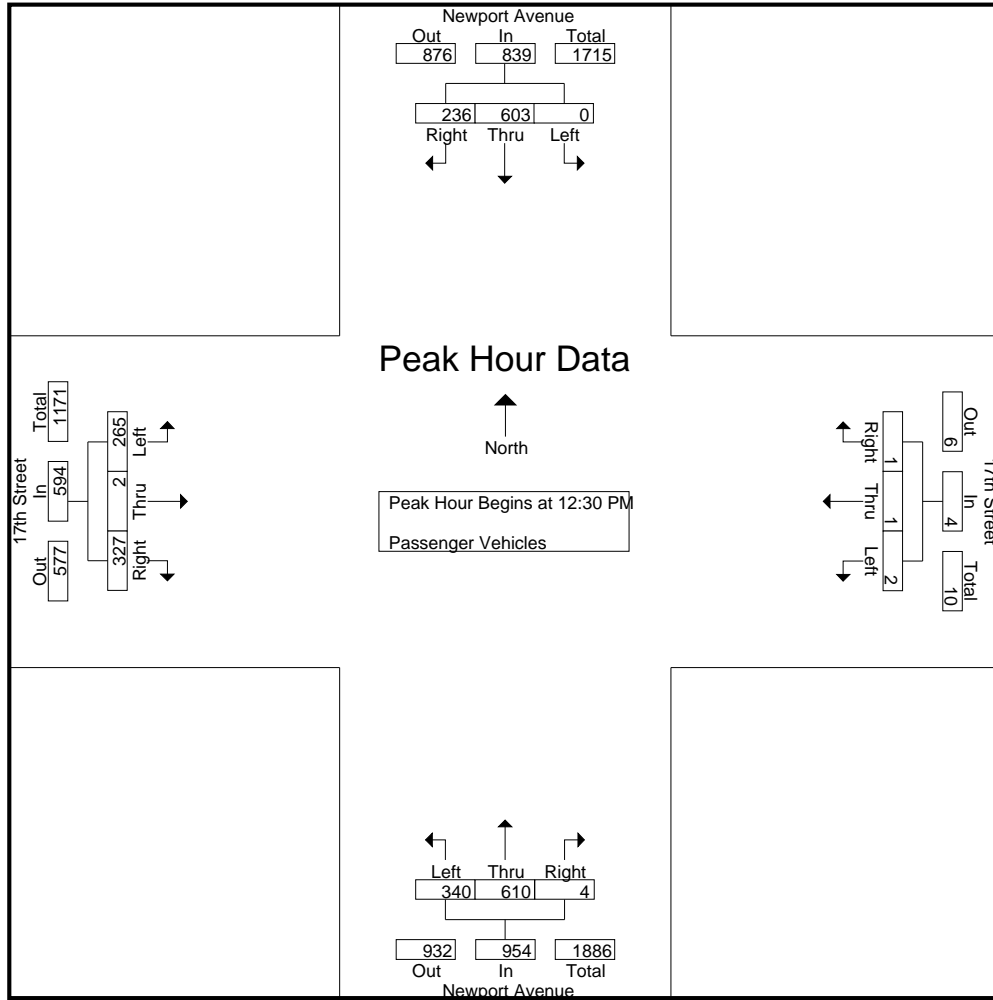
County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17MD
 Site Code : 21717852
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Groups Printed- Passenger Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	146	47	193	0	1	0	1	91	137	1	229	52	0	71	123	546
11:45 AM	0	151	54	205	2	1	0	3	72	129	2	203	50	0	70	120	531
Total	0	297	101	398	2	2	0	4	163	266	3	432	102	0	141	243	1077
12:00 PM	0	141	46	187	0	0	1	1	66	132	2	200	59	1	66	126	514
12:15 PM	0	115	52	167	1	3	0	4	94	138	2	234	64	1	60	125	530
12:30 PM	0	163	61	224	0	0	0	0	66	121	0	187	56	0	79	135	546
12:45 PM	0	152	56	208	2	1	0	3	83	130	2	215	65	2	72	139	565
Total	0	571	215	786	3	4	1	8	309	521	6	836	244	4	277	525	2155
01:00 PM	0	119	49	168	0	0	1	1	76	185	1	262	64	0	88	152	583
01:15 PM	0	169	70	239	0	0	0	0	115	174	1	290	80	0	88	168	697
Grand Total	0	1156	435	1591	5	6	2	13	663	1146	11	1820	490	4	594	1088	4512
Apprch %	0	72.7	27.3		38.5	46.2	15.4		36.4	63	0.6		45	0.4	54.6		
Total %	0	25.6	9.6	35.3	0.1	0.1	0	0.3	14.7	25.4	0.2	40.3	10.9	0.1	13.2	24.1	

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	163	61	224	0	0	0	0	66	121	0	187	56	0	79	135	546
12:45 PM	0	152	56	208	2	1	0	3	83	130	2	215	65	2	72	139	565
01:00 PM	0	119	49	168	0	0	1	1	76	185	1	262	64	0	88	152	583
01:15 PM	0	169	70	239	0	0	0	0	115	174	1	290	80	0	88	168	697
Total Volume	0	603	236	839	2	1	1	4	340	610	4	954	265	2	327	594	2391
% App. Total	0	71.9	28.1		50	25	25		35.6	63.9	0.4		44.6	0.3	55.1		
PHF	.000	.892	.843	.878	.250	.250	.250	.333	.739	.824	.500	.822	.828	.250	.929	.884	.858



Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	163	61	224	0	0	0	0	66	121	0	187	56	0	79	135
+15 mins.	0	152	56	208	2	1	0	3	83	130	2	215	65	2	72	139
+30 mins.	0	119	49	168	0	0	1	1	76	185	1	262	64	0	88	152
+45 mins.	0	169	70	239	0	0	0	0	115	174	1	290	80	0	88	168
Total Volume	0	603	236	839	2	1	1	4	340	610	4	954	265	2	327	594
% App. Total	0	71.9	28.1		50	25	25		35.6	63.9	0.4		44.6	0.3	55.1	
PHF	.000	.892	.843	.878	.250	.250	.250	.333	.739	.824	.500	.822	.828	.250	.929	.884

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17MD
 Site Code : 21717852
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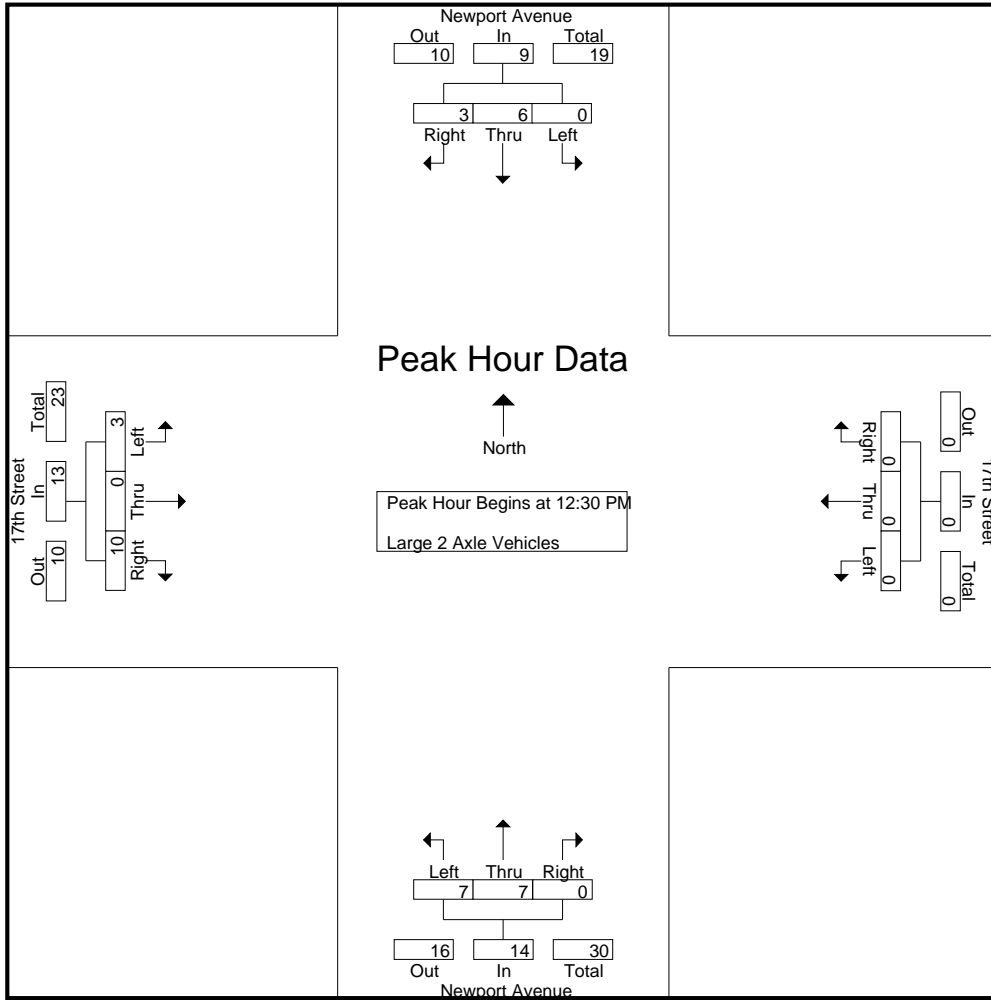
Groups Printed- Large 2 Axle Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	3	1	4	0	0	0	0	1	0	0	1	3	0	3	6	11
11:45 AM	0	3	1	4	0	0	0	0	1	2	0	3	1	0	3	4	11
Total	0	6	2	8	0	0	0	0	2	2	0	4	4	0	6	10	22
12:00 PM	0	4	0	4	0	0	0	0	3	4	0	7	0	0	0	0	11
12:15 PM	0	3	1	4	0	0	0	0	1	2	0	3	0	0	0	0	7
12:30 PM	0	3	0	3	0	0	0	0	1	1	0	2	1	0	4	5	10
12:45 PM	0	1	1	2	0	0	0	0	2	0	0	2	1	0	2	3	7
Total	0	11	2	13	0	0	0	0	7	7	0	14	2	0	6	8	35
01:00 PM	0	1	1	2	0	0	0	0	1	3	0	4	0	0	2	2	8
01:15 PM	0	1	1	2	0	0	0	0	3	3	0	6	1	0	2	3	11
Grand Total	0	19	6	25	0	0	0	0	13	15	0	28	7	0	16	23	76
Apprch %	0	76	24		0	0	0		46.4	53.6	0		30.4	0	69.6		
Total %	0	25	7.9	32.9	0	0	0	0	17.1	19.7	0	36.8	9.2	0	21.1	30.3	

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	3	0	3	0	0	0	0	1	1	0	2	1	0	4	5	10
12:45 PM	0	1	1	2	0	0	0	0	2	0	0	2	1	0	2	3	7
01:00 PM	0	1	1	2	0	0	0	0	1	3	0	4	0	0	2	2	8
01:15 PM	0	1	1	2	0	0	0	0	3	3	0	6	1	0	2	3	11
Total Volume	0	6	3	9	0	0	0	0	7	7	0	14	3	0	10	13	36
% App. Total	0	66.7	33.3		0	0	0		50	50	0		23.1	0	76.9		
PHF	.000	.500	.750	.750	.000	.000	.000	.000	.583	.583	.000	.583	.750	.000	.625	.650	.818

County of Orange
 N/S: Newport Avenue
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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	3	0	3	0	0	0	0	1	1	0	2	1	0	4	5
+15 mins.	0	1	1	2	0	0	0	0	2	0	0	2	1	0	2	3
+30 mins.	0	1	1	2	0	0	0	0	1	3	0	4	0	0	2	2
+45 mins.	0	1	1	2	0	0	0	0	3	3	0	6	1	0	2	3
Total Volume	0	6	3	9	0	0	0	0	7	7	0	14	3	0	10	13
% App. Total	0	66.7	33.3		0	0	0		50	50	0		23.1	0	76.9	
PHF	.000	.500	.750	.750	.000	.000	.000	.000	.583	.583	.000	.583	.750	.000	.625	.650

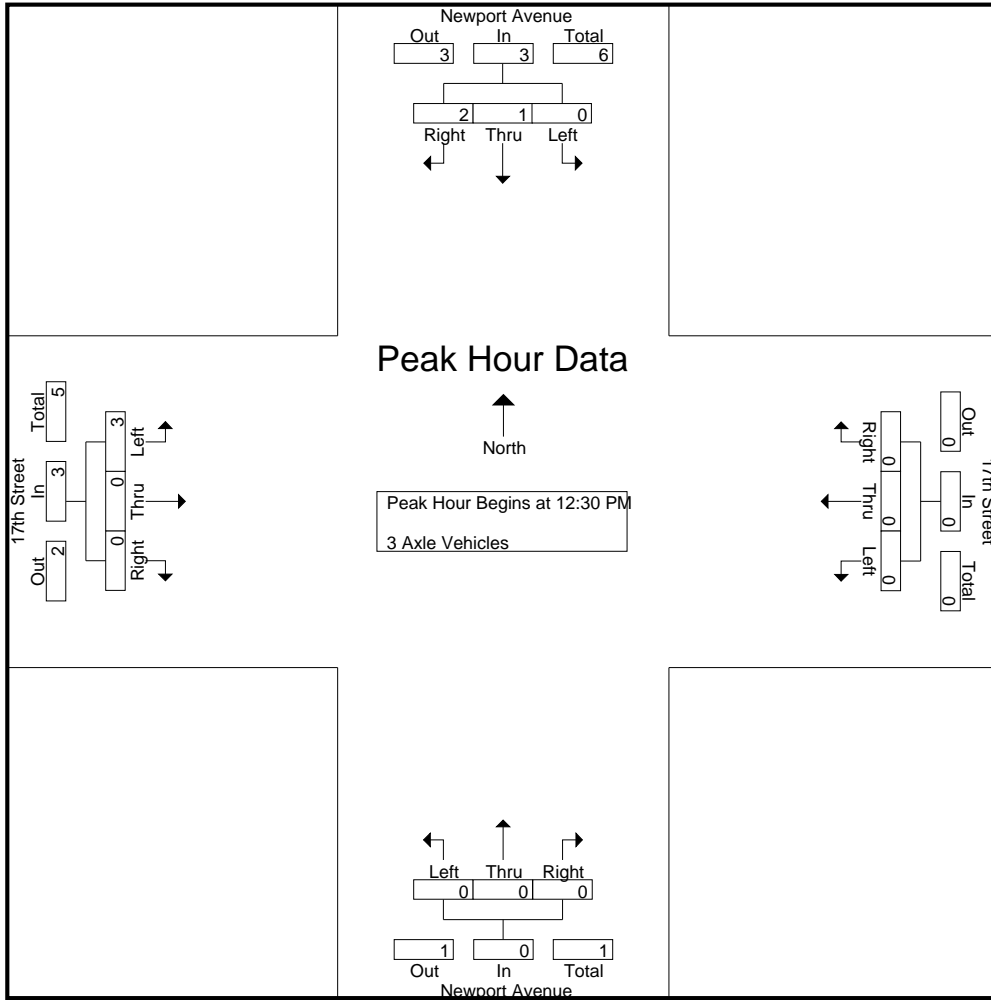
County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17MD
 Site Code : 21717852
 Start Date : 12/13/2017
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Groups Printed- 3 Axle Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
11:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
12:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	1	1	2	0	0	0	0	0	0	0	0	2	0	0	2	2	4
Total	0	1	2	3	0	0	0	0	0	0	0	0	3	0	0	3	3	6
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
Grand Total	0	1	3	4	0	0	0	0	0	0	0	0	4	0	1	5	5	9
Apprch %	0	25	75		0	0	0		0	0	0		80	0	20			
Total %	0	11.1	33.3	44.4	0	0	0	0	0	0	0	0	44.4	0	11.1	55.6		

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 12:30 PM																		
12:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	1	1	2	0	0	0	0	0	0	0	0	2	0	0	2	2	4
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
Total Volume	0	1	2	3	0	0	0	0	0	0	0	0	3	0	0	3	3	6
% App. Total	0	33.3	66.7		0	0	0		0	0	0		100	0	0			
PHF	.000	.250	.500	.375	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.375	.375



Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	1	2	0	0	0	0	0	0	0	0	2	0	0	2
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	0	1	2	3	0	0	0	0	0	0	0	0	3	0	0	3
% App. Total	0	33.3	66.7		0	0	0	0	0	0	0	0	100	0	0	
PHF	.000	.250	.500	.375	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17MD
 Site Code : 21717852
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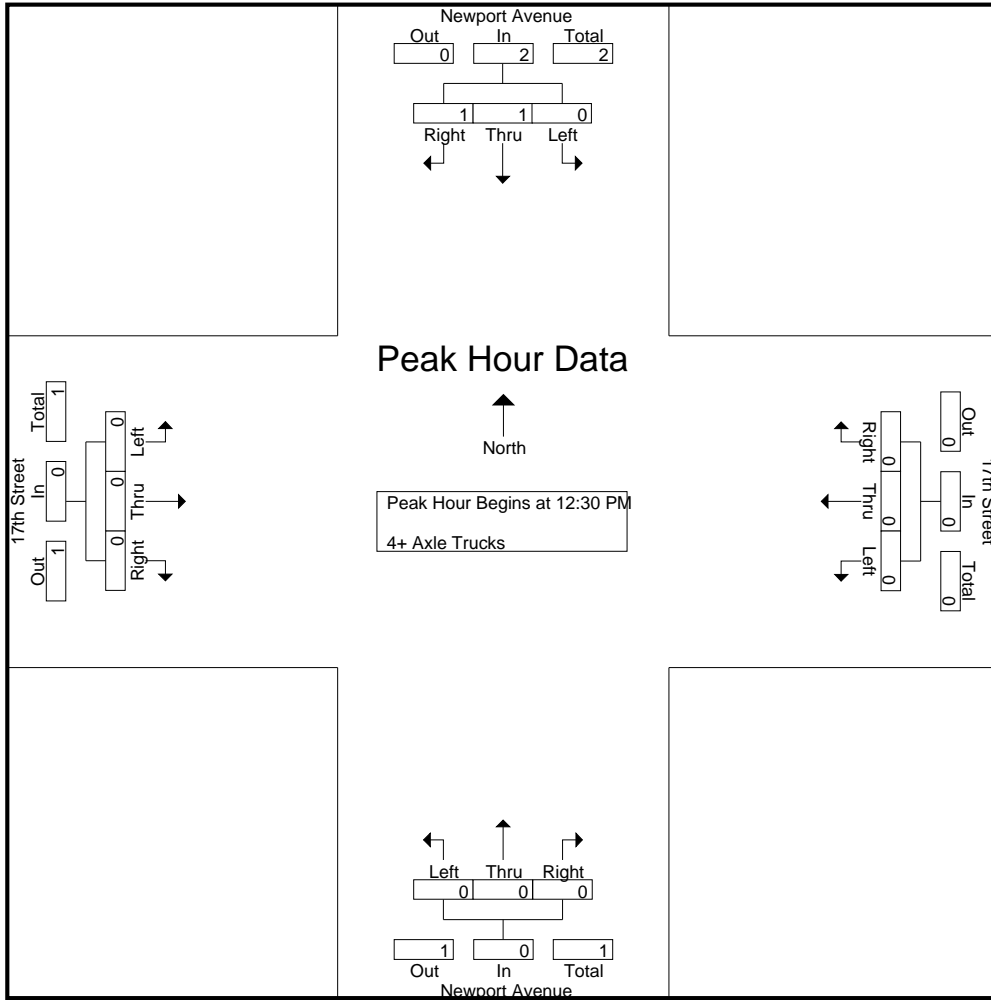
Groups Printed- 4+ Axle Trucks

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
01:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	1	3	0	0	0	0	0	0	0	0	1	0	0	1	4
Apprch %	0	66.7	33.3		0	0	0		0	0	0		100	0	0		
Total %	0	50	25	75	0	0	0		0	0	0		25	0	0	25	

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	50	50		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17MD
 Site Code : 21717852
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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	50	50		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

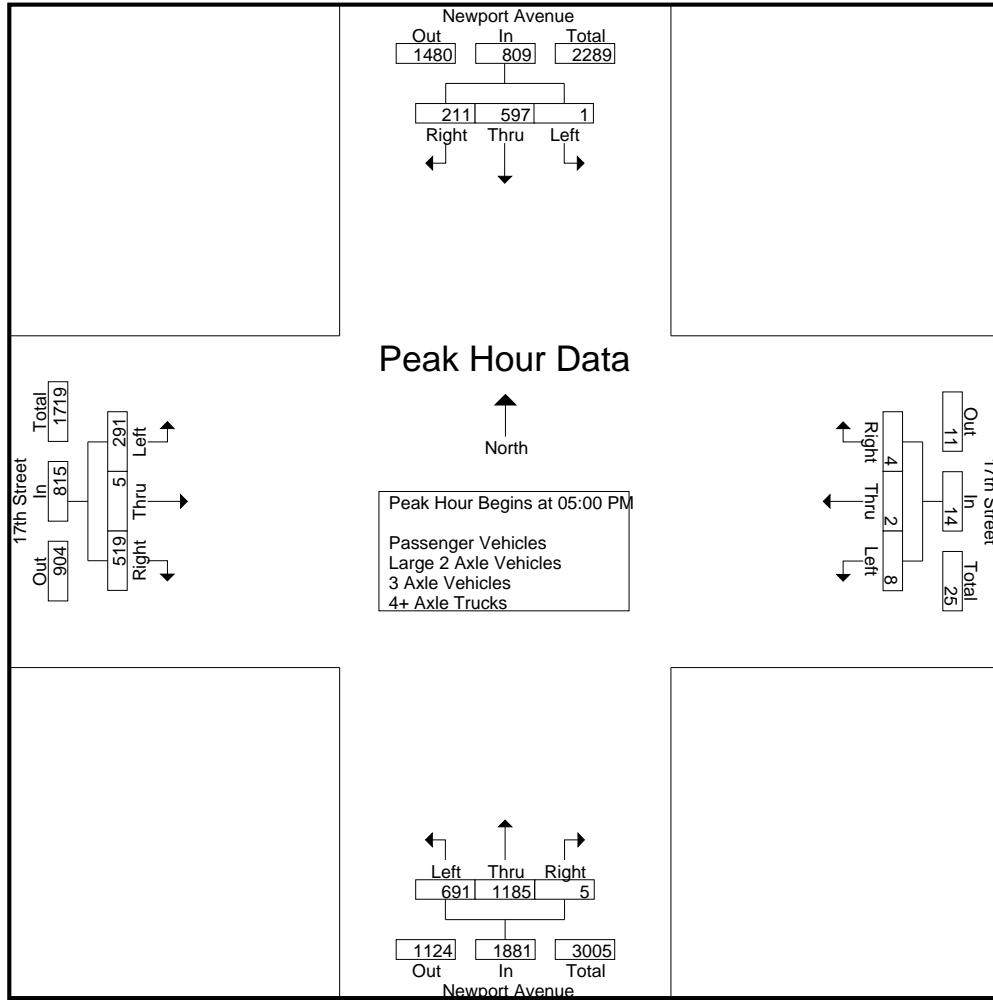
County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17PM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	166	53	219	0	3	0	3	130	264	2	396	60	0	100	160	778
04:15 PM	0	144	58	202	1	0	0	1	175	254	2	431	80	0	108	188	822
04:30 PM	1	156	53	210	2	1	0	3	171	284	2	457	38	0	73	111	781
04:45 PM	1	136	68	205	1	2	1	4	195	293	3	491	61	1	89	151	851
Total	2	602	232	836	4	6	1	11	671	1095	9	1775	239	1	370	610	3232
05:00 PM	1	163	46	210	2	1	2	5	163	321	1	485	64	0	108	172	872
05:15 PM	0	135	53	188	1	0	2	3	174	267	2	443	101	4	118	223	857
05:30 PM	0	140	49	189	3	1	0	4	162	292	1	455	46	0	121	167	815
05:45 PM	0	159	63	222	2	0	0	2	192	305	1	498	80	1	172	253	975
Total	1	597	211	809	8	2	4	14	691	1185	5	1881	291	5	519	815	3519
Grand Total	3	1199	443	1645	12	8	5	25	1362	2280	14	3656	530	6	889	1425	6751
Apprch %	0.2	72.9	26.9		48	32	20		37.3	62.4	0.4		37.2	0.4	62.4		
Total %	0	17.8	6.6	24.4	0.2	0.1	0.1	0.4	20.2	33.8	0.2	54.2	7.9	0.1	13.2	21.1	
Passenger Vehicles	3	1175	431	1609	11	8	4	23	1321	2253	13	3587	528	5	872	1405	6624
% Passenger Vehicles	100	98	97.3	97.8	91.7	100	80	92	97	98.8	92.9	98.1	99.6	83.3	98.1	98.6	98.1
Large 2 Axle Vehicles	0	22	10	32	1	0	1	2	36	25	1	62	2	1	16	19	115
% Large 2 Axle Vehicles	0	1.8	2.3	1.9	8.3	0	20	8	2.6	1.1	7.1	1.7	0.4	16.7	1.8	1.3	1.7
3 Axle Vehicles	0	1	0	1	0	0	0	0	4	2	0	6	0	0	0	0	7
% 3 Axle Vehicles	0	0.1	0	0.1	0	0	0	0	0.3	0.1	0	0.2	0	0	0	0	0.1
4+ Axle Trucks	0	1	2	3	0	0	0	0	1	0	0	1	0	0	1	1	5
% 4+ Axle Trucks	0	0.1	0.5	0.2	0	0	0	0	0.1	0	0	0	0	0	0.1	0.1	0.1

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	163	46	210	2	1	2	5	163	321	1	485	64	0	108	172	872
05:15 PM	0	135	53	188	1	0	2	3	174	267	2	443	101	4	118	223	857
05:30 PM	0	140	49	189	3	1	0	4	162	292	1	455	46	0	121	167	815
05:45 PM	0	159	63	222	2	0	0	2	192	305	1	498	80	1	172	253	975
Total Volume	1	597	211	809	8	2	4	14	691	1185	5	1881	291	5	519	815	3519
% App. Total	0.1	73.8	26.1		57.1	14.3	28.6		36.7	63	0.3		35.7	0.6	63.7		
PHF	.250	.916	.837	.911	.667	.500	.500	.700	.900	.923	.625	.944	.720	.313	.754	.805	.902



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				05:00 PM				05:00 PM			
+0 mins.	0	166	53	219	1	2	1	4	163	321	1	485	64	0	108	172
+15 mins.	0	144	58	202	2	1	2	5	174	267	2	443	101	4	118	223
+30 mins.	1	156	53	210	1	0	2	3	162	292	1	455	46	0	121	167
+45 mins.	1	136	68	205	3	1	0	4	192	305	1	498	80	1	172	253
Total Volume	2	602	232	836	7	4	5	16	691	1185	5	1881	291	5	519	815
% App. Total	0.2	72	27.8		43.8	25	31.2		36.7	63	0.3		35.7	0.6	63.7	
PHF	.500	.907	.853	.954	.583	.500	.625	.800	.900	.923	.625	.944	.720	.313	.754	.805

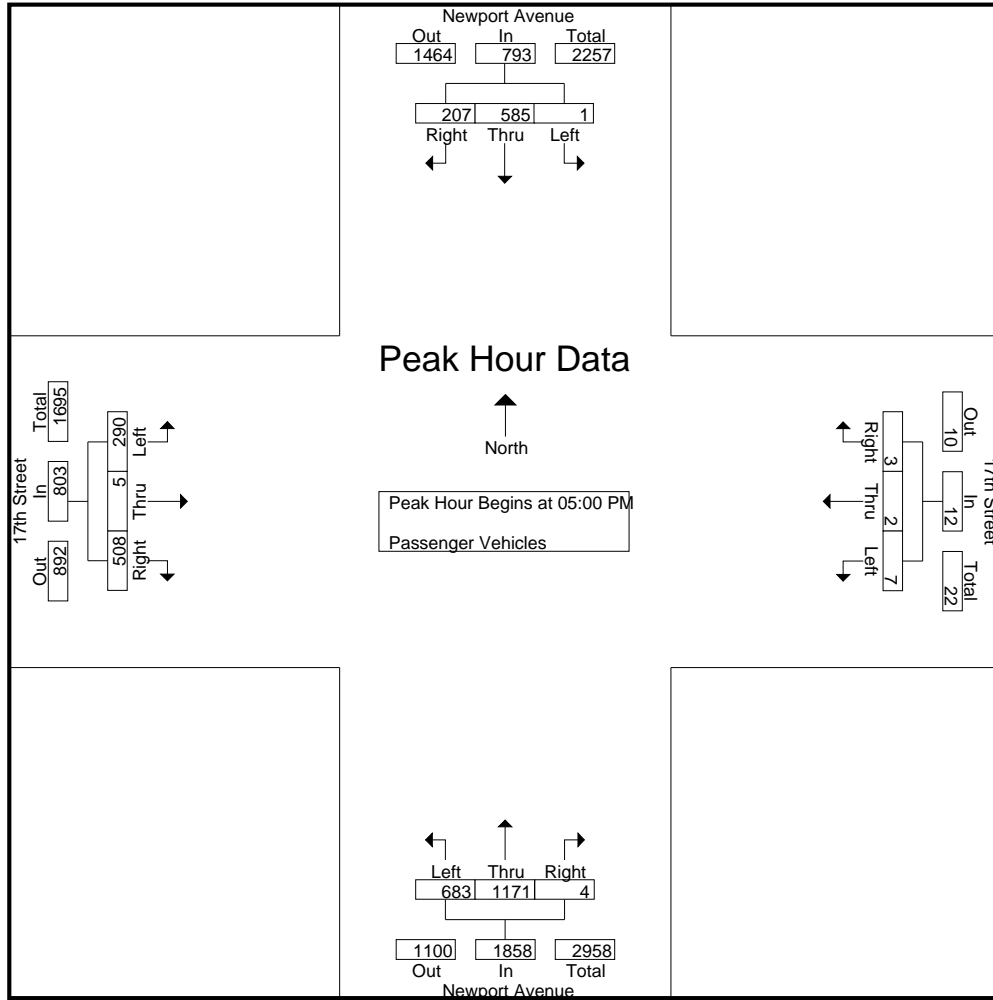
County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17PM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	163	50	213	0	3	0	3	119	261	2	382	60	0	100	160	758
04:15 PM	0	142	57	199	1	0	0	1	165	250	2	417	79	0	105	184	801
04:30 PM	1	152	51	204	2	1	0	3	165	280	2	447	38	0	72	110	764
04:45 PM	1	133	66	200	1	2	1	4	189	291	3	483	61	0	87	148	835
Total	2	590	224	816	4	6	1	11	638	1082	9	1729	238	0	364	602	3158
05:00 PM	1	158	45	204	1	1	1	3	161	316	0	477	64	0	106	170	854
05:15 PM	0	132	53	185	1	0	2	3	170	263	2	435	100	4	115	219	842
05:30 PM	0	138	47	185	3	1	0	4	161	289	1	451	46	0	119	165	805
05:45 PM	0	157	62	219	2	0	0	2	191	303	1	495	80	1	168	249	965
Total	1	585	207	793	7	2	3	12	683	1171	4	1858	290	5	508	803	3466
Grand Total	3	1175	431	1609	11	8	4	23	1321	2253	13	3587	528	5	872	1405	6624
Apprch %	0.2	73	26.8		47.8	34.8	17.4		36.8	62.8	0.4		37.6	0.4	62.1		
Total %	0	17.7	6.5	24.3	0.2	0.1	0.1	0.3	19.9	34	0.2	54.2	8	0.1	13.2	21.2	

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	158	45	204	1	1	1	3	161	316	0	477	64	0	106	170	854
05:15 PM	0	132	53	185	1	0	2	3	170	263	2	435	100	4	115	219	842
05:30 PM	0	138	47	185	3	1	0	4	161	289	1	451	46	0	119	165	805
05:45 PM	0	157	62	219	2	0	0	2	191	303	1	495	80	1	168	249	965
Total Volume	1	585	207	793	7	2	3	12	683	1171	4	1858	290	5	508	803	3466
% App. Total	0.1	73.8	26.1		58.3	16.7	25		36.8	63	0.2		36.1	0.6	63.3		
PHF	.250	.926	.835	.905	.583	.500	.375	.750	.894	.926	.500	.938	.725	.313	.756	.806	.898



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM							
+0 mins.	1	158	45	204	1	1	3	161	316	0	477	64	0	106	170	
+15 mins.	0	132	53	185	1	0	2	170	263	2	435	100	4	115	219	
+30 mins.	0	138	47	185	3	1	0	161	289	1	451	46	0	119	165	
+45 mins.	0	157	62	219	2	0	0	191	303	1	495	80	1	168	249	
Total Volume	1	585	207	793	7	2	3	683	1171	4	1858	290	5	508	803	
% App. Total	0.1	73.8	26.1		58.3	16.7	25	36.8	63	0.2		36.1	0.6	63.3		
PHF	.250	.926	.835	.905	.583	.500	.375	.750	.894	.926	.500	.938	.725	.313	.756	.806

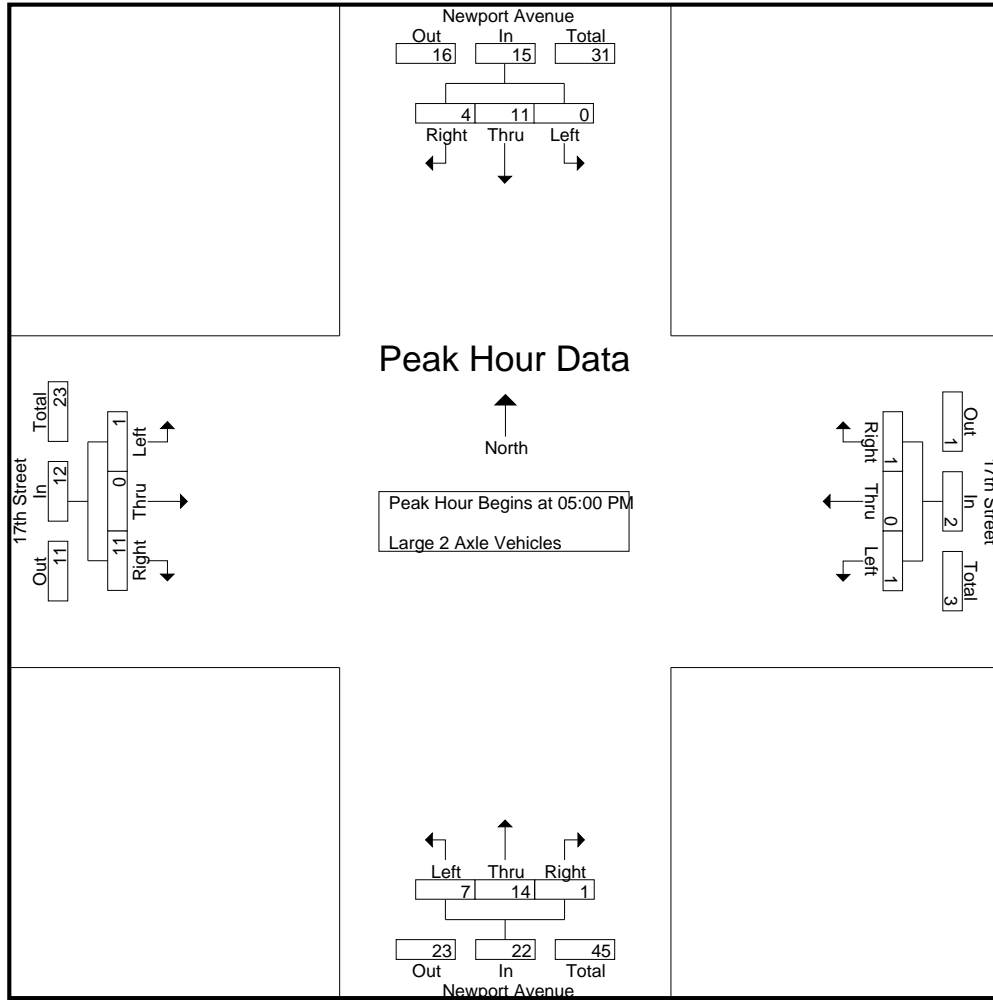
County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17PM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	3	2	5	0	0	0	0	10	3	0	13	0	0	0	0	18
04:15 PM	0	2	1	3	0	0	0	0	10	3	0	13	1	0	2	3	19
04:30 PM	0	4	1	5	0	0	0	0	5	4	0	9	0	0	1	1	15
04:45 PM	0	2	2	4	0	0	0	0	4	1	0	5	0	1	2	3	12
Total	0	11	6	17	0	0	0	0	29	11	0	40	1	1	5	7	64
05:00 PM	0	4	1	5	1	0	1	2	2	5	1	8	0	0	2	2	17
05:15 PM	0	3	0	3	0	0	0	0	3	4	0	7	1	0	3	4	14
05:30 PM	0	2	2	4	0	0	0	0	1	3	0	4	0	0	2	2	10
05:45 PM	0	2	1	3	0	0	0	0	1	2	0	3	0	0	4	4	10
Total	0	11	4	15	1	0	1	2	7	14	1	22	1	0	11	12	51
Grand Total	0	22	10	32	1	0	1	2	36	25	1	62	2	1	16	19	115
Apprch %	0	68.8	31.2		50	0	50		58.1	40.3	1.6		10.5	5.3	84.2		
Total %	0	19.1	8.7	27.8	0.9	0	0.9	1.7	31.3	21.7	0.9	53.9	1.7	0.9	13.9	16.5	

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	4	1	5	1	0	1	2	2	5	1	8	0	0	2	2	17
05:15 PM	0	3	0	3	0	0	0	0	3	4	0	7	1	0	3	4	14
05:30 PM	0	2	2	4	0	0	0	0	1	3	0	4	0	0	2	2	10
05:45 PM	0	2	1	3	0	0	0	0	1	2	0	3	0	0	4	4	10
Total Volume	0	11	4	15	1	0	1	2	7	14	1	22	1	0	11	12	51
% App. Total	0	73.3	26.7		50	0	50		31.8	63.6	4.5		8.3	0	91.7		
PHF	.000	.688	.500	.750	.250	.000	.250	.250	.583	.700	.250	.688	.250	.000	.688	.750	.750



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	4	1	5	1	0	1	2	2	5	1	8	0	0	2	2
+15 mins.	0	3	0	3	0	0	0	0	3	4	0	7	1	0	3	4
+30 mins.	0	2	2	4	0	0	0	0	1	3	0	4	0	0	2	2
+45 mins.	0	2	1	3	0	0	0	0	1	2	0	3	0	0	4	4
Total Volume	0	11	4	15	1	0	1	2	7	14	1	22	1	0	11	12
% App. Total	0	73.3	26.7		50	0	50		31.8	63.6	4.5		8.3	0	91.7	
PHF	.000	.688	.500	.750	.250	.000	.250	.250	.583	.700	.250	.688	.250	.000	.688	.750

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17PM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	2	1	0	3	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	3	2	0	5	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	4	2	0	6	0	0	0	0	0
Apprch %	0	100	0		0	0	0		66.7	33.3	0		0	0	0		
Total %	0	14.3	0	14.3	0	0	0	0	57.1	28.6	0	85.7	0	0	0	0	0

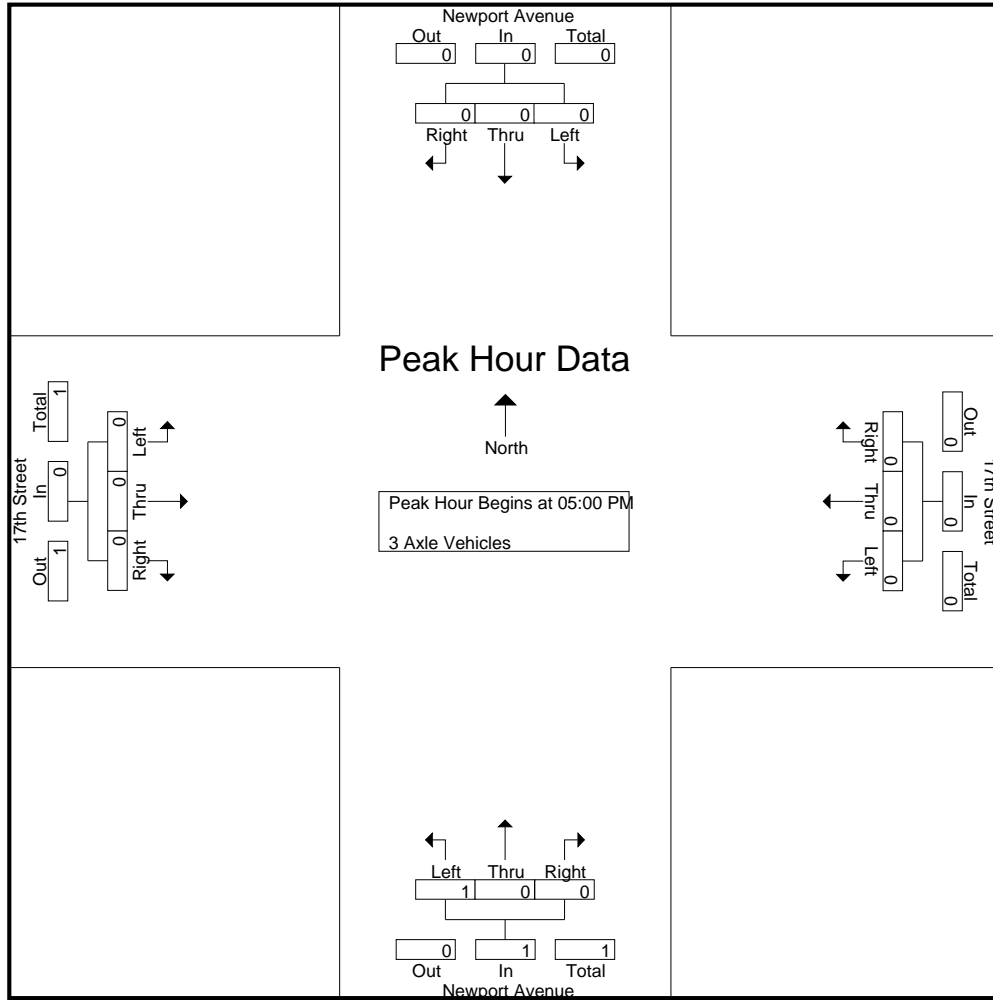
Start Time	Newport Avenue Southbound				17th Street Westbound				Newport Avenue Northbound				17th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
% App. Total	0	0	0		0	0	0		100	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.250

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17PM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 2



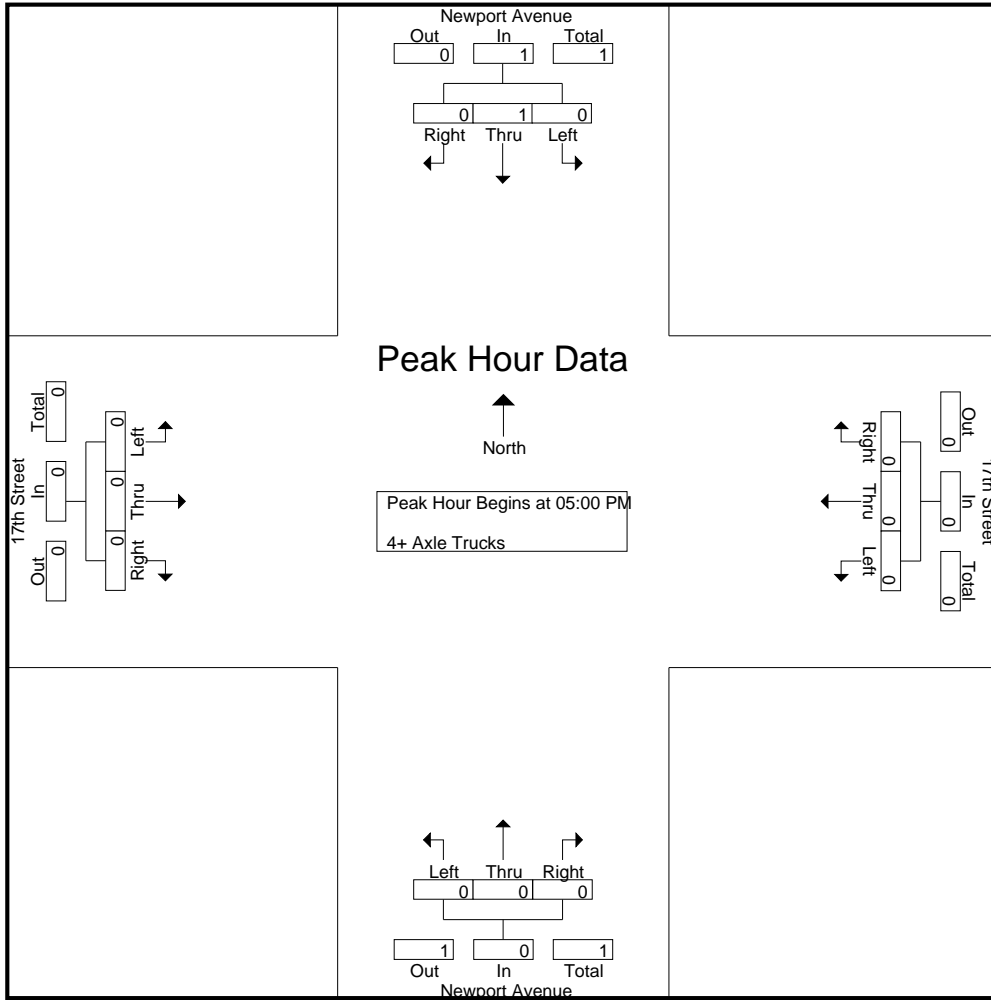
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000

County of Orange
 N/S: Newport Avenue
 E/W: 17th Street
 Weather: Clear

File Name : 04_ORCNE17PM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

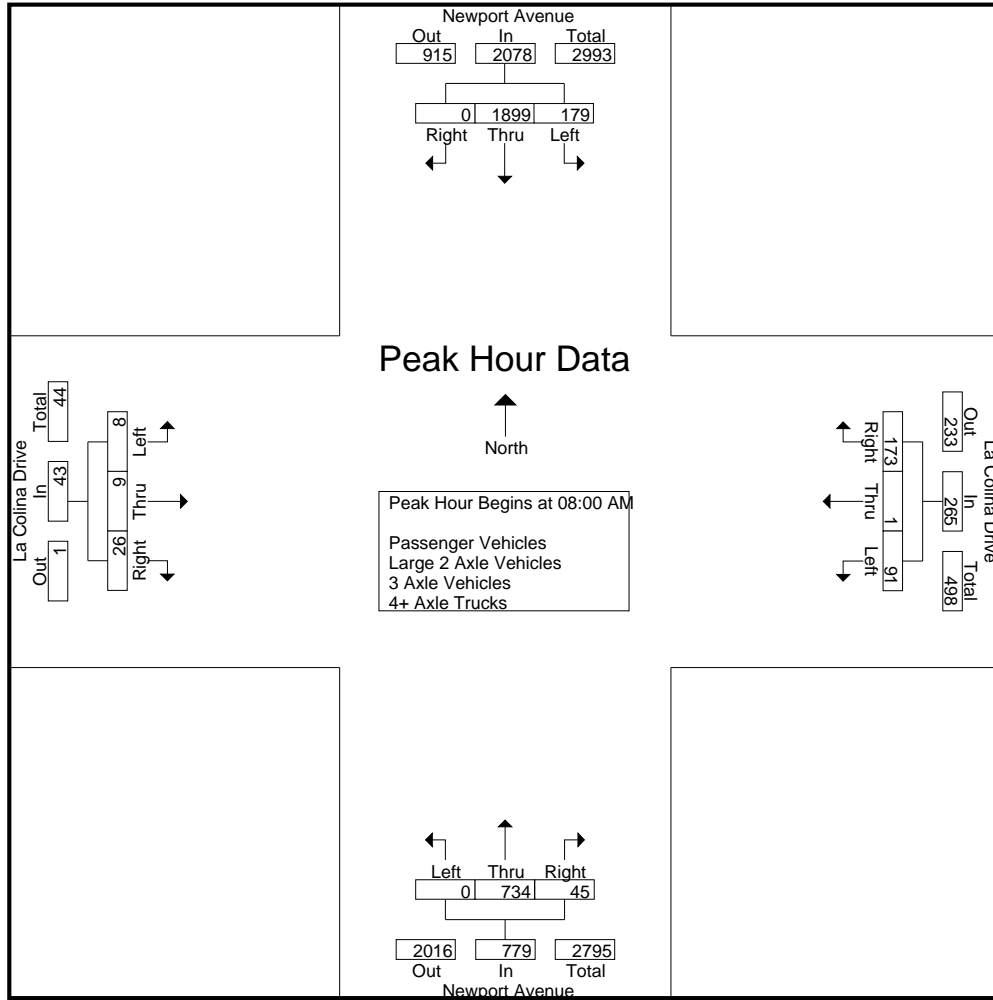
County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	17	250	0	267	8	0	10	18	0	98	9	107	5	0	3	8	400
07:15 AM	29	397	0	426	9	0	20	29	0	94	11	105	2	0	2	4	564
07:30 AM	23	398	0	421	19	1	22	42	0	141	6	147	1	2	8	11	621
07:45 AM	53	412	0	465	33	1	42	76	0	178	6	184	5	1	14	20	745
Total	122	1457	0	1579	69	2	94	165	0	511	32	543	13	3	27	43	2330
08:00 AM	59	453	0	512	37	0	43	80	0	174	16	190	5	4	12	21	803
08:15 AM	34	519	0	553	26	1	53	80	0	160	12	172	2	2	6	10	815
08:30 AM	45	427	0	472	10	0	43	53	0	211	8	219	1	3	5	9	753
08:45 AM	41	500	0	541	18	0	34	52	0	189	9	198	0	0	3	3	794
Total	179	1899	0	2078	91	1	173	265	0	734	45	779	8	9	26	43	3165
Grand Total	301	3356	0	3657	160	3	267	430	0	1245	77	1322	21	12	53	86	5495
Apprch %	8.2	91.8	0		37.2	0.7	62.1		0	94.2	5.8		24.4	14	61.6		
Total %	5.5	61.1	0	66.6	2.9	0.1	4.9	7.8	0	22.7	1.4	24.1	0.4	0.2	1	1.6	
Passenger Vehicles	298	3318	0	3616	160	3	265	428	0	1217	75	1292	21	12	52	85	5421
% Passenger Vehicles	99	98.9	0	98.9	100	100	99.3	99.5	0	97.8	97.4	97.7	100	100	98.1	98.8	98.7
Large 2 Axle Vehicles	3	32	0	35	0	0	1	1	0	22	1	23	0	0	1	1	60
% Large 2 Axle Vehicles	1	1	0	1	0	0	0.4	0.2	0	1.8	1.3	1.7	0	0	1.9	1.2	1.1
3 Axle Vehicles	0	5	0	5	0	0	1	1	0	5	1	6	0	0	0	0	12
% 3 Axle Vehicles	0	0.1	0	0.1	0	0	0.4	0.2	0	0.4	1.3	0.5	0	0	0	0	0.2
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	59	453	0	512	37	0	43	80	0	174	16	190	5	4	12	21	803
08:15 AM	34	519	0	553	26	1	53	80	0	160	12	172	2	2	6	10	815
08:30 AM	45	427	0	472	10	0	43	53	0	211	8	219	1	3	5	9	753
08:45 AM	41	500	0	541	18	0	34	52	0	189	9	198	0	0	3	3	794
Total Volume	179	1899	0	2078	91	1	173	265	0	734	45	779	8	9	26	43	3165
% App. Total	8.6	91.4	0		34.3	0.4	65.3		0	94.2	5.8		18.6	20.9	60.5		
PHF	.758	.915	.000	.939	.615	.250	.816	.828	.000	.870	.703	.889	.400	.563	.542	.512	.971



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				08:00 AM				07:30 AM			
+0 mins.	59	453	0	512	33	1	42	76	0	174	16	190	1	2	8	11
+15 mins.	34	519	0	553	37	0	43	80	0	160	12	172	5	1	14	20
+30 mins.	45	427	0	472	26	1	53	80	0	211	8	219	5	4	12	21
+45 mins.	41	500	0	541	10	0	43	53	0	189	9	198	2	2	6	10
Total Volume	179	1899	0	2078	106	2	181	289	0	734	45	779	13	9	40	62
% App. Total	8.6	91.4	0		36.7	0.7	62.6		0	94.2	5.8		21	14.5	64.5	
PHF	.758	.915	.000	.939	.716	.500	.854	.903	.000	.870	.703	.889	.650	.563	.714	.738

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	17	249	0	266	8	0	8	16	0	93	9	102	5	0	2	7	391
07:15 AM	28	393	0	421	9	0	20	29	0	92	10	102	2	0	2	4	556
07:30 AM	23	392	0	415	19	1	22	42	0	140	6	146	1	2	8	11	614
07:45 AM	53	406	0	459	33	1	42	76	0	175	6	181	5	1	14	20	736
Total	121	1440	0	1561	69	2	92	163	0	500	31	531	13	3	26	42	2297
08:00 AM	58	448	0	506	37	0	43	80	0	166	16	182	5	4	12	21	789
08:15 AM	34	517	0	551	26	1	53	80	0	159	12	171	2	2	6	10	812
08:30 AM	44	417	0	461	10	0	43	53	0	207	8	215	1	3	5	9	738
08:45 AM	41	496	0	537	18	0	34	52	0	185	8	193	0	0	3	3	785
Total	177	1878	0	2055	91	1	173	265	0	717	44	761	8	9	26	43	3124
Grand Total	298	3318	0	3616	160	3	265	428	0	1217	75	1292	21	12	52	85	5421
Apprch %	8.2	91.8	0		37.4	0.7	61.9		0	94.2	5.8		24.7	14.1	61.2		
Total %	5.5	61.2	0	66.7	3	0.1	4.9	7.9	0	22.4	1.4	23.8	0.4	0.2	1	1.6	

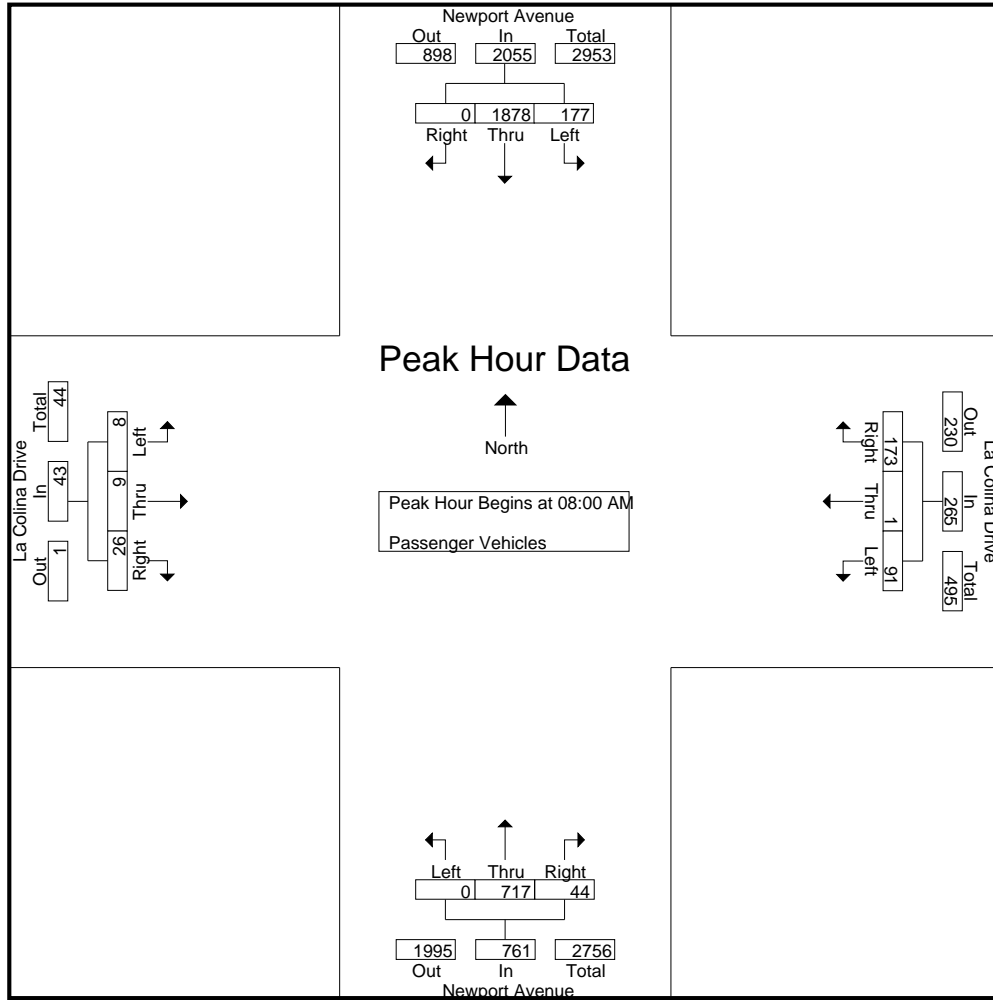
Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	58	448	0	506	37	0	43	80	0	166	16	182	5	4	12	21	789
08:15 AM	34	517	0	551	26	1	53	80	0	159	12	171	2	2	6	10	812
08:30 AM	44	417	0	461	10	0	43	53	0	207	8	215	1	3	5	9	738
08:45 AM	41	496	0	537	18	0	34	52	0	185	8	193	0	0	3	3	785
Total Volume	177	1878	0	2055	91	1	173	265	0	717	44	761	8	9	26	43	3124
% App. Total	8.6	91.4	0		34.3	0.4	65.3		0	94.2	5.8		18.6	20.9	60.5		
PHF	.763	.908	.000	.932	.615	.250	.816	.828	.000	.866	.688	.885	.400	.563	.542	.512	.962

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM							
+0 mins.	58	448	0	506	37	0	43	80	0	166	16	182	5	4	12	21
+15 mins.	34	517	0	551	26	1	53	80	0	159	12	171	2	2	6	10
+30 mins.	44	417	0	461	10	0	43	53	0	207	8	215	1	3	5	9
+45 mins.	41	496	0	537	18	0	34	52	0	185	8	193	0	0	3	3
Total Volume	177	1878	0	2055	91	1	173	265	0	717	44	761	8	9	26	43
% App. Total	8.6	91.4	0		34.3	0.4	65.3		0	94.2	5.8		18.6	20.9	60.5	
PHF	.763	.908	.000	.932	.615	.250	.816	.828	.000	.866	.688	.885	.400	.563	.542	.512

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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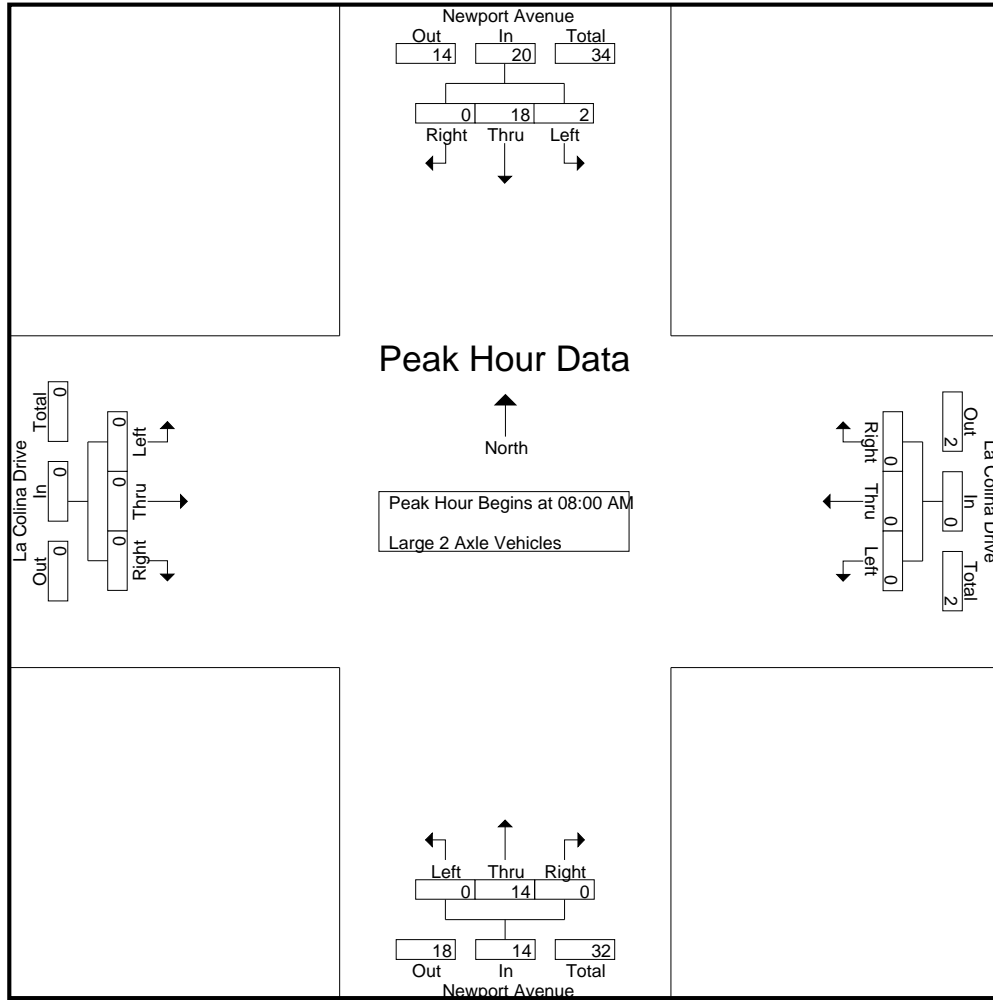
Groups Printed- Large 2 Axle Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	1	1	0	3	0	3	0	0	1	1	5
07:15 AM	1	4	0	5	0	0	0	0	0	2	1	3	0	0	0	0	8
07:30 AM	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
07:45 AM	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
Total	1	14	0	15	0	0	1	1	0	8	1	9	0	0	1	1	26
08:00 AM	1	5	0	6	0	0	0	0	0	8	0	8	0	0	0	0	14
08:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:30 AM	1	8	0	9	0	0	0	0	0	1	0	1	0	0	0	0	10
08:45 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
Total	2	18	0	20	0	0	0	0	0	14	0	14	0	0	0	0	34
Grand Total	3	32	0	35	0	0	1	1	0	22	1	23	0	0	1	1	60
Apprch %	8.6	91.4	0		0	0	100		0	95.7	4.3		0	0	100		
Total %	5	53.3	0	58.3	0	0	1.7	1.7	0	36.7	1.7	38.3	0	0	1.7	1.7	

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	1	5	0	6	0	0	0	0	0	8	0	8	0	0	0	0	14
08:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:30 AM	1	8	0	9	0	0	0	0	0	1	0	1	0	0	0	0	10
08:45 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
Total Volume	2	18	0	20	0	0	0	0	0	14	0	14	0	0	0	0	34
% App. Total	10	90	0		0	0	0		0	100	0		0	0	0		
PHF	.500	.563	.000	.556	.000	.000	.000	.000	.000	.438	.000	.438	.000	.000	.000	.000	.607

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM							
+0 mins.	1	5	0	6	0	0	0	0	0	8	0	8	0	0	0	0
+15 mins.	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	1	8	0	9	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0
Total Volume	2	18	0	20	0	0	0	0	0	14	0	14	0	0	0	0
% App. Total	10	90	0		0	0	0	0	0	100	0		0	0	0	
PHF	.500	.563	.000	.556	.000	.000	.000	.000	.000	.438	.000	.438	.000	.000	.000	.000

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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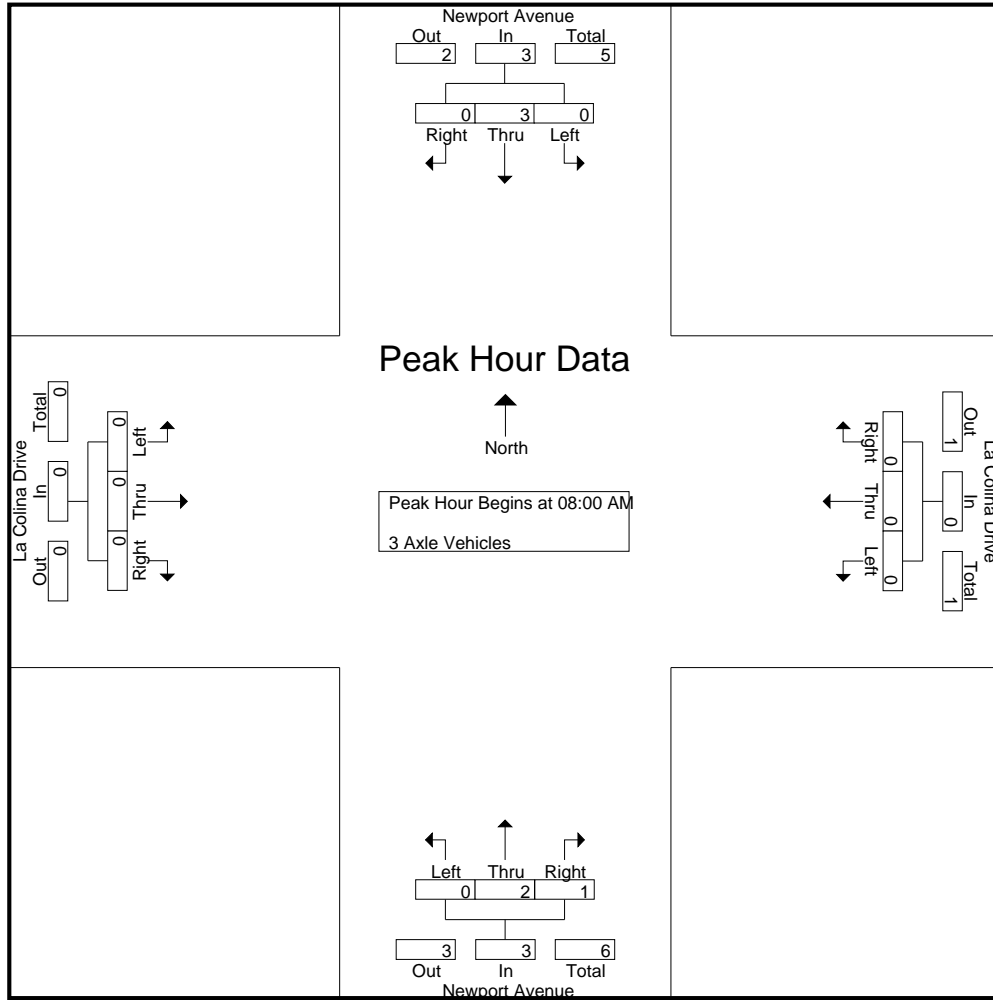
Groups Printed- 3 Axle Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	0	1	0	0	1	1	0	2	0	2	0	0	0	0	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	1	1	0	3	0	3	0	0	0	0	6
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	0	3	0	3	0	0	0	0	0	2	1	3	0	0	0	0	6
Grand Total	0	5	0	5	0	0	1	1	0	5	1	6	0	0	0	0	12
Apprch %	0	100	0		0	0	100		0	83.3	16.7		0	0	0		
Total %	0	41.7	0	41.7	0	0	8.3	8.3	0	41.7	8.3	50	0	0	0	0	

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total Volume	0	3	0	3	0	0	0	0	0	2	1	3	0	0	0	0	6
% App. Total	0	100	0		0	0	0		0	66.7	33.3		0	0	0		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.250	.250	.375	.000	.000	.000	.000	.375

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0
Total Volume	0	3	0	3	0	0	0	0	0	2	1	3	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	66.7	33.3	0	0	0	0	0
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.250	.250	.375	.000	.000	.000	.000

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	50	0	50	0	0	0	0	0	50	0	50	0	0	0	0	

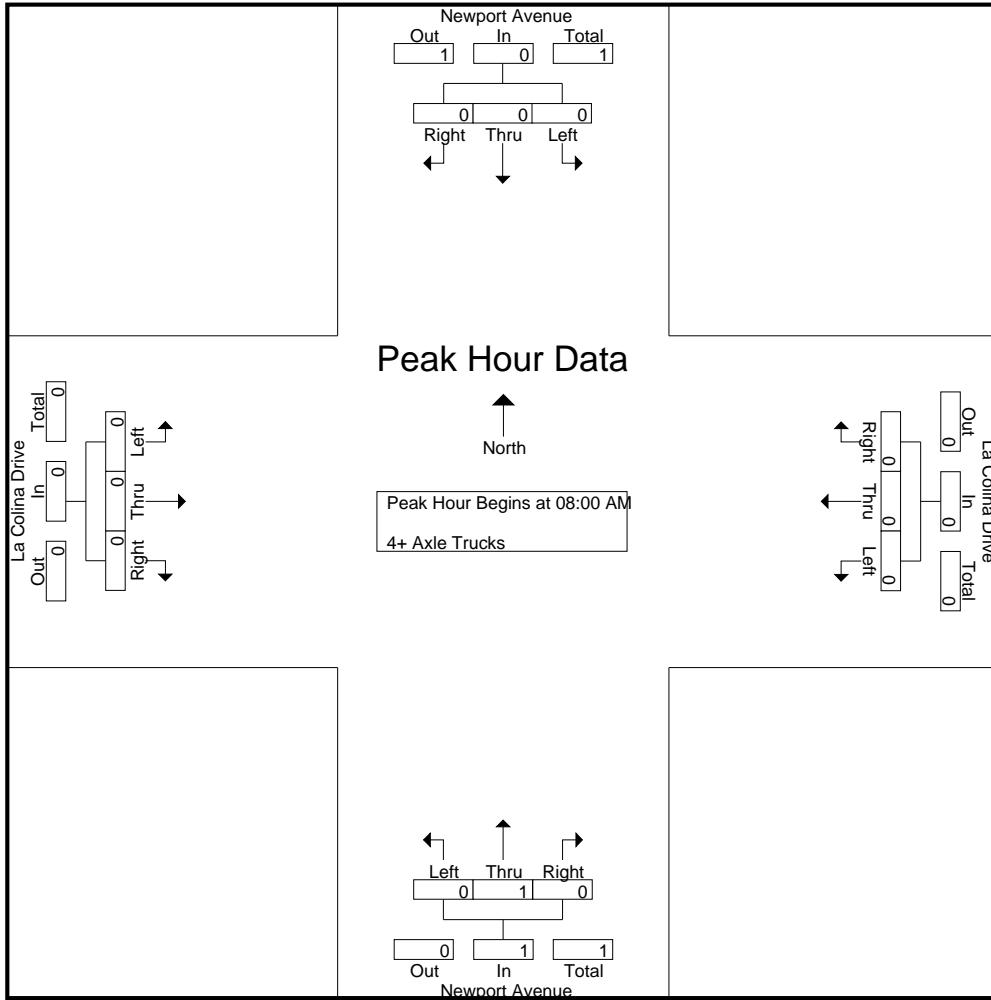
Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

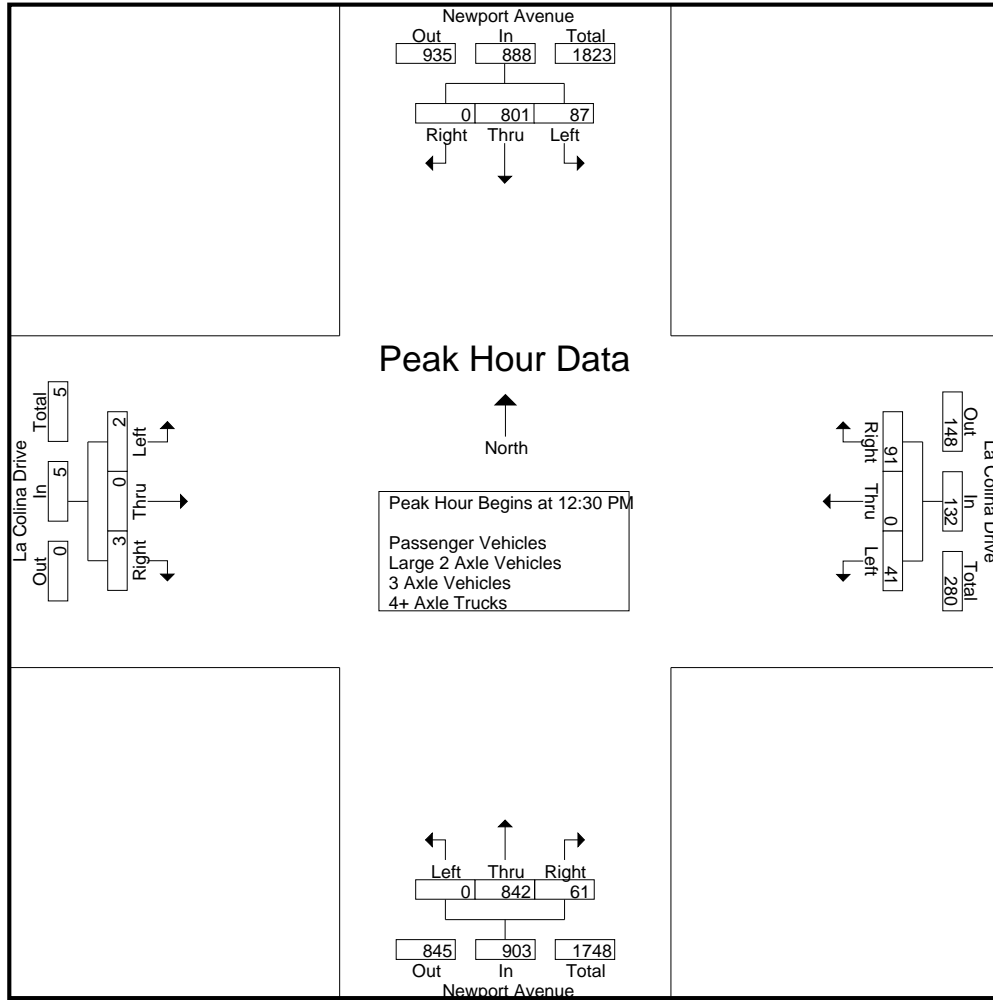
County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCMD
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	13	212	0	225	13	0	16	29	0	190	13	203	0	0	0	0	457
11:45 AM	16	207	0	223	9	0	20	29	0	190	14	204	0	0	0	0	456
Total	29	419	0	448	22	0	36	58	0	380	27	407	0	0	0	0	913
12:00 PM	11	206	0	217	8	0	19	27	0	190	16	206	1	0	0	1	451
12:15 PM	12	166	0	178	9	0	22	31	0	194	10	204	0	1	1	2	415
12:30 PM	15	205	0	220	9	0	21	30	0	171	10	181	0	0	1	1	432
12:45 PM	23	200	0	223	7	0	21	28	0	183	12	195	1	0	1	2	448
Total	61	777	0	838	33	0	83	116	0	738	48	786	2	1	3	6	1746
01:00 PM	25	177	0	202	11	0	22	33	0	261	14	275	1	0	0	1	511
01:15 PM	24	219	0	243	14	0	27	41	0	227	25	252	0	0	1	1	537
Grand Total	139	1592	0	1731	80	0	168	248	0	1606	114	1720	3	1	4	8	3707
Apprch %	8	92	0		32.3	0	67.7		0	93.4	6.6		37.5	12.5	50		
Total %	3.7	42.9	0	46.7	2.2	0	4.5	6.7	0	43.3	3.1	46.4	0.1	0	0.1	0.2	
Passenger Vehicles	139	1564	0	1703	80	0	164	244	0	1581	111	1692	3	1	3	7	3646
% Passenger Vehicles	100	98.2	0	98.4	100	0	97.6	98.4	0	98.4	97.4	98.4	100	100	75	87.5	98.4
Large 2 Axle Vehicles	0	26	0	26	0	0	4	4	0	25	3	28	0	0	1	1	59
% Large 2 Axle Vehicles	0	1.6	0	1.5	0	0	2.4	1.6	0	1.6	2.6	1.6	0	0	25	12.5	1.6
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	15	205	0	220	9	0	21	30	0	171	10	181	0	0	1	1	432
12:45 PM	23	200	0	223	7	0	21	28	0	183	12	195	1	0	1	2	448
01:00 PM	25	177	0	202	11	0	22	33	0	261	14	275	1	0	0	1	511
01:15 PM	24	219	0	243	14	0	27	41	0	227	25	252	0	0	1	1	537
Total Volume	87	801	0	888	41	0	91	132	0	842	61	903	2	0	3	5	1928
% App. Total	9.8	90.2	0		31.1	0	68.9		0	93.2	6.8		40	0	60		
PHF	.870	.914	.000	.914	.732	.000	.843	.805	.000	.807	.610	.821	.500	.000	.750	.625	.898



Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:00 PM							
+0 mins.	15	205	0	220	9	0	21	30	0	171	10	181	1	0	0	1
+15 mins.	23	200	0	223	7	0	21	28	0	183	12	195	0	1	1	2
+30 mins.	25	177	0	202	11	0	22	33	0	261	14	275	0	0	1	1
+45 mins.	24	219	0	243	14	0	27	41	0	227	25	252	1	0	1	2
Total Volume	87	801	0	888	41	0	91	132	0	842	61	903	2	1	3	6
% App. Total	9.8	90.2	0		31.1	0	68.9		0	93.2	6.8		33.3	16.7	50	
PHF	.870	.914	.000	.914	.732	.000	.843	.805	.000	.807	.610	.821	.500	.250	.750	.750

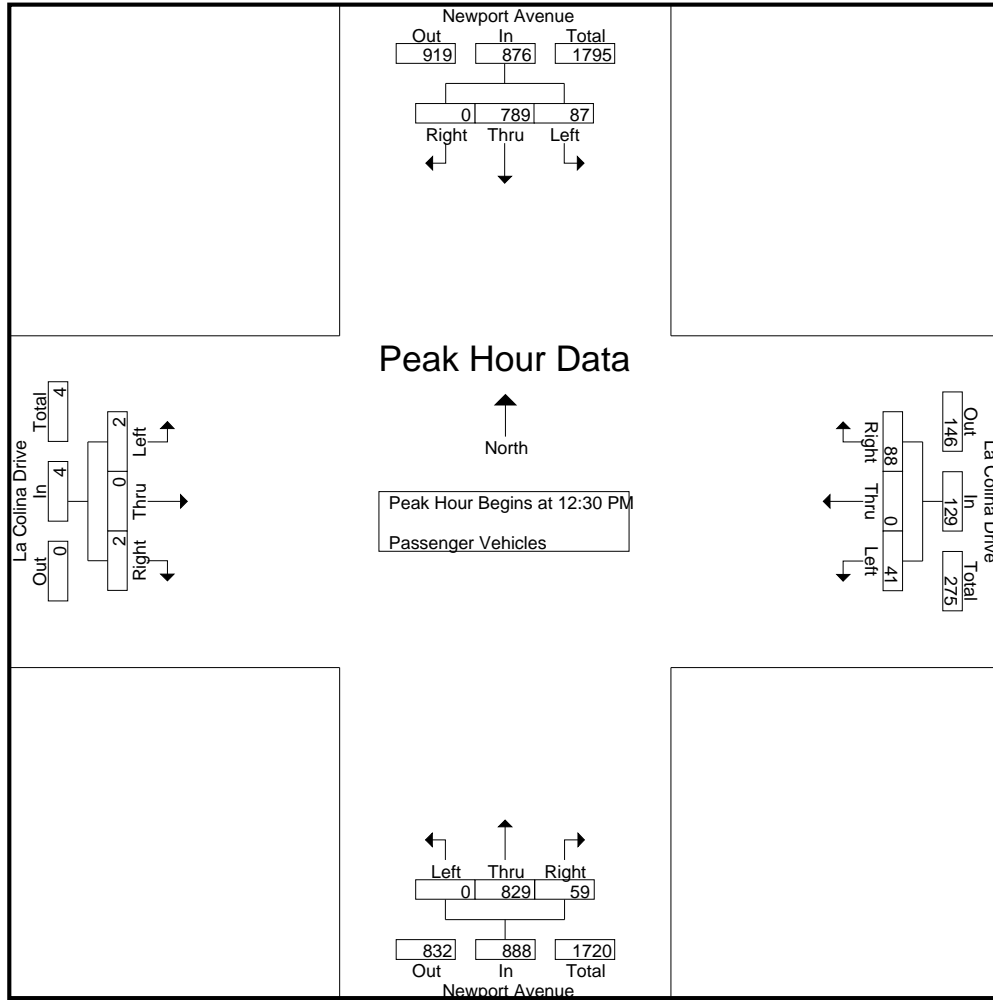
County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCMD
 Site Code : 21717852
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Groups Printed- Passenger Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	13	209	0	222	13	0	16	29	0	189	13	202	0	0	0	0	453
11:45 AM	16	202	0	218	9	0	20	29	0	188	13	201	0	0	0	0	448
Total	29	411	0	440	22	0	36	58	0	377	26	403	0	0	0	0	901
12:00 PM	11	201	0	212	8	0	18	26	0	184	16	200	1	0	0	1	439
12:15 PM	12	163	0	175	9	0	22	31	0	191	10	201	0	1	1	2	409
12:30 PM	15	202	0	217	9	0	21	30	0	169	10	179	0	0	1	1	427
12:45 PM	23	198	0	221	7	0	20	27	0	182	12	194	1	0	1	2	444
Total	61	764	0	825	33	0	81	114	0	726	48	774	2	1	3	6	1719
01:00 PM	25	172	0	197	11	0	22	33	0	256	13	269	1	0	0	1	500
01:15 PM	24	217	0	241	14	0	25	39	0	222	24	246	0	0	0	0	526
Grand Total	139	1564	0	1703	80	0	164	244	0	1581	111	1692	3	1	3	7	3646
Apprch %	8.2	91.8	0		32.8	0	67.2		0	93.4	6.6		42.9	14.3	42.9		
Total %	3.8	42.9	0	46.7	2.2	0	4.5	6.7	0	43.4	3	46.4	0.1	0	0.1	0.2	

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	15	202	0	217	9	0	21	30	0	169	10	179	0	0	1	1	427
12:45 PM	23	198	0	221	7	0	20	27	0	182	12	194	1	0	1	2	444
01:00 PM	25	172	0	197	11	0	22	33	0	256	13	269	1	0	0	1	500
01:15 PM	24	217	0	241	14	0	25	39	0	222	24	246	0	0	0	0	526
Total Volume	87	789	0	876	41	0	88	129	0	829	59	888	2	0	2	4	1897
% App. Total	9.9	90.1	0		31.8	0	68.2		0	93.4	6.6		50	0	50		
PHF	.870	.909	.000	.909	.732	.000	.880	.827	.000	.810	.615	.825	.500	.000	.500	.500	.902



Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	15	202	0	217	9	0	21	30	0	169	10	179	0	0	1	1
+15 mins.	23	198	0	221	7	0	20	27	0	182	12	194	1	0	1	2
+30 mins.	25	172	0	197	11	0	22	33	0	256	13	269	1	0	0	1
+45 mins.	24	217	0	241	14	0	25	39	0	222	24	246	0	0	0	0
Total Volume	87	789	0	876	41	0	88	129	0	829	59	888	2	0	2	4
% App. Total	9.9	90.1	0		31.8	0	68.2		0	93.4	6.6		50	0	50	
PHF	.870	.909	.000	.909	.732	.000	.880	.827	.000	.810	.615	.825	.500	.000	.500	.500

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

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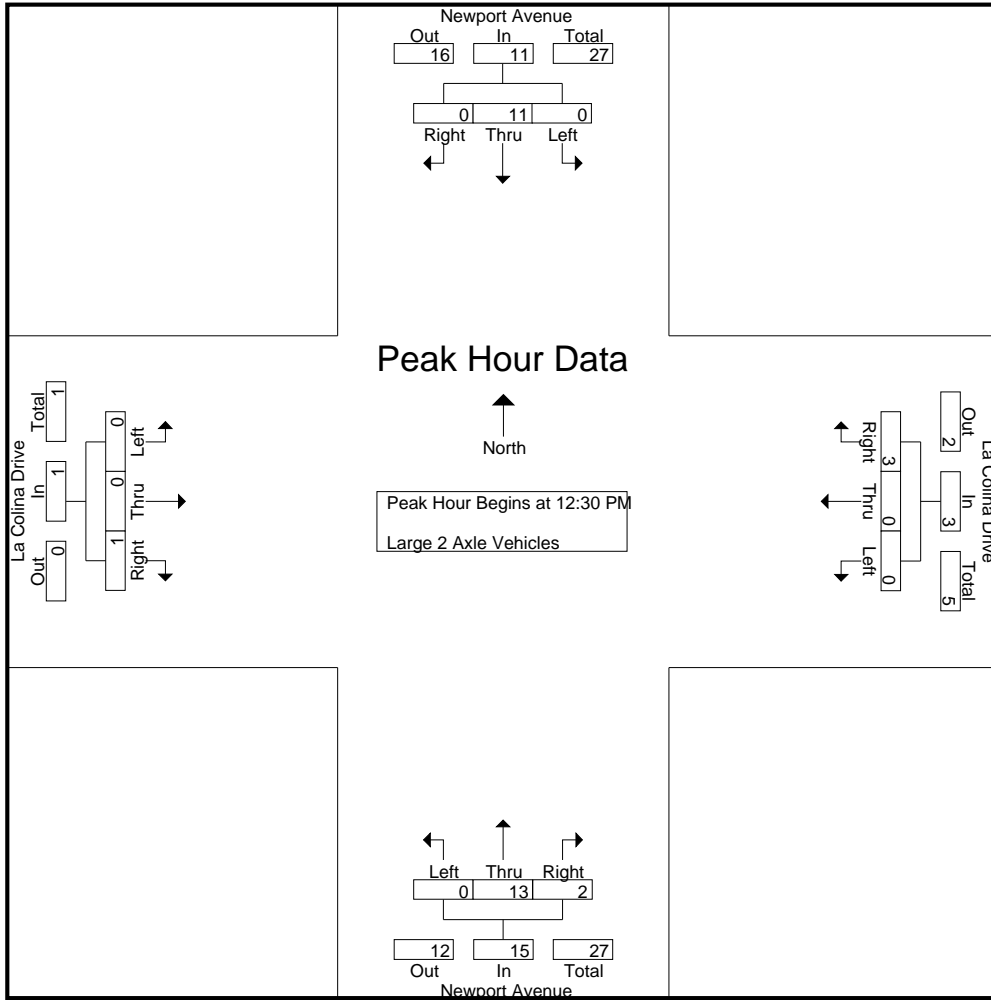
Groups Printed- Large 2 Axle Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
11:45 AM	0	5	0	5	0	0	0	0	0	2	1	3	0	0	0	0	8
Total	0	8	0	8	0	0	0	0	0	3	1	4	0	0	0	0	12
12:00 PM	0	4	0	4	0	0	1	1	0	6	0	6	0	0	0	0	11
12:15 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
12:30 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
12:45 PM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
Total	0	11	0	11	0	0	2	2	0	12	0	12	0	0	0	0	25
01:00 PM	0	5	0	5	0	0	0	0	0	5	1	6	0	0	0	0	11
01:15 PM	0	2	0	2	0	0	2	2	0	5	1	6	0	0	1	1	11
Grand Total	0	26	0	26	0	0	4	4	0	25	3	28	0	0	1	1	59
Apprch %	0	100	0		0	0	100		0	89.3	10.7		0	0	100		
Total %	0	44.1	0	44.1	0	0	6.8	6.8	0	42.4	5.1	47.5	0	0	1.7	1.7	

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
12:45 PM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
01:00 PM	0	5	0	5	0	0	0	0	0	5	1	6	0	0	0	0	11
01:15 PM	0	2	0	2	0	0	2	2	0	5	1	6	0	0	1	1	11
Total Volume	0	11	0	11	0	0	3	3	0	13	2	15	0	0	1	1	30
% App. Total	0	100	0		0	0	100		0	86.7	13.3		0	0	100		
PHF	.000	.550	.000	.550	.000	.000	.375	.375	.000	.650	.500	.625	.000	.000	.250	.250	.682

County of Orange
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 Weather: Clear

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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	5	1	6	0	0	0	0
+45 mins.	0	2	0	2	0	0	2	2	0	5	1	6	0	0	1	1
Total Volume	0	11	0	11	0	0	3	3	0	13	2	15	0	0	1	1
% App. Total	0	100	0		0	0	100		0	86.7	13.3		0	0	100	
PHF	.000	.550	.000	.550	.000	.000	.375	.375	.000	.650	.500	.625	.000	.000	.250	.250

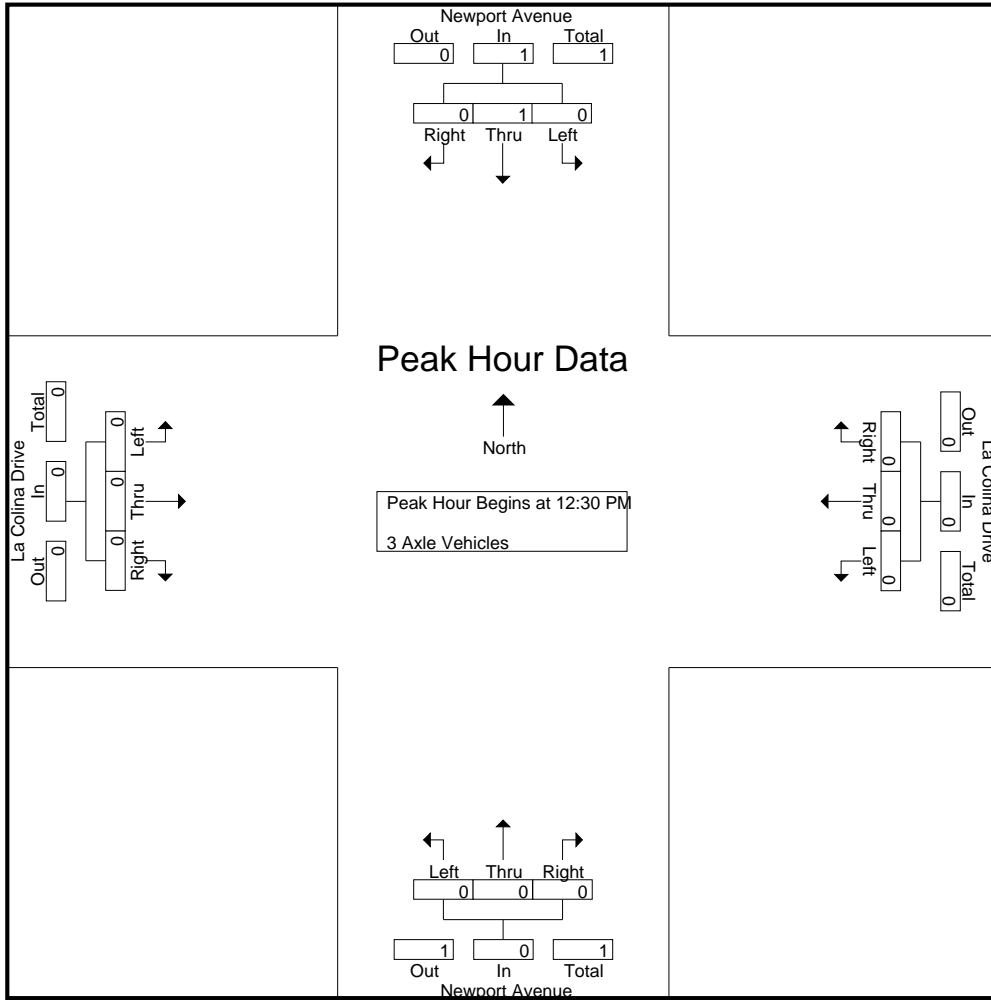
County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

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Groups Printed- 3 Axle Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0		0	0	0		0	0	0		

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250



Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM				12:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCMD
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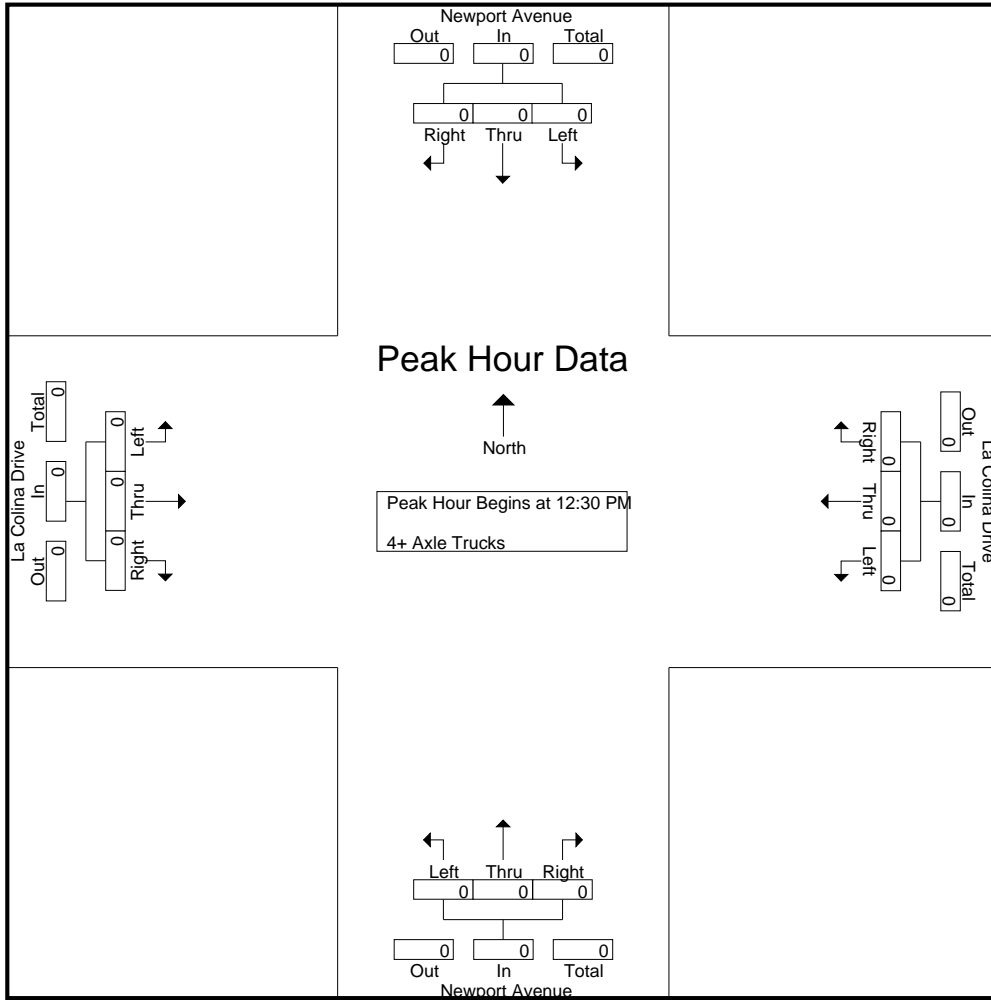
Groups Printed- 4+ Axle Trucks

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0		0	0	0		0	0	0		

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
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 Weather: Clear

File Name : 03_ORCNELCMD
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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM				12:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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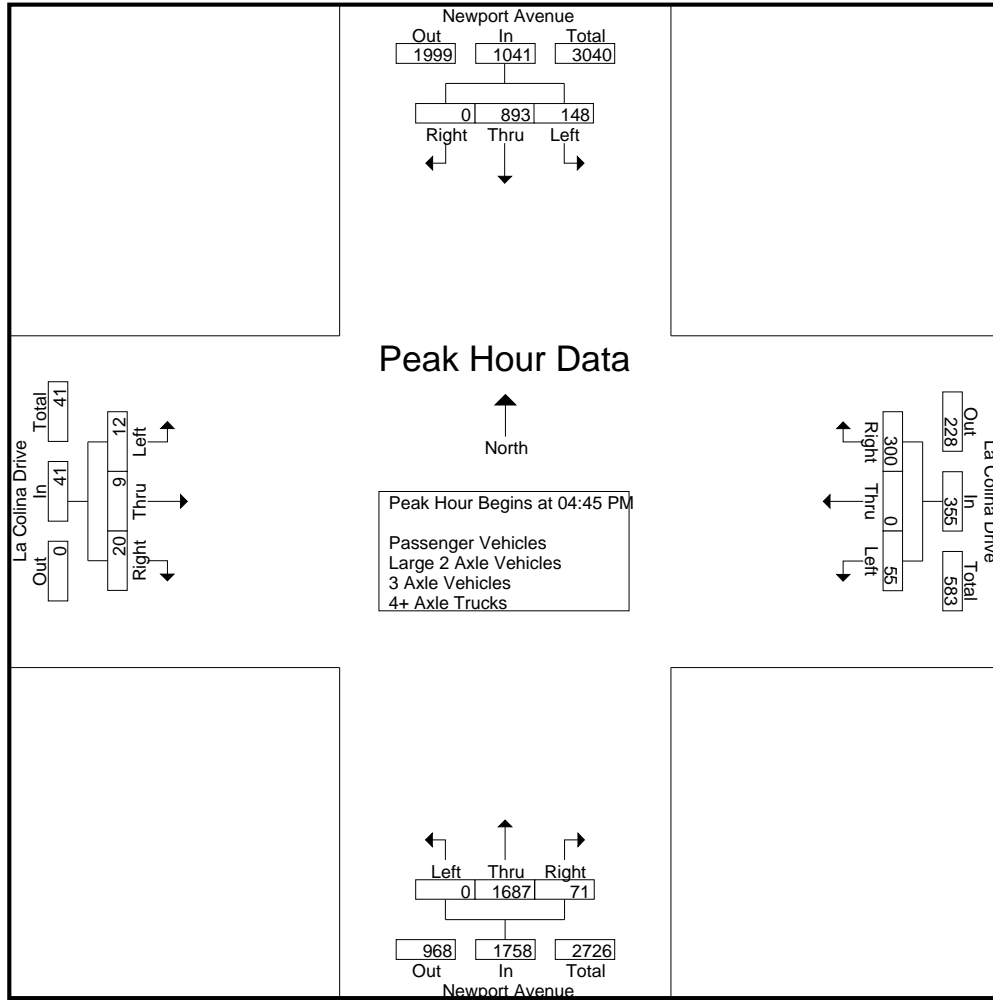
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	27	228	0	255	10	1	53	64	0	388	18	406	4	5	9	18	743
04:15 PM	43	215	0	258	19	0	69	88	0	365	17	382	6	3	6	15	743
04:30 PM	21	209	0	230	12	0	72	84	0	400	24	424	3	2	7	12	750
04:45 PM	35	195	0	230	18	0	84	102	0	404	20	424	5	3	10	18	774
Total	126	847	0	973	59	1	278	338	0	1557	79	1636	18	13	32	63	3010
05:00 PM	32	226	0	258	11	0	63	74	0	443	22	465	4	3	7	14	811
05:15 PM	47	224	0	271	19	0	90	109	0	411	17	428	1	2	3	6	814
05:30 PM	34	248	0	282	7	0	63	70	0	429	12	441	2	1	0	3	796
05:45 PM	45	233	0	278	14	0	68	82	0	386	19	405	1	0	1	2	767
Total	158	931	0	1089	51	0	284	335	0	1669	70	1739	8	6	11	25	3188
Grand Total	284	1778	0	2062	110	1	562	673	0	3226	149	3375	26	19	43	88	6198
Apprch %	13.8	86.2	0		16.3	0.1	83.5		0	95.6	4.4		29.5	21.6	48.9		
Total %	4.6	28.7	0	33.3	1.8	0	9.1	10.9	0	52	2.4	54.5	0.4	0.3	0.7	1.4	
Passenger Vehicles	279	1752	0	2031	109	1	558	668	0	3193	147	3340	25	19	43	87	6126
% Passenger Vehicles	98.2	98.5	0	98.5	99.1	100	99.3	99.3	0	99	98.7	99	96.2	100	100	98.9	98.8
Large 2 Axle Vehicles	4	24	0	28	1	0	4	5	0	28	2	30	1	0	0	1	64
% Large 2 Axle Vehicles	1.4	1.3	0	1.4	0.9	0	0.7	0.7	0	0.9	1.3	0.9	3.8	0	0	1.1	1
3 Axle Vehicles	1	0	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
% 3 Axle Vehicles	0.4	0	0	0	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0.1
4+ Axle Trucks	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% 4+ Axle Trucks	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	35	195	0	230	18	0	84	102	0	404	20	424	5	3	10	18	774
05:00 PM	32	226	0	258	11	0	63	74	0	443	22	465	4	3	7	14	811
05:15 PM	47	224	0	271	19	0	90	109	0	411	17	428	1	2	3	6	814
05:30 PM	34	248	0	282	7	0	63	70	0	429	12	441	2	1	0	3	796
Total Volume	148	893	0	1041	55	0	300	355	0	1687	71	1758	12	9	20	41	3195
% App. Total	14.2	85.8	0		15.5	0	84.5		0	96	4		29.3	22	48.8		
PHF	.787	.900	.000	.923	.724	.000	.833	.814	.000	.952	.807	.945	.600	.750	.500	.569	.981

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	32	226	0	258	12	0	72	84	0	404	20	424	4	5	9	18
+15 mins.	47	224	0	271	18	0	84	102	0	443	22	465	6	3	6	15
+30 mins.	34	248	0	282	11	0	63	74	0	411	17	428	3	2	7	12
+45 mins.	45	233	0	278	19	0	90	109	0	429	12	441	5	3	10	18
Total Volume	158	931	0	1089	60	0	309	369	0	1687	71	1758	18	13	32	63
% App. Total	14.5	85.5	0		16.3	0	83.7		0	96	4		28.6	20.6	50.8	
PHF	.840	.939	.000	.965	.789	.000	.858	.846	.000	.952	.807	.945	.750	.650	.800	.875

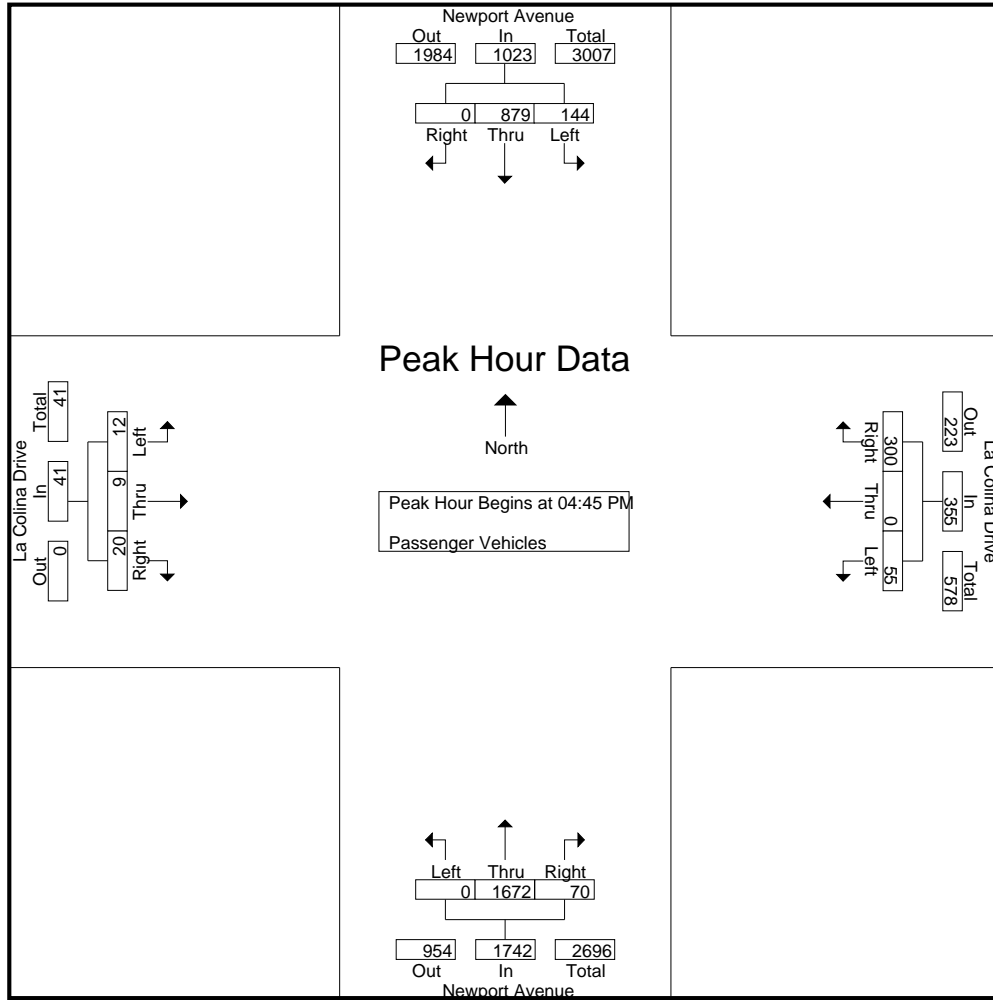
County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCPM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	27	228	0	255	9	1	52	62	0	381	17	398	3	5	9	17	732
04:15 PM	43	212	0	255	19	0	68	87	0	360	17	377	6	3	6	15	734
04:30 PM	20	204	0	224	12	0	70	82	0	395	24	419	3	2	7	12	737
04:45 PM	35	191	0	226	18	0	84	102	0	400	19	419	5	3	10	18	765
Total	125	835	0	960	58	1	274	333	0	1536	77	1613	17	13	32	62	2968
05:00 PM	29	223	0	252	11	0	63	74	0	441	22	463	4	3	7	14	803
05:15 PM	46	222	0	268	19	0	90	109	0	405	17	422	1	2	3	6	805
05:30 PM	34	243	0	277	7	0	63	70	0	426	12	438	2	1	0	3	788
05:45 PM	45	229	0	274	14	0	68	82	0	385	19	404	1	0	1	2	762
Total	154	917	0	1071	51	0	284	335	0	1657	70	1727	8	6	11	25	3158
Grand Total	279	1752	0	2031	109	1	558	668	0	3193	147	3340	25	19	43	87	6126
Apprch %	13.7	86.3	0		16.3	0.1	83.5		0	95.6	4.4		28.7	21.8	49.4		
Total %	4.6	28.6	0	33.2	1.8	0	9.1	10.9	0	52.1	2.4	54.5	0.4	0.3	0.7	1.4	

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	35	191	0	226	18	0	84	102	0	400	19	419	5	3	10	18	765
05:00 PM	29	223	0	252	11	0	63	74	0	441	22	463	4	3	7	14	803
05:15 PM	46	222	0	268	19	0	90	109	0	405	17	422	1	2	3	6	805
05:30 PM	34	243	0	277	7	0	63	70	0	426	12	438	2	1	0	3	788
Total Volume	144	879	0	1023	55	0	300	355	0	1672	70	1742	12	9	20	41	3161
% App. Total	14.1	85.9	0		15.5	0	84.5		0	96	4		29.3	22	48.8		
PHF	.783	.904	.000	.923	.724	.000	.833	.814	.000	.948	.795	.941	.600	.750	.500	.569	.982



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	35	191	0	226	18	0	84	102	0	400	19	419	5	3	10	18
+15 mins.	29	223	0	252	11	0	63	74	0	441	22	463	4	3	7	14
+30 mins.	46	222	0	268	19	0	90	109	0	405	17	422	1	2	3	6
+45 mins.	34	243	0	277	7	0	63	70	0	426	12	438	2	1	0	3
Total Volume	144	879	0	1023	55	0	300	355	0	1672	70	1742	12	9	20	41
% App. Total	14.1	85.9	0		15.5	0	84.5		0	96	4		29.3	22	48.8	
PHF	.783	.904	.000	.923	.724	.000	.833	.814	.000	.948	.795	.941	.600	.750	.500	.569

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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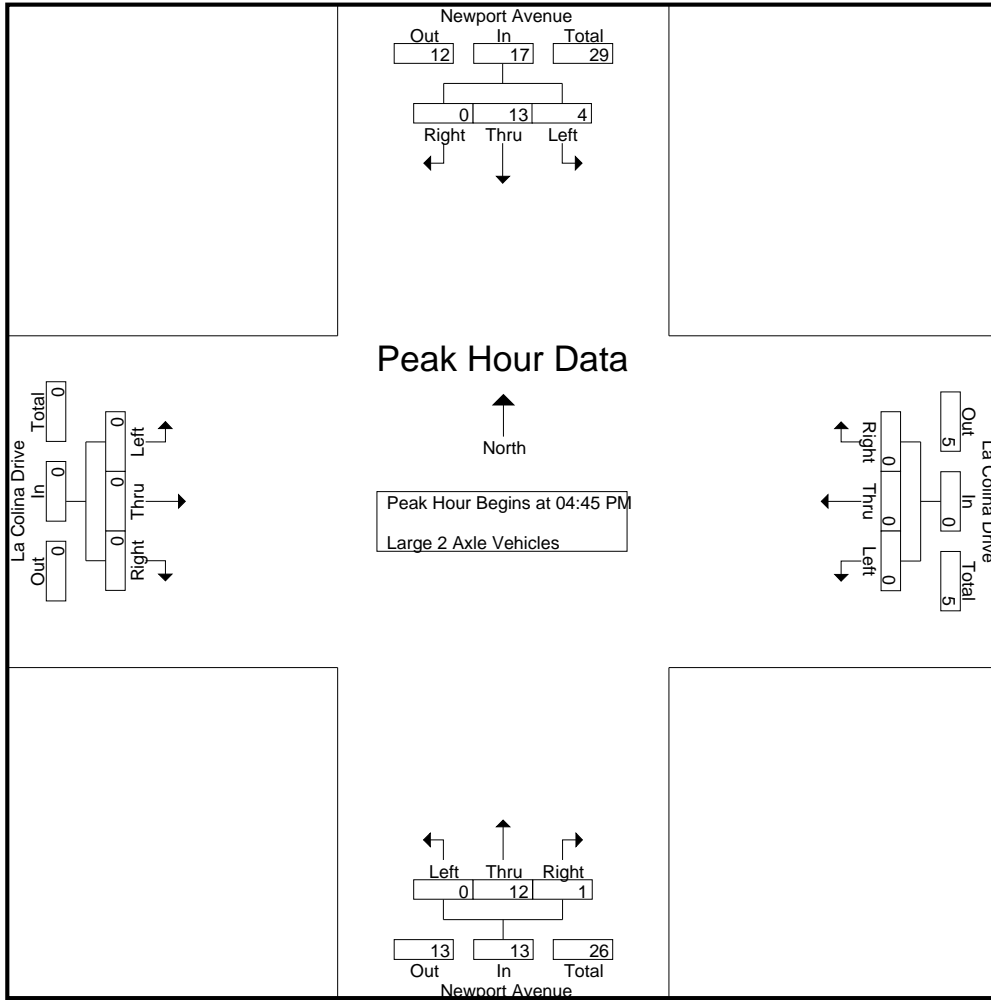
Groups Printed- Large 2 Axle Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	1	0	1	2	0	7	1	8	1	0	0	1	11
04:15 PM	0	2	0	2	0	0	1	1	0	4	0	4	0	0	0	0	7
04:30 PM	0	5	0	5	0	0	2	2	0	4	0	4	0	0	0	0	11
04:45 PM	0	4	0	4	0	0	0	0	0	2	1	3	0	0	0	0	7
Total	0	11	0	11	1	0	4	5	0	17	2	19	1	0	0	1	36
05:00 PM	3	3	0	6	0	0	0	0	0	2	0	2	0	0	0	0	8
05:15 PM	1	2	0	3	0	0	0	0	0	5	0	5	0	0	0	0	8
05:30 PM	0	4	0	4	0	0	0	0	0	3	0	3	0	0	0	0	7
05:45 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total	4	13	0	17	0	0	0	0	0	11	0	11	0	0	0	0	28
Grand Total	4	24	0	28	1	0	4	5	0	28	2	30	1	0	0	1	64
Apprch %	14.3	85.7	0		20	0	80		0	93.3	6.7		100	0	0		
Total %	6.2	37.5	0	43.8	1.6	0	6.2	7.8	0	43.8	3.1	46.9	1.6	0	0	1.6	

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	4	0	4	0	0	0	0	0	2	1	3	0	0	0	0	7
05:00 PM	3	3	0	6	0	0	0	0	0	2	0	2	0	0	0	0	8
05:15 PM	1	2	0	3	0	0	0	0	0	5	0	5	0	0	0	0	8
05:30 PM	0	4	0	4	0	0	0	0	0	3	0	3	0	0	0	0	7
Total Volume	4	13	0	17	0	0	0	0	0	12	1	13	0	0	0	0	30
% App. Total	23.5	76.5	0		0	0	0		0	92.3	7.7		0	0	0		
PHF	.333	.813	.000	.708	.000	.000	.000	.000	.000	.600	.250	.650	.000	.000	.000	.000	.938

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM							
+0 mins.	0	4	0	4	0	0	0	0	0	2	1	3	0	0	0	0
+15 mins.	3	3	0	6	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	1	2	0	3	0	0	0	0	0	5	0	5	0	0	0	0
+45 mins.	0	4	0	4	0	0	0	0	0	3	0	3	0	0	0	0
Total Volume	4	13	0	17	0	0	0	0	0	12	1	13	0	0	0	0
% App. Total	23.5	76.5	0		0	0	0	0	0	92.3	7.7		0	0	0	0
PHF	.333	.813	.000	.708	.000	.000	.000	.000	.000	.600	.250	.650	.000	.000	.000	.000

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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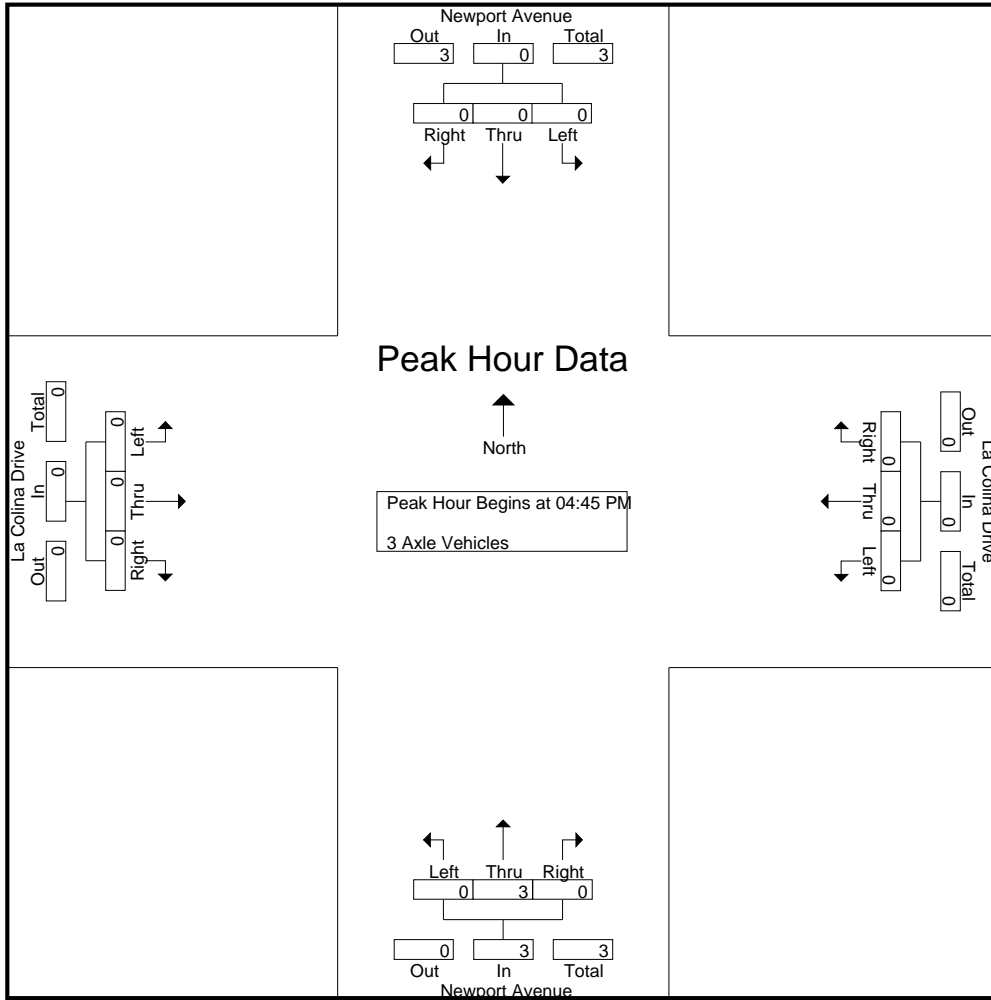
Groups Printed- 3 Axle Vehicles

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
04:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	1	0	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
Apprch %	100	0	0		0	0	0		0	100	0		0	0	0		
Total %	16.7	0	0	16.7	0	0	0	0	0	83.3	0	83.3	0	0	0	0	

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.375

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM							
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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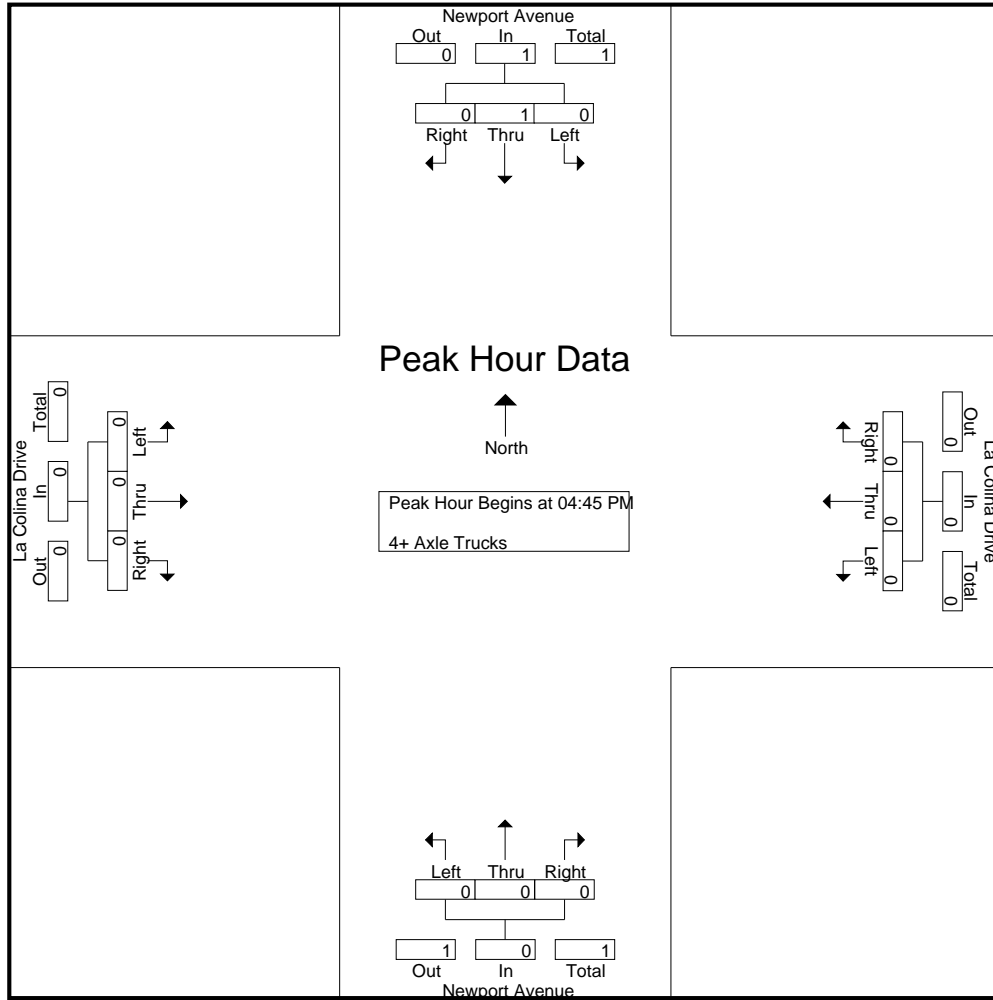
Groups Printed- 4+ Axle Trucks

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0		0	0	0		0	0	0		

Start Time	Newport Avenue Southbound				La Colina Drive Westbound				Newport Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

County of Orange
 N/S: Newport Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 03_ORCNELCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

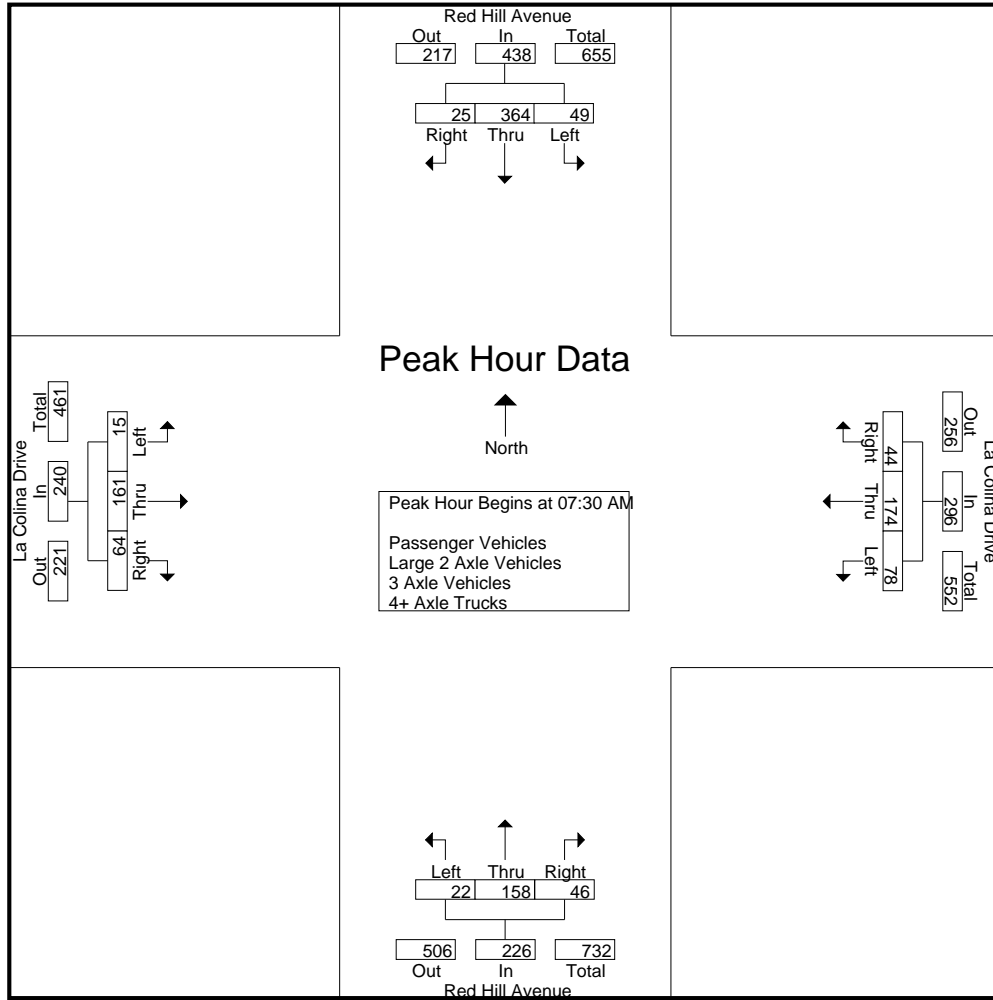
County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	16	43	0	59	8	7	4	19	3	16	6	25	0	19	9	28	131
07:15 AM	17	66	0	83	6	14	12	32	1	25	7	33	4	23	14	41	189
07:30 AM	15	77	0	92	7	29	12	48	4	48	7	59	6	25	18	49	248
07:45 AM	12	87	7	106	18	45	15	78	6	62	11	79	7	49	9	65	328
Total	60	273	7	340	39	95	43	177	14	151	31	196	17	116	50	183	896
08:00 AM	10	105	14	129	23	55	2	80	9	21	14	44	0	62	20	82	335
08:15 AM	12	95	4	111	30	45	15	90	3	27	14	44	2	25	17	44	289
08:30 AM	12	66	0	78	8	25	9	42	8	26	8	42	3	35	20	58	220
08:45 AM	16	76	2	94	18	22	12	52	9	30	6	45	1	31	16	48	239
Total	50	342	20	412	79	147	38	264	29	104	42	175	6	153	73	232	1083
Grand Total	110	615	27	752	118	242	81	441	43	255	73	371	23	269	123	415	1979
Apprch %	14.6	81.8	3.6		26.8	54.9	18.4		11.6	68.7	19.7		5.5	64.8	29.6		
Total %	5.6	31.1	1.4	38	6	12.2	4.1	22.3	2.2	12.9	3.7	18.7	1.2	13.6	6.2	21	
Passenger Vehicles	108	611	27	746	118	241	81	440	43	251	73	367	23	266	122	411	1964
% Passenger Vehicles	98.2	99.3	100	99.2	100	99.6	100	99.8	100	98.4	100	98.9	100	98.9	99.2	99	99.2
Large 2 Axle Vehicles	2	4	0	6	0	1	0	1	0	4	0	4	0	1	1	2	13
% Large 2 Axle Vehicles	1.8	0.7	0	0.8	0	0.4	0	0.2	0	1.6	0	1.1	0	0.4	0.8	0.5	0.7
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0	0.5	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	77	0	92	7	29	12	48	4	48	7	59	6	25	18	49	248
07:45 AM	12	87	7	106	18	45	15	78	6	62	11	79	7	49	9	65	328
08:00 AM	10	105	14	129	23	55	2	80	9	21	14	44	0	62	20	82	335
08:15 AM	12	95	4	111	30	45	15	90	3	27	14	44	2	25	17	44	289
Total Volume	49	364	25	438	78	174	44	296	22	158	46	226	15	161	64	240	1200
% App. Total	11.2	83.1	5.7		26.4	58.8	14.9		9.7	69.9	20.4		6.2	67.1	26.7		
PHF	.817	.867	.446	.849	.650	.791	.733	.822	.611	.637	.821	.715	.536	.649	.800	.732	.896



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:45 AM			
+0 mins.	15	77	0	92	7	29	12	48	4	48	7	59	7	49	9	65
+15 mins.	12	87	7	106	18	45	15	78	6	62	11	79	0	62	20	82
+30 mins.	10	105	14	129	23	55	2	80	9	21	14	44	2	25	17	44
+45 mins.	12	95	4	111	30	45	15	90	3	27	14	44	3	35	20	58
Total Volume	49	364	25	438	78	174	44	296	22	158	46	226	12	171	66	249
% App. Total	11.2	83.1	5.7		26.4	58.8	14.9		9.7	69.9	20.4		4.8	68.7	26.5	
PHF	.817	.867	.446	.849	.650	.791	.733	.822	.611	.637	.821	.715	.429	.690	.825	.759

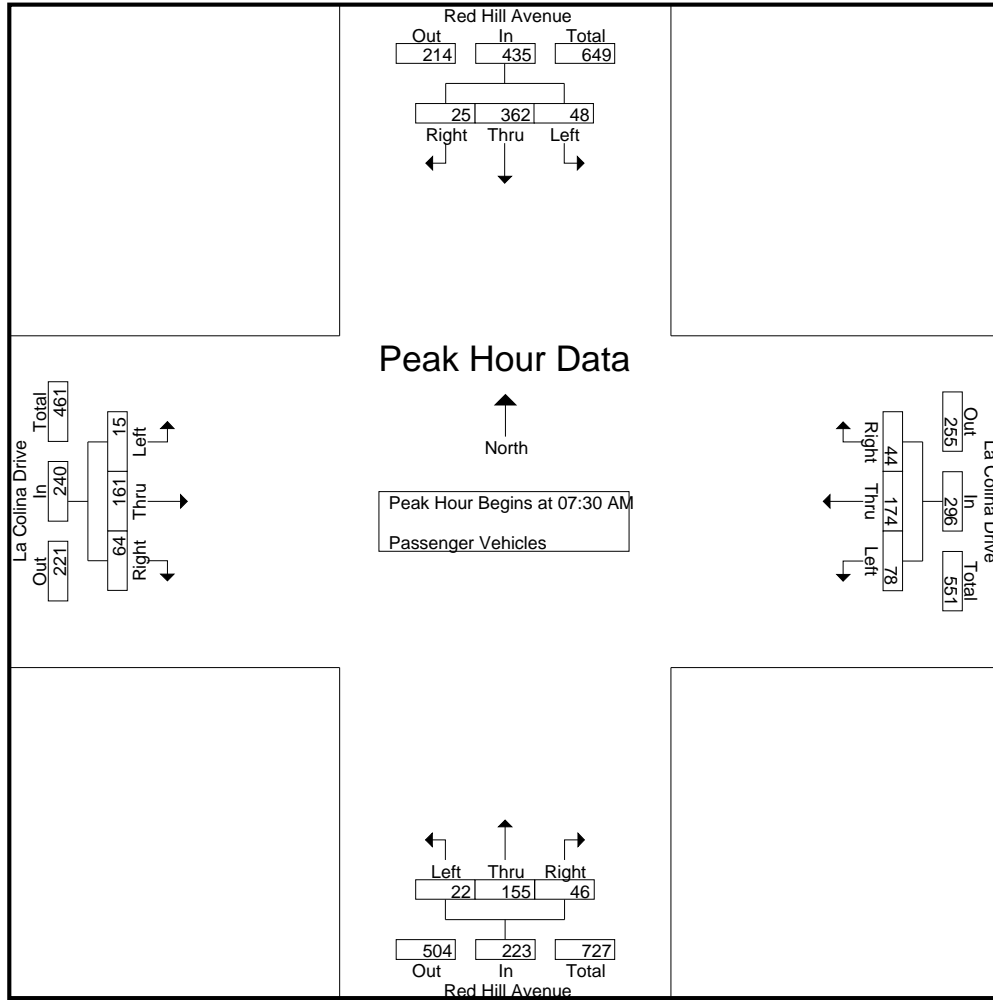
County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	16	43	0	59	8	6	4	18	3	15	6	24	0	19	9	28	129
07:15 AM	17	65	0	82	6	14	12	32	1	25	7	33	4	23	13	40	187
07:30 AM	15	77	0	92	7	29	12	48	4	48	7	59	6	25	18	49	248
07:45 AM	12	87	7	106	18	45	15	78	6	60	11	77	7	49	9	65	326
Total	60	272	7	339	39	94	43	176	14	148	31	193	17	116	49	182	890
08:00 AM	9	104	14	127	23	55	2	80	9	20	14	43	0	62	20	82	332
08:15 AM	12	94	4	110	30	45	15	90	3	27	14	44	2	25	17	44	288
08:30 AM	11	66	0	77	8	25	9	42	8	26	8	42	3	35	20	58	219
08:45 AM	16	75	2	93	18	22	12	52	9	30	6	45	1	28	16	45	235
Total	48	339	20	407	79	147	38	264	29	103	42	174	6	150	73	229	1074
Grand Total	108	611	27	746	118	241	81	440	43	251	73	367	23	266	122	411	1964
Apprch %	14.5	81.9	3.6		26.8	54.8	18.4		11.7	68.4	19.9		5.6	64.7	29.7		
Total %	5.5	31.1	1.4	38	6	12.3	4.1	22.4	2.2	12.8	3.7	18.7	1.2	13.5	6.2	20.9	

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	77	0	92	7	29	12	48	4	48	7	59	6	25	18	49	248
07:45 AM	12	87	7	106	18	45	15	78	6	60	11	77	7	49	9	65	326
08:00 AM	9	104	14	127	23	55	2	80	9	20	14	43	0	62	20	82	332
08:15 AM	12	94	4	110	30	45	15	90	3	27	14	44	2	25	17	44	288
Total Volume	48	362	25	435	78	174	44	296	22	155	46	223	15	161	64	240	1194
% App. Total	11	83.2	5.7		26.4	58.8	14.9		9.9	69.5	20.6		6.2	67.1	26.7		
PHF	.800	.870	.446	.856	.650	.791	.733	.822	.611	.646	.821	.724	.536	.649	.800	.732	.899



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	15	77	0	92	7	29	12	48	4	48	7	59	6	25	18	49
+15 mins.	12	87	7	106	18	45	15	78	6	60	11	77	7	49	9	65
+30 mins.	9	104	14	127	23	55	2	80	9	20	14	43	0	62	20	82
+45 mins.	12	94	4	110	30	45	15	90	3	27	14	44	2	25	17	44
Total Volume	48	362	25	435	78	174	44	296	22	155	46	223	15	161	64	240
% App. Total	11	83.2	5.7		26.4	58.8	14.9		9.9	69.5	20.6		6.2	67.1	26.7	
PHF	.800	.870	.446	.856	.650	.791	.733	.822	.611	.646	.821	.724	.536	.649	.800	.732

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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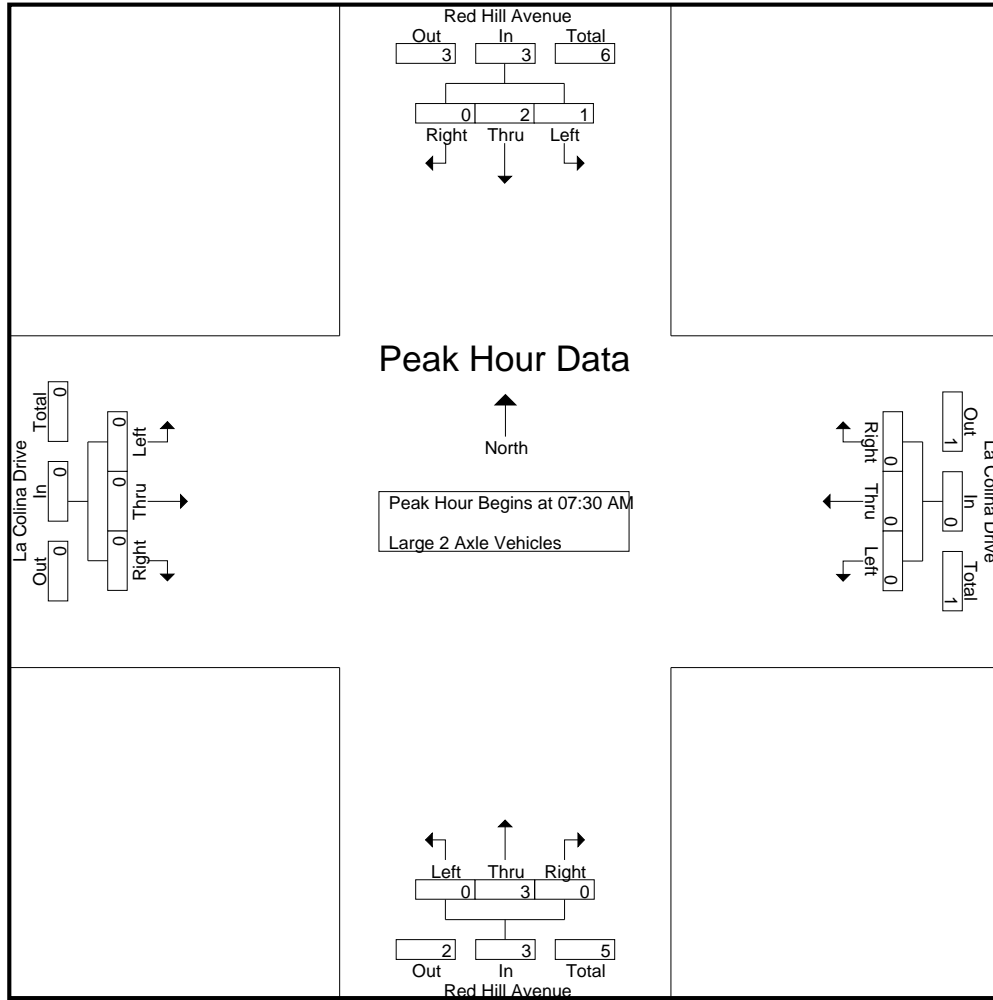
Groups Printed- Large 2 Axle Vehicles

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	1	0	1	0	1	0	1	0	3	0	3	0	0	1	1	6
08:00 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	2	3	0	5	0	0	0	0	0	1	0	1	0	1	0	1	7
Grand Total	2	4	0	6	0	1	0	1	0	4	0	4	0	1	1	2	13
Apprch %	33.3	66.7	0		0	100	0		0	100	0		0	50	50		
Total %	15.4	30.8	0	46.2	0	7.7	0	7.7	0	30.8	0	30.8	0	7.7	7.7	15.4	

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:00 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	2	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
% App. Total	33.3	66.7	0		0	0	0		0	100	0		0	0	0		
PHF	.250	.500	.000	.375	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.500

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	3	0	3	0	0	0	0
% App. Total	33.3	66.7	0		0	0	0	0	0	100	0		0	0	0	0
PHF	.250	.500	.000	.375	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Groups Printed- 3 Axle Vehicles

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Apprch %	0	0	0		0	0	0		0	0	0		0	100	0		
Total %	0	0	0		0	0	0		0	0	0		0	100	0	100	

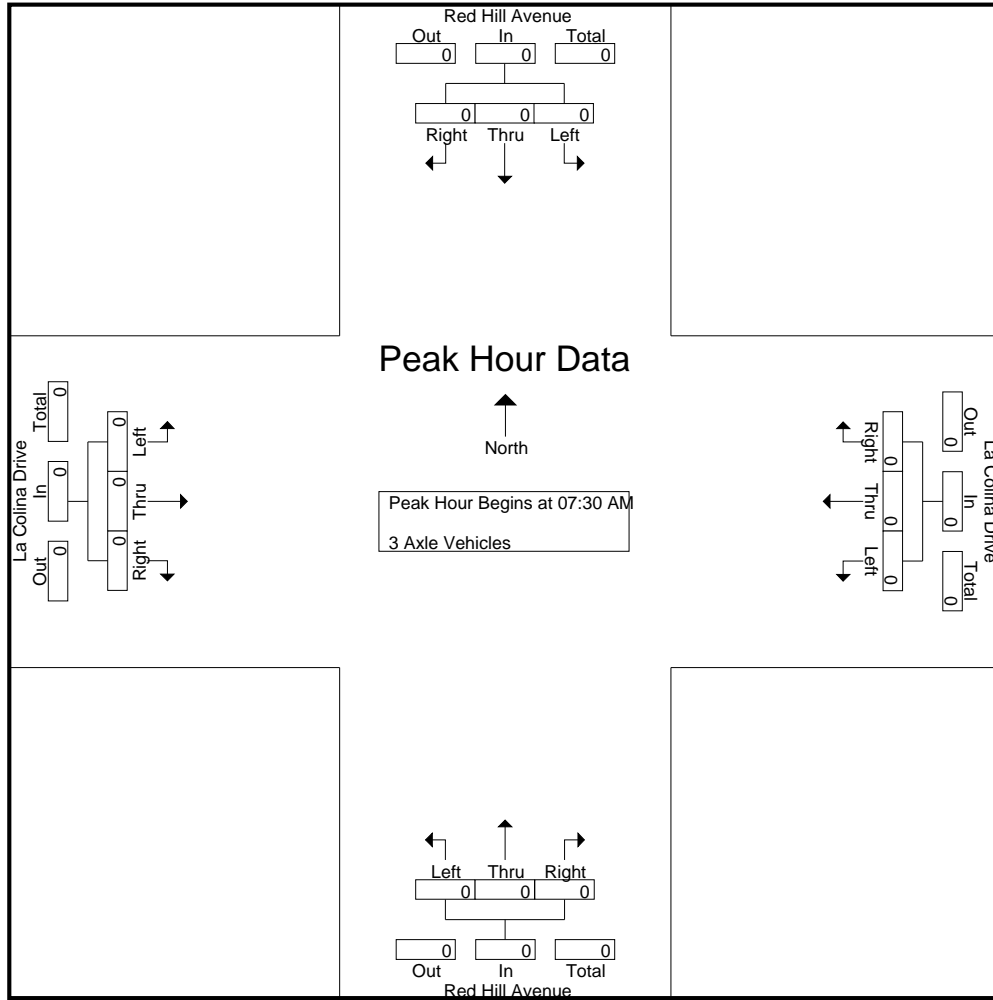
Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

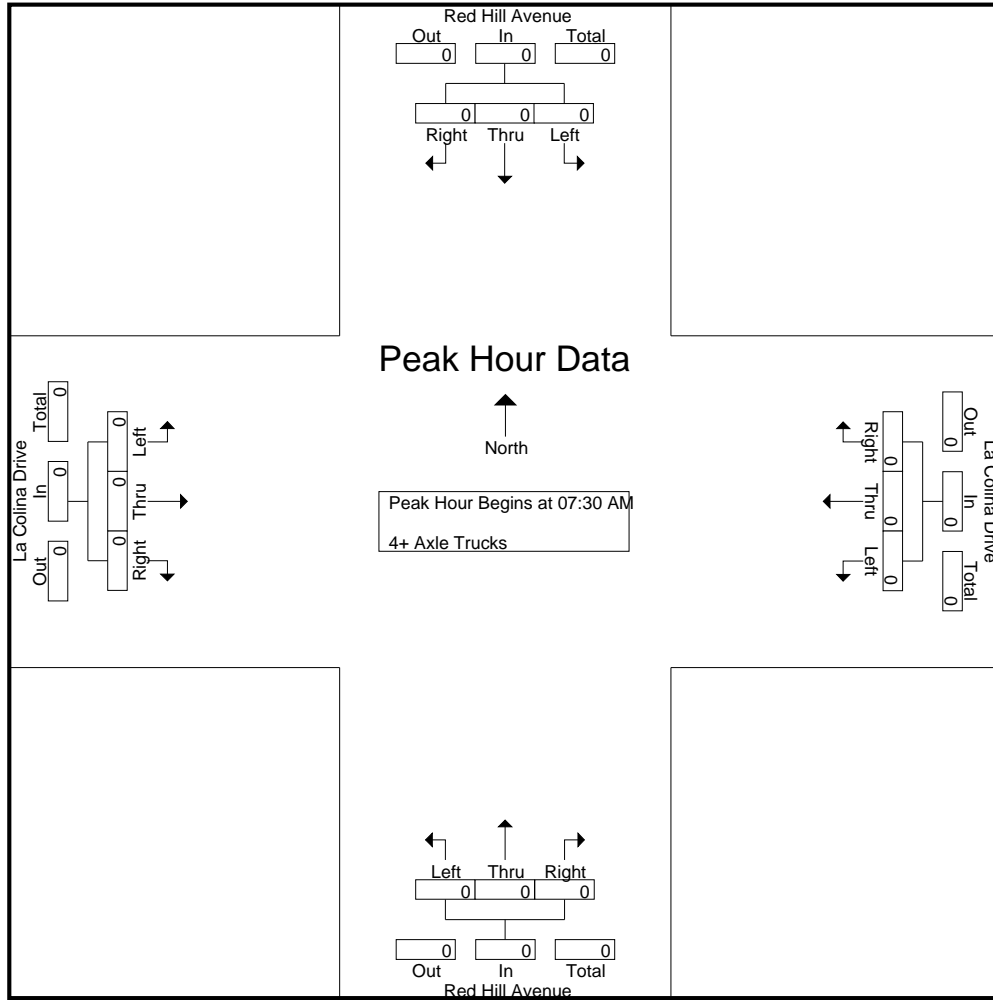
Groups Printed- 4+ Axle Trucks

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

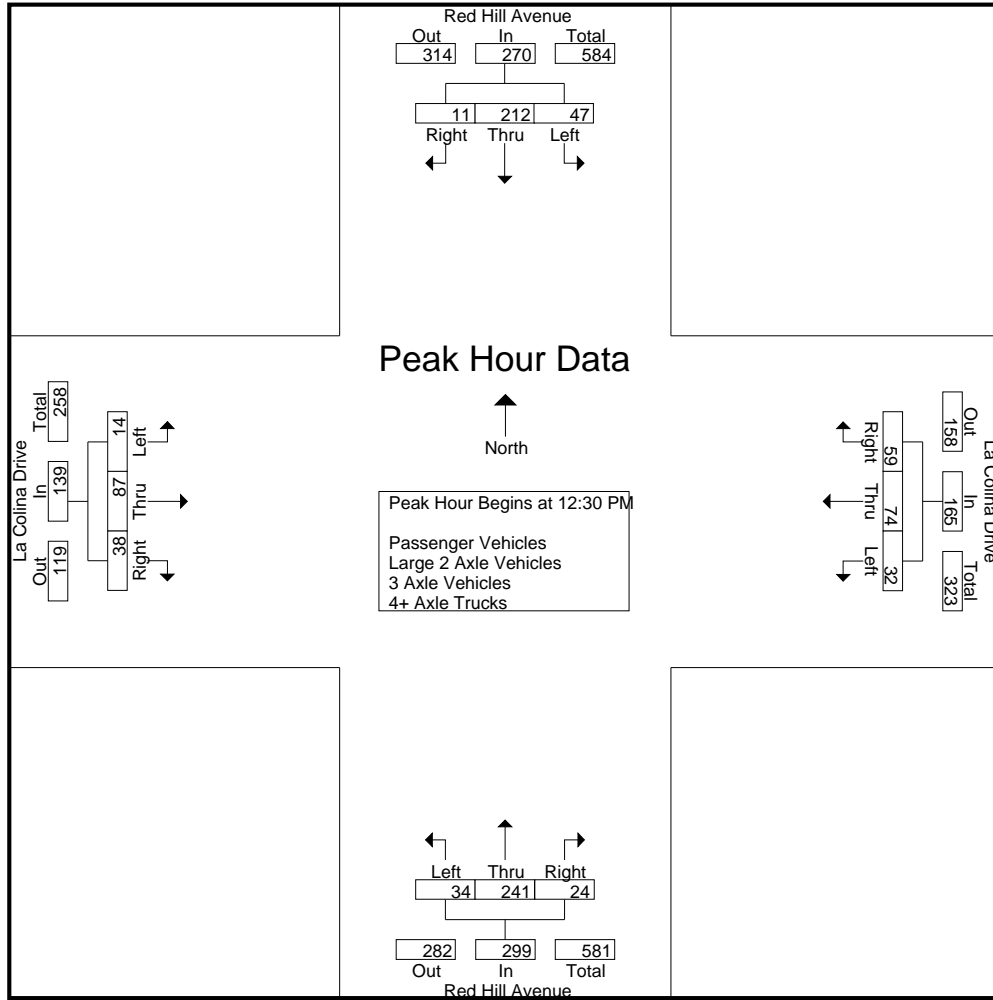
County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	6	80	2	88	6	12	4	22	10	36	4	50	1	12	10	23	183
11:45 AM	8	38	0	46	5	17	7	29	5	42	3	50	5	9	5	19	144
Total	14	118	2	134	11	29	11	51	15	78	7	100	6	21	15	42	327
12:00 PM	15	47	2	64	4	13	6	23	7	40	9	56	2	11	6	19	162
12:15 PM	3	45	1	49	5	14	11	30	7	39	5	51	1	10	7	18	148
12:30 PM	11	50	2	63	3	14	6	23	9	40	5	54	1	12	8	21	161
12:45 PM	11	26	3	40	7	16	9	32	9	63	7	79	2	21	7	30	181
Total	40	168	8	216	19	57	32	108	32	182	26	240	6	54	28	88	652
01:00 PM	13	38	1	52	6	15	21	42	9	78	7	94	9	25	10	44	232
01:15 PM	12	98	5	115	16	29	23	68	7	60	5	72	2	29	13	44	299
Grand Total	79	422	16	517	52	130	87	269	63	398	45	506	23	129	66	218	1510
Apprch %	15.3	81.6	3.1		19.3	48.3	32.3		12.5	78.7	8.9		10.6	59.2	30.3		
Total %	5.2	27.9	1.1	34.2	3.4	8.6	5.8	17.8	4.2	26.4	3	33.5	1.5	8.5	4.4	14.4	
Passenger Vehicles	77	411	15	503	52	128	83	263	60	390	44	494	23	128	64	215	1475
% Passenger Vehicles	97.5	97.4	93.8	97.3	100	98.5	95.4	97.8	95.2	98	97.8	97.6	100	99.2	97	98.6	97.7
Large 2 Axle Vehicles	1	5	1	7	0	2	0	2	3	7	1	11	0	1	2	3	23
% Large 2 Axle Vehicles	1.3	1.2	6.2	1.4	0	1.5	0	0.7	4.8	1.8	2.2	2.2	0	0.8	3	1.4	1.5
3 Axle Vehicles	1	5	0	6	0	0	4	4	0	1	0	1	0	0	0	0	11
% 3 Axle Vehicles	1.3	1.2	0	1.2	0	0	4.6	1.5	0	0.3	0	0.2	0	0	0	0	0.7
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	11	50	2	63	3	14	6	23	9	40	5	54	1	12	8	21	161
12:45 PM	11	26	3	40	7	16	9	32	9	63	7	79	2	21	7	30	181
01:00 PM	13	38	1	52	6	15	21	42	9	78	7	94	9	25	10	44	232
01:15 PM	12	98	5	115	16	29	23	68	7	60	5	72	2	29	13	44	299
Total Volume	47	212	11	270	32	74	59	165	34	241	24	299	14	87	38	139	873
% App. Total	17.4	78.5	4.1		19.4	44.8	35.8		11.4	80.6	8		10.1	62.6	27.3		
PHF	.904	.541	.550	.587	.500	.638	.641	.607	.944	.772	.857	.795	.389	.750	.731	.790	.730



Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	11	50	2	63	3	14	6	23	9	40	5	54	1	12	8	21
+15 mins.	11	26	3	40	7	16	9	32	9	63	7	79	2	21	7	30
+30 mins.	13	38	1	52	6	15	21	42	9	78	7	94	9	25	10	44
+45 mins.	12	98	5	115	16	29	23	68	7	60	5	72	2	29	13	44
Total Volume	47	212	11	270	32	74	59	165	34	241	24	299	14	87	38	139
% App. Total	17.4	78.5	4.1		19.4	44.8	35.8		11.4	80.6	8		10.1	62.6	27.3	
PHF	.904	.541	.550	.587	.500	.638	.641	.607	.944	.772	.857	.795	.389	.750	.731	.790

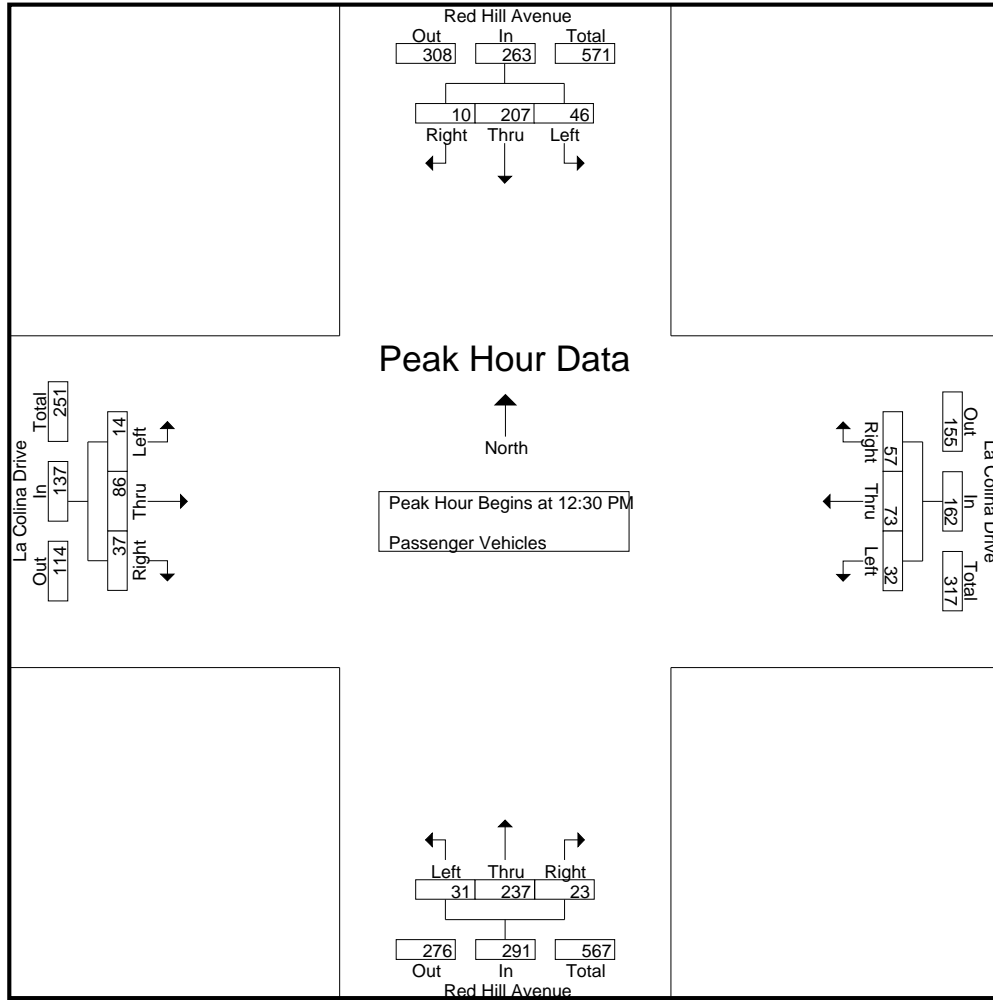
County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
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Groups Printed- Passenger Vehicles

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	5	78	2	85	6	12	4	22	10	35	4	49	1	12	10	23	179
11:45 AM	8	37	0	45	5	17	6	28	5	40	3	48	5	9	4	18	139
Total	13	115	2	130	11	29	10	50	15	75	7	97	6	21	14	41	318
12:00 PM	15	46	2	63	4	12	6	22	7	40	9	56	2	11	6	19	160
12:15 PM	3	43	1	47	5	14	10	29	7	38	5	50	1	10	7	18	144
12:30 PM	11	49	2	62	3	14	5	22	9	38	5	52	1	12	8	21	157
12:45 PM	11	26	3	40	7	15	9	31	8	61	7	76	2	21	7	30	177
Total	40	164	8	212	19	55	30	104	31	177	26	234	6	54	28	88	638
01:00 PM	13	37	1	51	6	15	21	42	9	78	6	93	9	25	9	43	229
01:15 PM	11	95	4	110	16	29	22	67	5	60	5	70	2	28	13	43	290
Grand Total	77	411	15	503	52	128	83	263	60	390	44	494	23	128	64	215	1475
Apprch %	15.3	81.7	3		19.8	48.7	31.6		12.1	78.9	8.9		10.7	59.5	29.8		
Total %	5.2	27.9	1	34.1	3.5	8.7	5.6	17.8	4.1	26.4	3	33.5	1.6	8.7	4.3	14.6	

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	11	49	2	62	3	14	5	22	9	38	5	52	1	12	8	21	157
12:45 PM	11	26	3	40	7	15	9	31	8	61	7	76	2	21	7	30	177
01:00 PM	13	37	1	51	6	15	21	42	9	78	6	93	9	25	9	43	229
01:15 PM	11	95	4	110	16	29	22	67	5	60	5	70	2	28	13	43	290
Total Volume	46	207	10	263	32	73	57	162	31	237	23	291	14	86	37	137	853
% App. Total	17.5	78.7	3.8		19.8	45.1	35.2		10.7	81.4	7.9		10.2	62.8	27		
PHF	.885	.545	.625	.598	.500	.629	.648	.604	.861	.760	.821	.782	.389	.768	.712	.797	.735



Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	11	49	2	62	3	14	5	22	9	38	5	52	1	12	8	21
+15 mins.	11	26	3	40	7	15	9	31	8	61	7	76	2	21	7	30
+30 mins.	13	37	1	51	6	15	21	42	9	78	6	93	9	25	9	43
+45 mins.	11	95	4	110	16	29	22	67	5	60	5	70	2	28	13	43
Total Volume	46	207	10	263	32	73	57	162	31	237	23	291	14	86	37	137
% App. Total	17.5	78.7	3.8		19.8	45.1	35.2		10.7	81.4	7.9		10.2	62.8	27	
PHF	.885	.545	.625	.598	.500	.629	.648	.604	.861	.760	.821	.782	.389	.768	.712	.797

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
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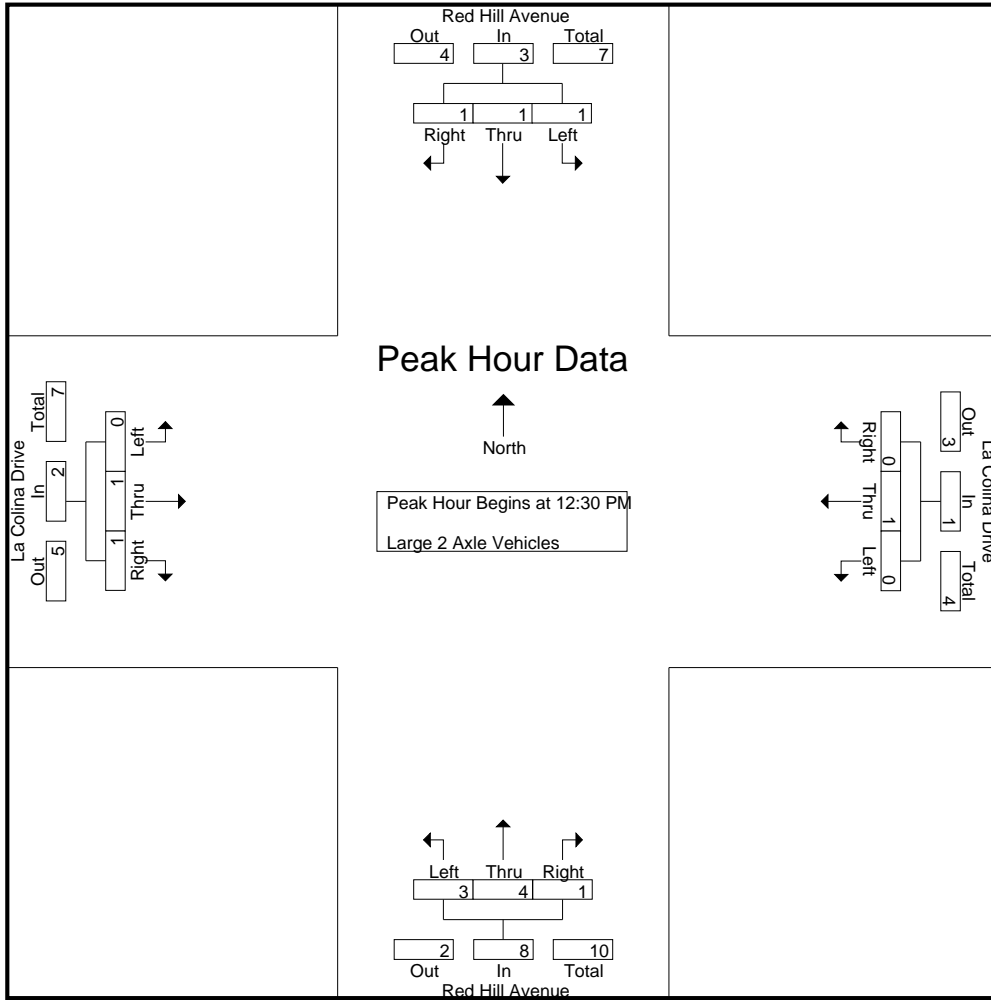
Groups Printed- Large 2 Axle Vehicles

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
11:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
Total	0	2	0	2	0	0	0	0	0	2	0	2	0	0	1	1	5
12:00 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
12:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
12:45 PM	0	0	0	0	0	1	0	1	1	2	0	3	0	0	0	0	4
Total	0	2	0	2	0	2	0	2	1	5	0	6	0	0	0	0	10
01:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
01:15 PM	1	1	1	3	0	0	0	0	2	0	0	2	0	1	0	1	6
Grand Total	1	5	1	7	0	2	0	2	3	7	1	11	0	1	2	3	23
Apprch %	14.3	71.4	14.3		0	100	0		27.3	63.6	9.1		0	33.3	66.7		
Total %	4.3	21.7	4.3	30.4	0	8.7	0	8.7	13	30.4	4.3	47.8	0	4.3	8.7	13	

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
12:45 PM	0	0	0	0	0	1	0	1	1	2	0	3	0	0	0	0	4
01:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
01:15 PM	1	1	1	3	0	0	0	0	2	0	0	2	0	1	0	1	6
Total Volume	1	1	1	3	0	1	0	1	3	4	1	8	0	1	1	2	14
% App. Total	33.3	33.3	33.3		0	100	0		37.5	50	12.5		0	50	50		
PHF	.250	.250	.250	.250	.000	.250	.000	.250	.375	.500	.250	.667	.000	.250	.250	.500	.583

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCMD
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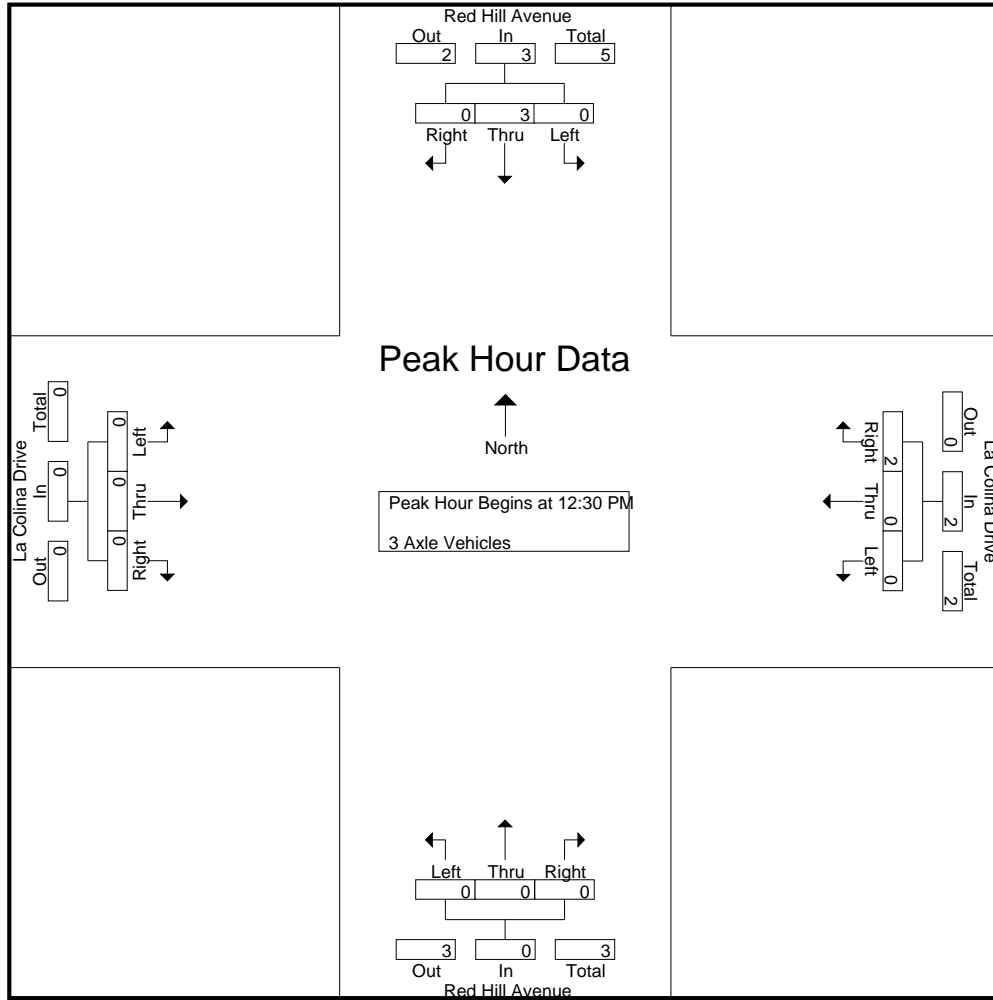
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	1	2	0	3	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
+45 mins.	1	1	1	3	0	0	0	0	2	0	0	2	0	1	0	1
Total Volume	1	1	1	3	0	1	0	1	3	4	1	8	0	1	1	2
% App. Total	33.3	33.3	33.3		0	100	0		37.5	50	12.5		0	50	50	
PHF	.250	.250	.250	.250	.000	.250	.000	.250	.375	.500	.250	.667	.000	.250	.250	.500

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM				12:30 PM			
+0 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0
Total Volume	0	3	0	3	0	0	2	2	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	100	0	0	0	0	0	0	0	0	0
PHF	.000	.375	.000	.375	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCMD
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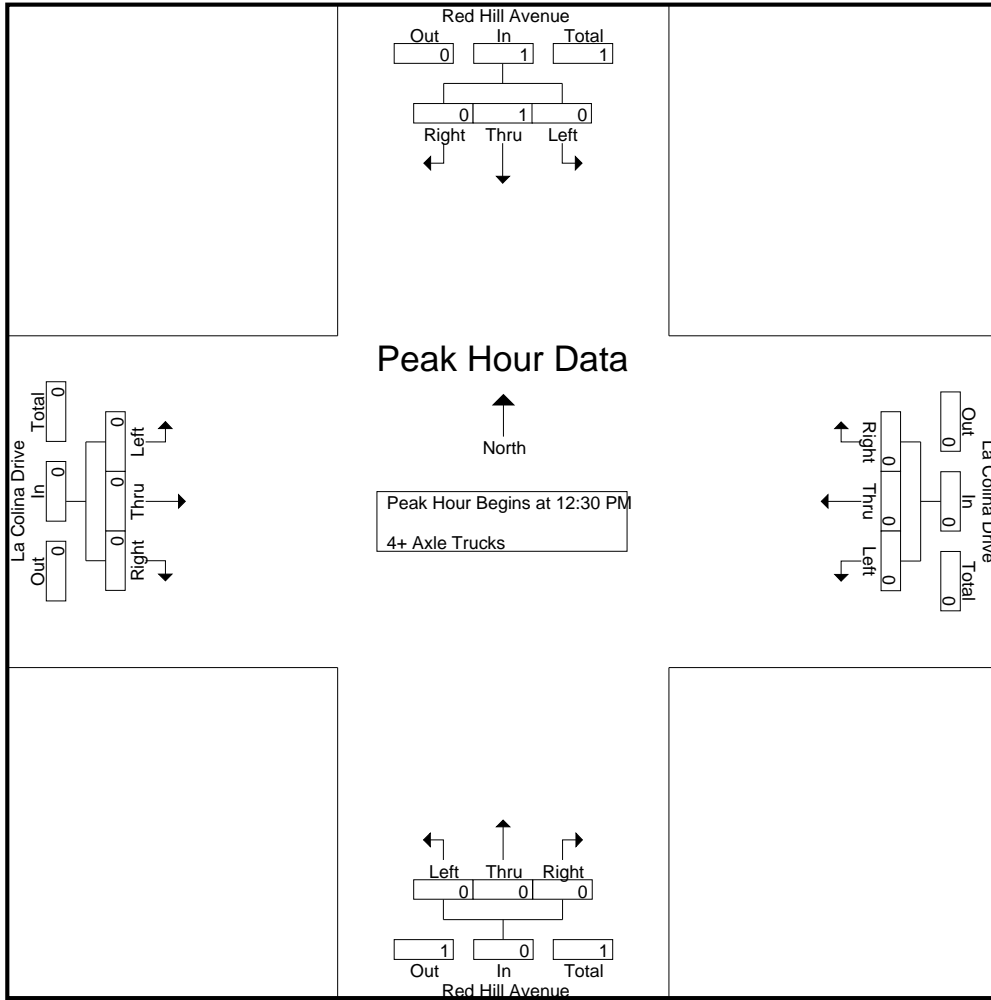
Groups Printed- 4+ Axle Trucks

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0		0	0	0		0	0	0		

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

County of Orange
 N/S: Red Hill Avenue
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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM				12:30 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
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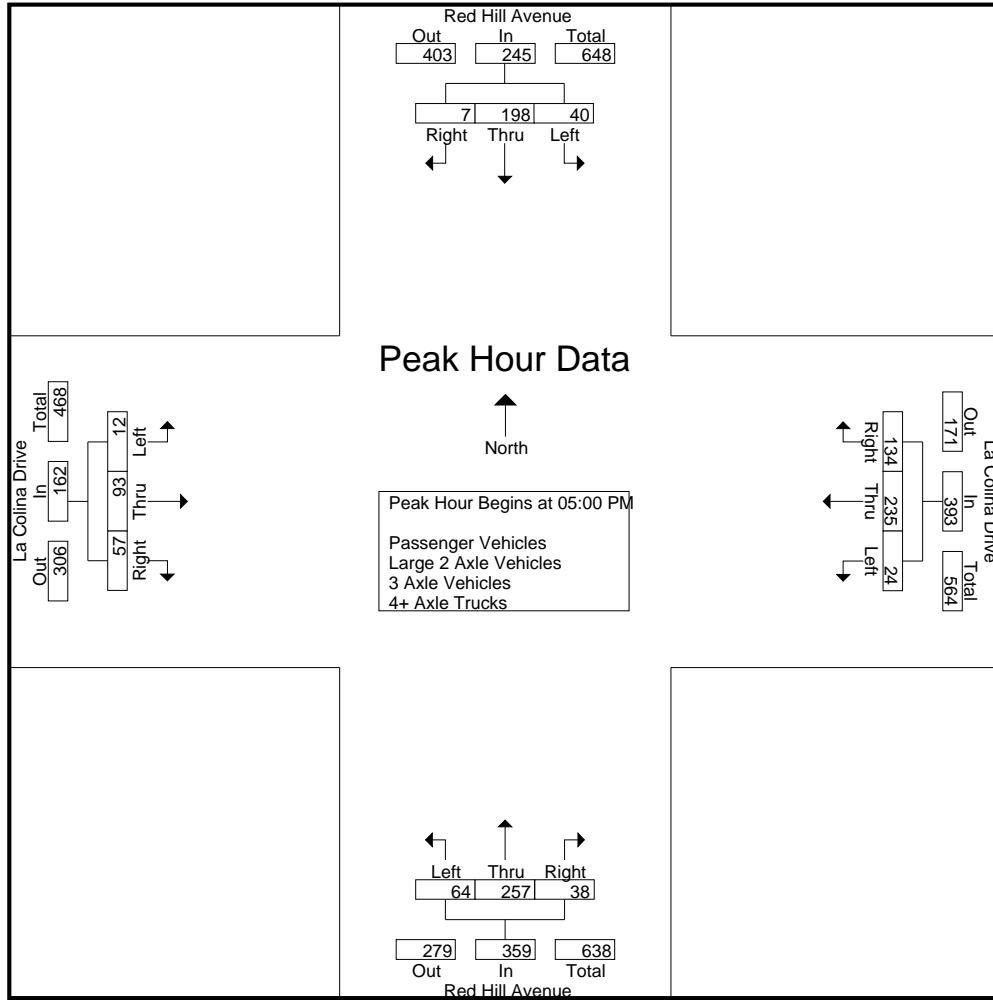
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	10	40	2	52	5	45	23	73	15	57	5	77	1	27	13	41	243
04:15 PM	10	50	5	65	5	64	16	85	18	69	8	95	2	27	15	44	289
04:30 PM	7	37	3	47	6	87	23	116	16	73	10	99	2	22	13	37	299
04:45 PM	9	46	1	56	6	55	32	93	18	66	9	93	4	29	9	42	284
Total	36	173	11	220	22	251	94	367	67	265	32	364	9	105	50	164	1115
05:00 PM	9	46	0	55	7	61	25	93	15	70	10	95	1	26	14	41	284
05:15 PM	9	53	3	65	7	55	32	94	18	49	13	80	5	20	14	39	278
05:30 PM	11	49	0	60	6	54	42	102	15	75	8	98	4	21	15	40	300
05:45 PM	11	50	4	65	4	65	35	104	16	63	7	86	2	26	14	42	297
Total	40	198	7	245	24	235	134	393	64	257	38	359	12	93	57	162	1159
Grand Total	76	371	18	465	46	486	228	760	131	522	70	723	21	198	107	326	2274
Apprch %	16.3	79.8	3.9		6.1	63.9	30		18.1	72.2	9.7		6.4	60.7	32.8		
Total %	3.3	16.3	0.8	20.4	2	21.4	10	33.4	5.8	23	3.1	31.8	0.9	8.7	4.7	14.3	
Passenger Vehicles	76	368	18	462	46	483	228	757	131	521	70	722	21	195	106	322	2263
% Passenger Vehicles	100	99.2	100	99.4	100	99.4	100	99.6	100	99.8	100	99.9	100	98.5	99.1	98.8	99.5
Large 2 Axle Vehicles	0	2	0	2	0	3	0	3	0	0	0	0	0	1	1	2	7
% Large 2 Axle Vehicles	0	0.5	0	0.4	0	0.6	0	0.4	0	0	0	0	0	0.5	0.9	0.6	0.3
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
% 3 Axle Vehicles	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0	1	0	0.6	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	9	46	0	55	7	61	25	93	15	70	10	95	1	26	14	41	284
05:15 PM	9	53	3	65	7	55	32	94	18	49	13	80	5	20	14	39	278
05:30 PM	11	49	0	60	6	54	42	102	15	75	8	98	4	21	15	40	300
05:45 PM	11	50	4	65	4	65	35	104	16	63	7	86	2	26	14	42	297
Total Volume	40	198	7	245	24	235	134	393	64	257	38	359	12	93	57	162	1159
% App. Total	16.3	80.8	2.9		6.1	59.8	34.1		17.8	71.6	10.6		7.4	57.4	35.2		
PHF	.909	.934	.438	.942	.857	.904	.798	.945	.889	.857	.731	.916	.600	.894	.950	.964	.966

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	9	46	0	55	6	87	23	116	18	69	8	95	1	27	13	41
+15 mins.	9	53	3	65	6	55	32	93	16	73	10	99	2	27	15	44
+30 mins.	11	49	0	60	7	61	25	93	18	66	9	93	2	22	13	37
+45 mins.	11	50	4	65	7	55	32	94	15	70	10	95	4	29	9	42
Total Volume	40	198	7	245	26	258	112	396	67	278	37	382	9	105	50	164
% App. Total	16.3	80.8	2.9		6.6	65.2	28.3		17.5	72.8	9.7		5.5	64	30.5	
PHF	.909	.934	.438	.942	.929	.741	.875	.853	.931	.952	.925	.965	.563	.905	.833	.932

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

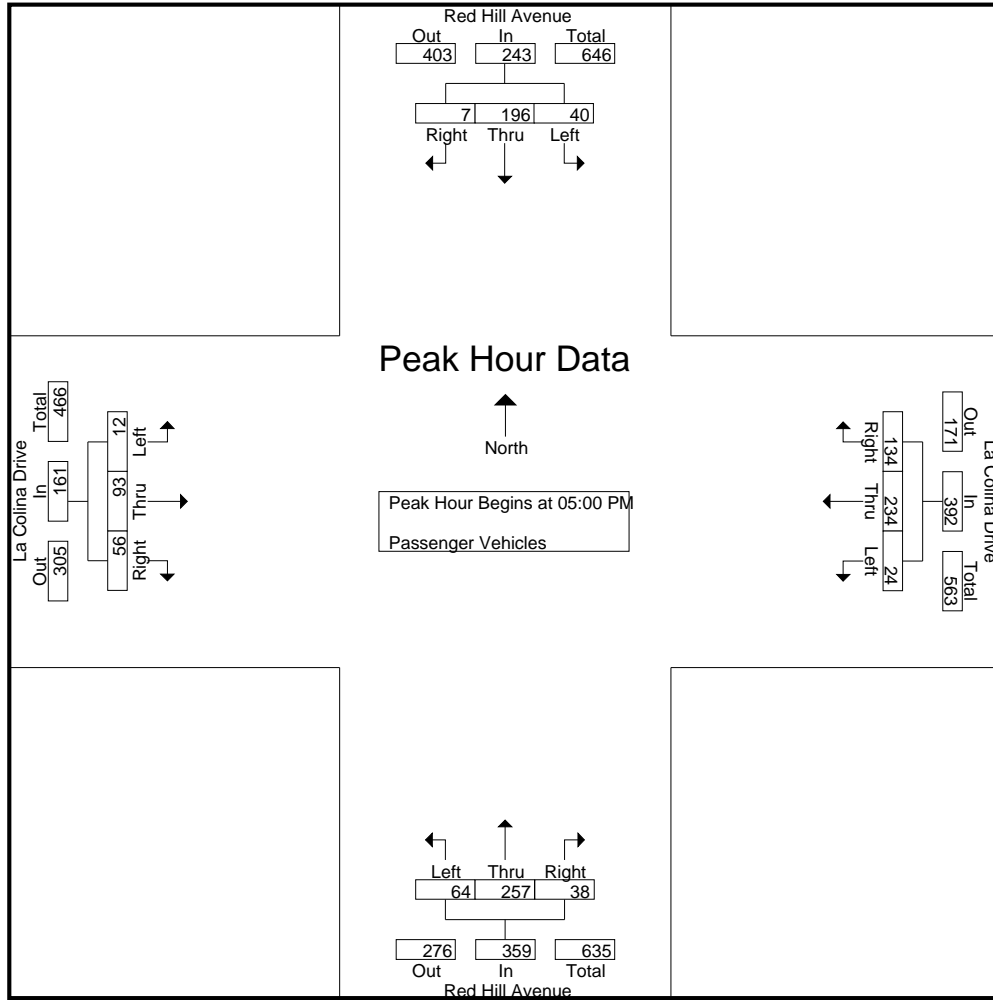
Groups Printed- Passenger Vehicles

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	10	40	2	52	5	45	23	73	15	56	5	76	1	26	13	40	241
04:15 PM	10	50	5	65	5	63	16	84	18	69	8	95	2	27	15	44	288
04:30 PM	7	36	3	46	6	86	23	115	16	73	10	99	2	21	13	36	296
04:45 PM	9	46	1	56	6	55	32	93	18	66	9	93	4	28	9	41	283
Total	36	172	11	219	22	249	94	365	67	264	32	363	9	102	50	161	1108
05:00 PM	9	44	0	53	7	61	25	93	15	70	10	95	1	26	14	41	282
05:15 PM	9	53	3	65	7	55	32	94	18	49	13	80	5	20	13	38	277
05:30 PM	11	49	0	60	6	54	42	102	15	75	8	98	4	21	15	40	300
05:45 PM	11	50	4	65	4	64	35	103	16	63	7	86	2	26	14	42	296
Total	40	196	7	243	24	234	134	392	64	257	38	359	12	93	56	161	1155
Grand Total	76	368	18	462	46	483	228	757	131	521	70	722	21	195	106	322	2263
Apprch %	16.5	79.7	3.9		6.1	63.8	30.1		18.1	72.2	9.7		6.5	60.6	32.9		
Total %	3.4	16.3	0.8	20.4	2	21.3	10.1	33.5	5.8	23	3.1	31.9	0.9	8.6	4.7	14.2	

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	9	44	0	53	7	61	25	93	15	70	10	95	1	26	14	41	282
05:15 PM	9	53	3	65	7	55	32	94	18	49	13	80	5	20	13	38	277
05:30 PM	11	49	0	60	6	54	42	102	15	75	8	98	4	21	15	40	300
05:45 PM	11	50	4	65	4	64	35	103	16	63	7	86	2	26	14	42	296
Total Volume	40	196	7	243	24	234	134	392	64	257	38	359	12	93	56	161	1155
% App. Total	16.5	80.7	2.9		6.1	59.7	34.2		17.8	71.6	10.6		7.5	57.8	34.8		
PHF	.909	.925	.438	.935	.857	.914	.798	.951	.889	.857	.731	.916	.600	.894	.933	.958	.963

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM							
+0 mins.	9	44	0	53	7	61	25	93	15	70	10	95	1	26	14	41
+15 mins.	9	53	3	65	7	55	32	94	18	49	13	80	5	20	13	38
+30 mins.	11	49	0	60	6	54	42	102	15	75	8	98	4	21	15	40
+45 mins.	11	50	4	65	4	64	35	103	16	63	7	86	2	26	14	42
Total Volume	40	196	7	243	24	234	134	392	64	257	38	359	12	93	56	161
% App. Total	16.5	80.7	2.9		6.1	59.7	34.2		17.8	71.6	10.6		7.5	57.8	34.8	
PHF	.909	.925	.438	.935	.857	.914	.798	.951	.889	.857	.731	.916	.600	.894	.933	.958

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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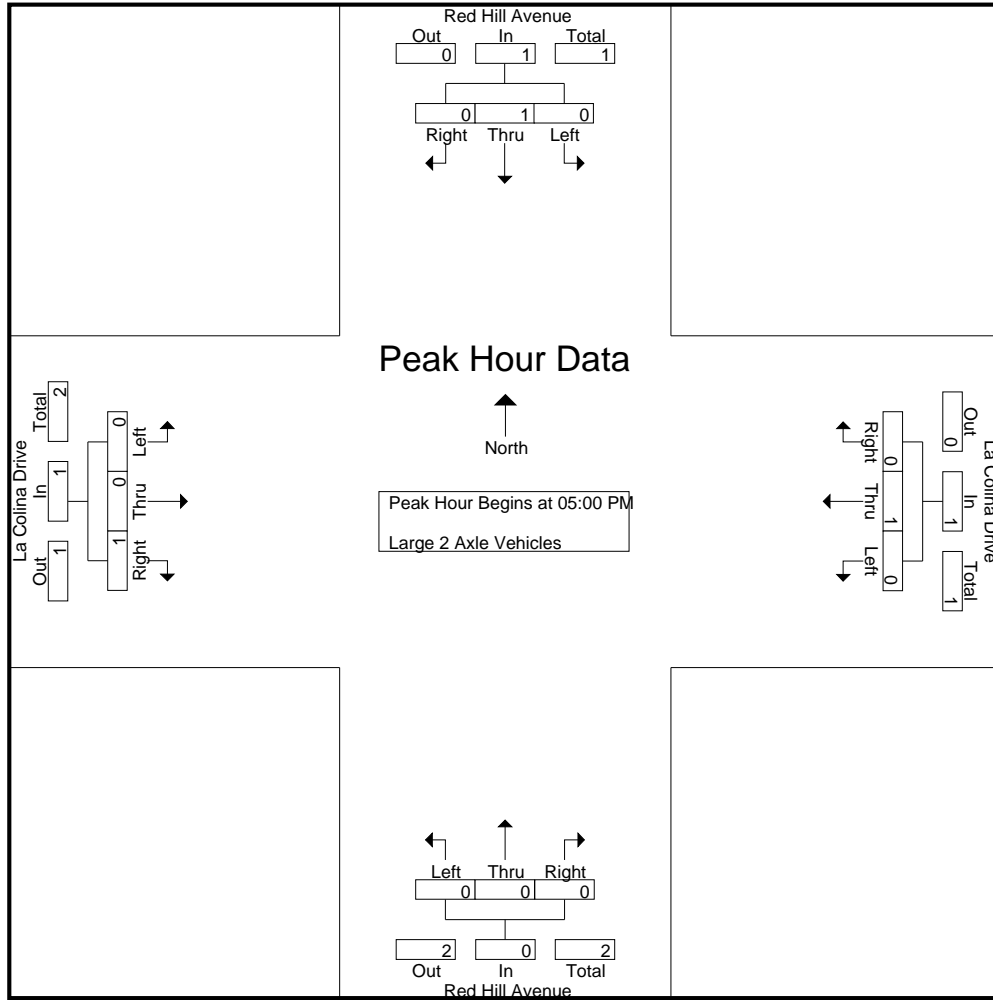
Groups Printed- Large 2 Axle Vehicles

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	3
Grand Total	0	2	0	2	0	3	0	3	0	0	0	0	0	1	1	2	7
Apprch %	0	100	0		0	100	0		0	0	0		0	50	50		
Total %	0	28.6	0	28.6	0	42.9	0	42.9	0	0	0	0	0	14.3	14.3	28.6	

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	3
% App. Total	0	100	0		0	100	0		0	0	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.250	.250	.750

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1
% App. Total	0	100	0	0	0	100	0	0	0	0	0	0	0	0	100	0
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.250	.250

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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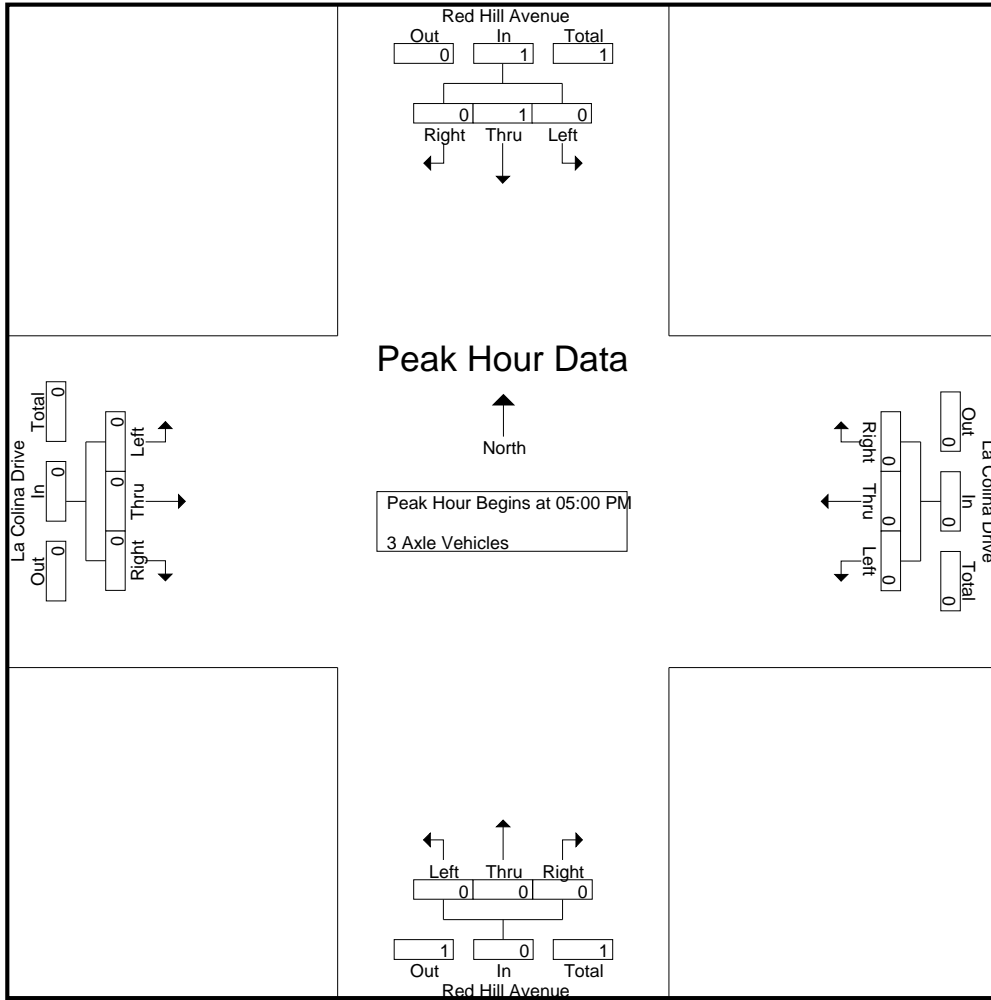
Groups Printed- 3 Axle Vehicles

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
Apprch %	0	100	0		0	0	0		0	0	0		0	100	0		
Total %	0	33.3	0	33.3	0	0	0		0	0	0		0	66.7	0	66.7	

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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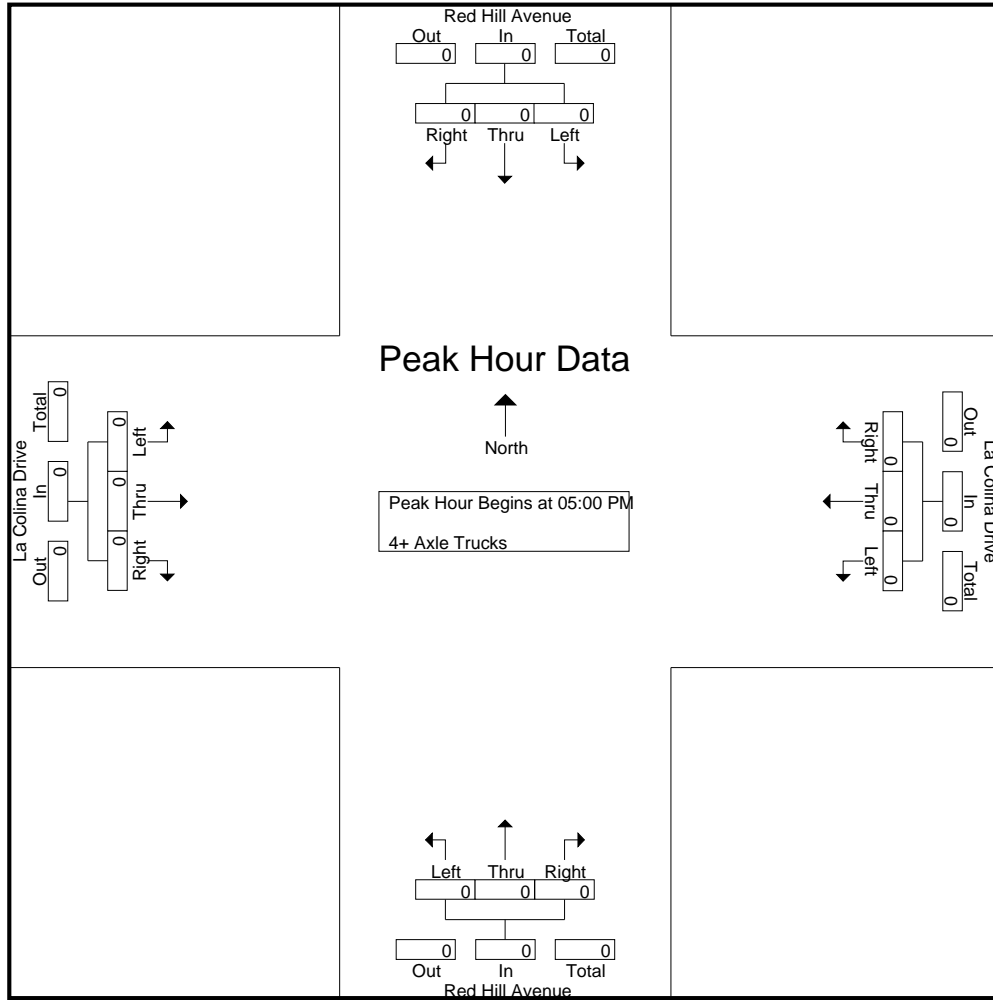
Groups Printed- 4+ Axle Trucks

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0		0	0	0		0	100	0	100	0	0	0		

Start Time	Red Hill Avenue Southbound				La Colina Drive Westbound				Red Hill Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Red Hill Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 02_ORCRHLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

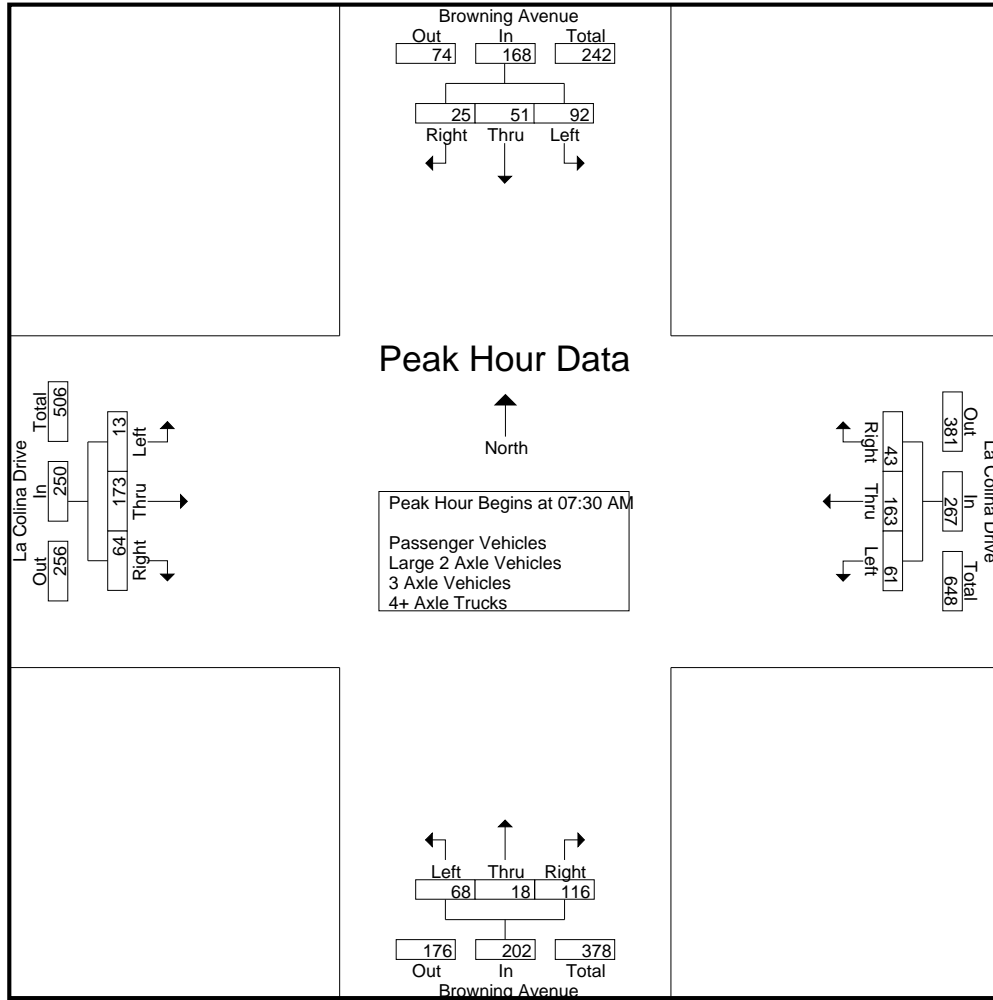
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	18	7	1	26	2	9	3	14	1	2	1	4	0	36	5	41	85
07:15 AM	18	10	3	31	1	21	7	29	2	1	5	8	3	42	3	48	116
07:30 AM	18	6	4	28	6	40	6	52	0	5	0	5	4	40	7	51	136
07:45 AM	17	13	11	41	17	39	14	70	16	4	16	36	6	38	25	69	216
Total	71	36	19	126	26	109	30	165	19	12	22	53	13	156	40	209	553
08:00 AM	32	18	6	56	36	39	14	89	30	7	75	112	1	49	29	79	336
08:15 AM	25	14	4	43	2	45	9	56	22	2	25	49	2	46	3	51	199
08:30 AM	28	6	3	37	1	27	14	42	0	0	4	4	8	38	2	48	131
08:45 AM	17	7	4	28	1	25	15	41	4	6	4	14	3	42	7	52	135
Total	102	45	17	164	40	136	52	228	56	15	108	179	14	175	41	230	801
Grand Total	173	81	36	290	66	245	82	393	75	27	130	232	27	331	81	439	1354
Apprch %	59.7	27.9	12.4		16.8	62.3	20.9		32.3	11.6	56		6.2	75.4	18.5		
Total %	12.8	6	2.7	21.4	4.9	18.1	6.1	29	5.5	2	9.6	17.1	2	24.4	6	32.4	
Passenger Vehicles	173	79	36	288	66	245	76	387	75	26	129	230	26	327	79	432	1337
% Passenger Vehicles	100	97.5	100	99.3	100	100	92.7	98.5	100	96.3	99.2	99.1	96.3	98.8	97.5	98.4	98.7
Large 2 Axle Vehicles	0	1	0	1	0	0	6	6	0	0	1	1	1	4	0	5	13
% Large 2 Axle Vehicles	0	1.2	0	0.3	0	0	7.3	1.5	0	0	0.8	0.4	3.7	1.2	0	1.1	1
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	1	0	1	0	0	2	2	4
% 3 Axle Vehicles	0	1.2	0	0.3	0	0	0	0	0	3.7	0	0.4	0	0	2.5	0.5	0.3
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	18	6	4	28	6	40	6	52	0	5	0	5	4	40	7	51	136
07:45 AM	17	13	11	41	17	39	14	70	16	4	16	36	6	38	25	69	216
08:00 AM	32	18	6	56	36	39	14	89	30	7	75	112	1	49	29	79	336
08:15 AM	25	14	4	43	2	45	9	56	22	2	25	49	2	46	3	51	199
Total Volume	92	51	25	168	61	163	43	267	68	18	116	202	13	173	64	250	887
% App. Total	54.8	30.4	14.9		22.8	61	16.1		33.7	8.9	57.4		5.2	69.2	25.6		
PHF	.719	.708	.568	.750	.424	.906	.768	.750	.567	.643	.387	.451	.542	.883	.552	.791	.660

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	17	13	11	41	6	40	6	52	0	5	0	5	4	40	7	51
+15 mins.	32	18	6	56	17	39	14	70	16	4	16	36	6	38	25	69
+30 mins.	25	14	4	43	36	39	14	89	30	7	75	112	1	49	29	79
+45 mins.	28	6	3	37	2	45	9	56	22	2	25	49	2	46	3	51
Total Volume	102	51	24	177	61	163	43	267	68	18	116	202	13	173	64	250
% App. Total	57.6	28.8	13.6		22.8	61	16.1		33.7	8.9	57.4		5.2	69.2	25.6	
PHF	.797	.708	.545	.790	.424	.906	.768	.750	.567	.643	.387	.451	.542	.883	.552	.791

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	18	7	1	26	2	9	3	14	1	1	1	3	0	35	5	40	83
07:15 AM	18	10	3	31	1	21	6	28	2	1	4	7	2	42	3	47	113
07:30 AM	18	6	4	28	6	40	6	52	0	5	0	5	4	40	6	50	135
07:45 AM	17	13	11	41	17	39	14	70	16	4	16	36	6	38	25	69	216
Total	71	36	19	126	26	109	29	164	19	11	21	51	12	155	39	206	547
08:00 AM	32	18	6	56	36	39	14	89	30	7	75	112	1	48	29	78	335
08:15 AM	25	13	4	42	2	45	8	55	22	2	25	49	2	46	3	51	197
08:30 AM	28	6	3	37	1	27	11	39	0	0	4	4	8	37	2	47	127
08:45 AM	17	6	4	27	1	25	14	40	4	6	4	14	3	41	6	50	131
Total	102	43	17	162	40	136	47	223	56	15	108	179	14	172	40	226	790
Grand Total	173	79	36	288	66	245	76	387	75	26	129	230	26	327	79	432	1337
Apprch %	60.1	27.4	12.5		17.1	63.3	19.6		32.6	11.3	56.1		6	75.7	18.3		
Total %	12.9	5.9	2.7	21.5	4.9	18.3	5.7	28.9	5.6	1.9	9.6	17.2	1.9	24.5	5.9	32.3	

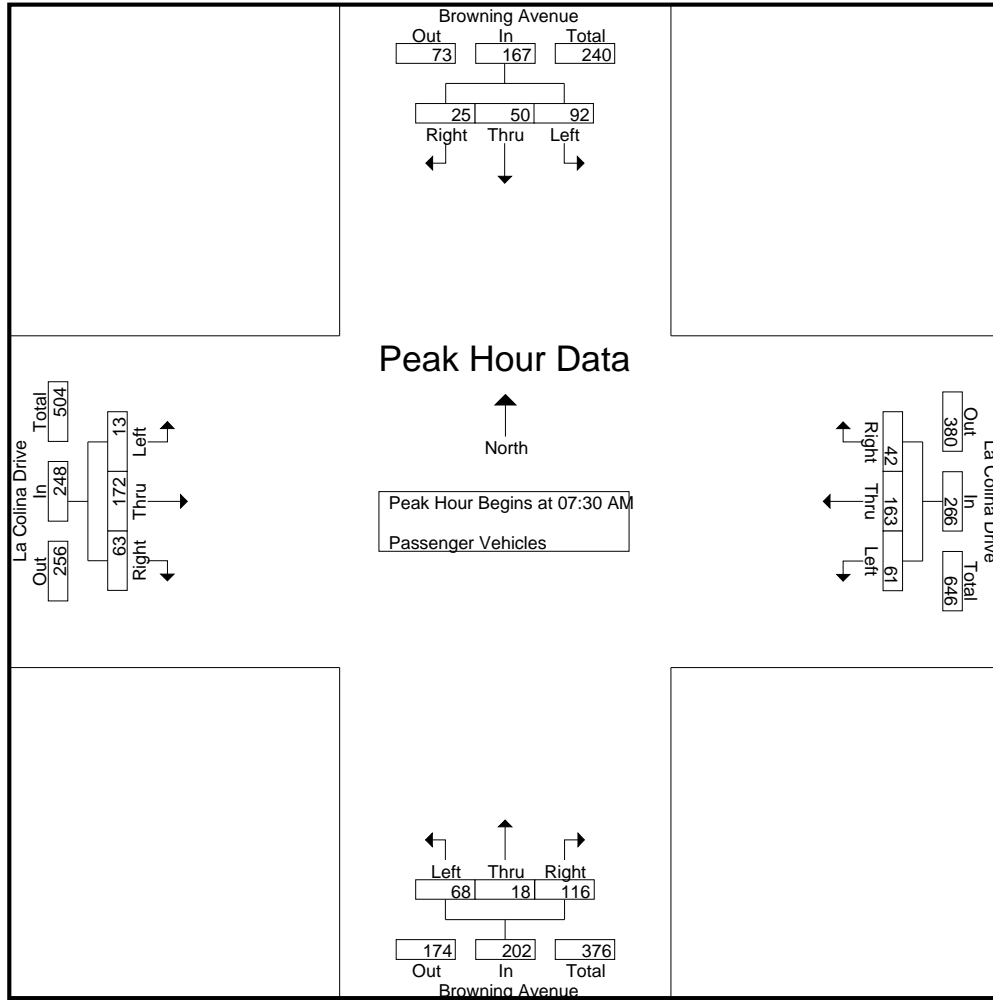
Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	18	6	4	28	6	40	6	52	0	5	0	5	4	40	6	50	135
07:45 AM	17	13	11	41	17	39	14	70	16	4	16	36	6	38	25	69	216
08:00 AM	32	18	6	56	36	39	14	89	30	7	75	112	1	48	29	78	335
08:15 AM	25	13	4	42	2	45	8	55	22	2	25	49	2	46	3	51	197
Total Volume	92	50	25	167	61	163	42	266	68	18	116	202	13	172	63	248	883
% App. Total	55.1	29.9	15		22.9	61.3	15.8		33.7	8.9	57.4		5.2	69.4	25.4		
PHF	.719	.694	.568	.746	.424	.906	.750	.747	.567	.643	.387	.451	.542	.896	.543	.795	.659

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	18	6	4	28	6	40	6	52	0	5	0	5	4	40	6	50
+15 mins.	17	13	11	41	17	39	14	70	16	4	16	36	6	38	25	69
+30 mins.	32	18	6	56	36	39	14	89	30	7	75	112	1	48	29	78
+45 mins.	25	13	4	42	2	45	8	55	22	2	25	49	2	46	3	51
Total Volume	92	50	25	167	61	163	42	266	68	18	116	202	13	172	63	248
% App. Total	55.1	29.9	15		22.9	61.3	15.8		33.7	8.9	57.4		5.2	69.4	25.4	
PHF	.719	.694	.568	.746	.424	.906	.750	.747	.567	.643	.387	.451	.542	.896	.543	.795

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	1	1	0	0	1	1	1	0	0	1	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0	2	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	3	3	0	0	0	0	0	1	0	1	4
08:45 AM	0	1	0	1	0	0	1	1	0	0	0	0	0	1	0	1	3
Total	0	1	0	1	0	0	5	5	0	0	0	0	0	3	0	3	9
Grand Total	0	1	0	1	0	0	6	6	0	0	1	1	1	4	0	5	13
Apprch %	0	100	0		0	0	100		0	0	100		20	80	0		
Total %	0	7.7	0	7.7	0	0	46.2	46.2	0	0	7.7	7.7	7.7	30.8	0	38.5	

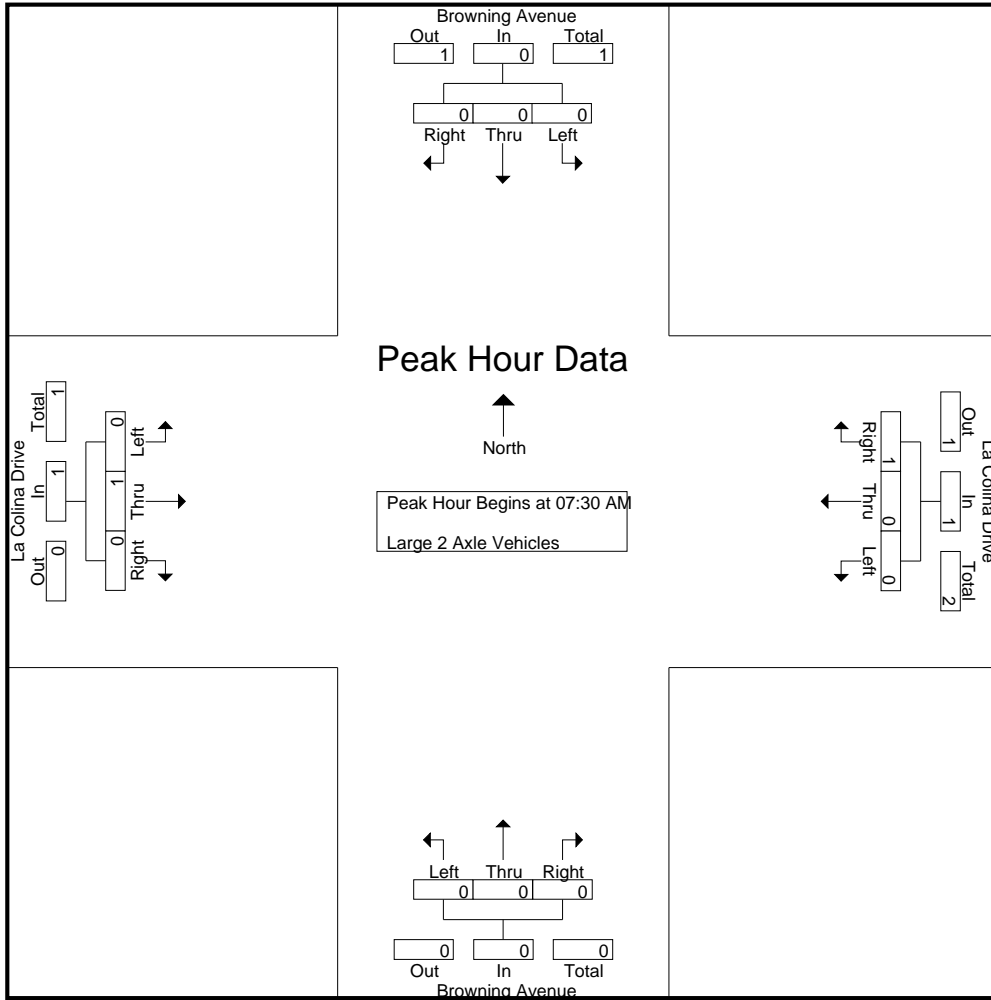
Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
% App. Total	0	0	0		0	0	100		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250	.500

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	0	100		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Grand Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	2	2	4
Apprch %	0	100	0		0	0	0		0	100	0		0	0	100		
Total %	0	25	0	25	0	0	0	0	0	25	0	25	0	0	50	50	

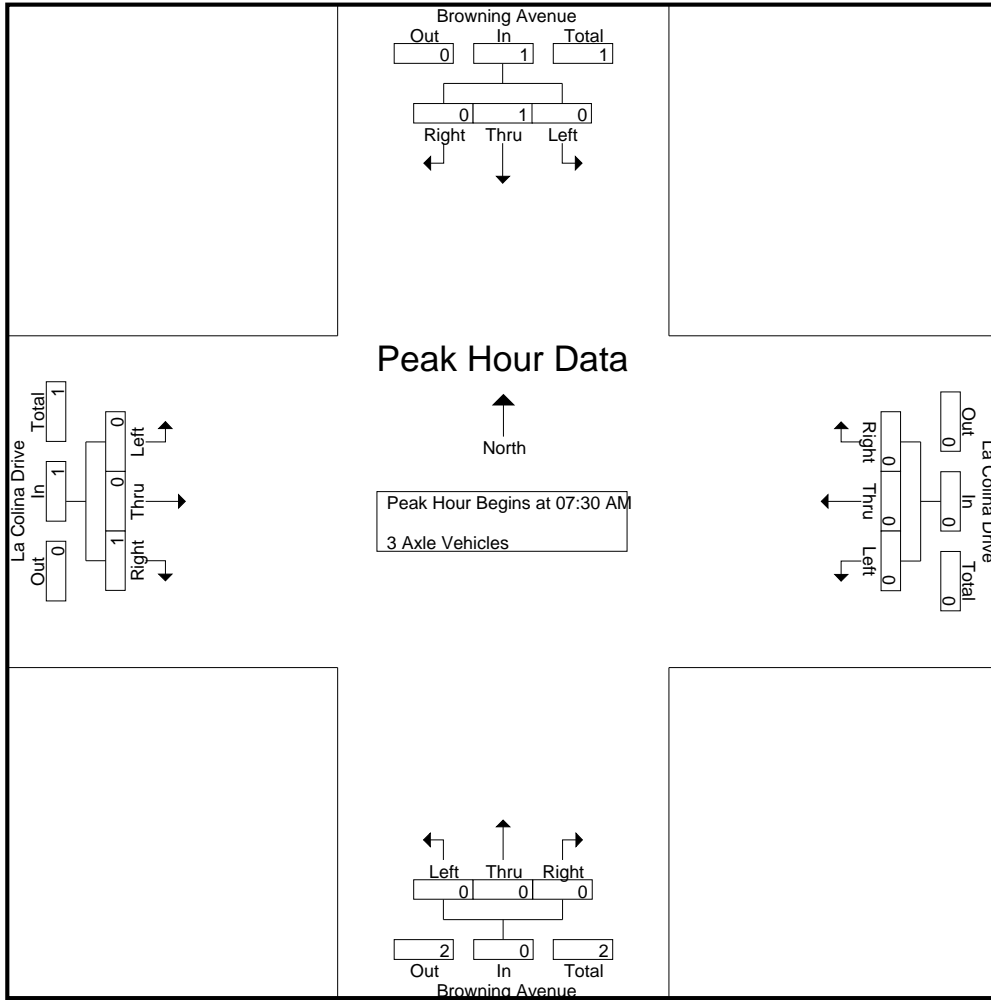
Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	100	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

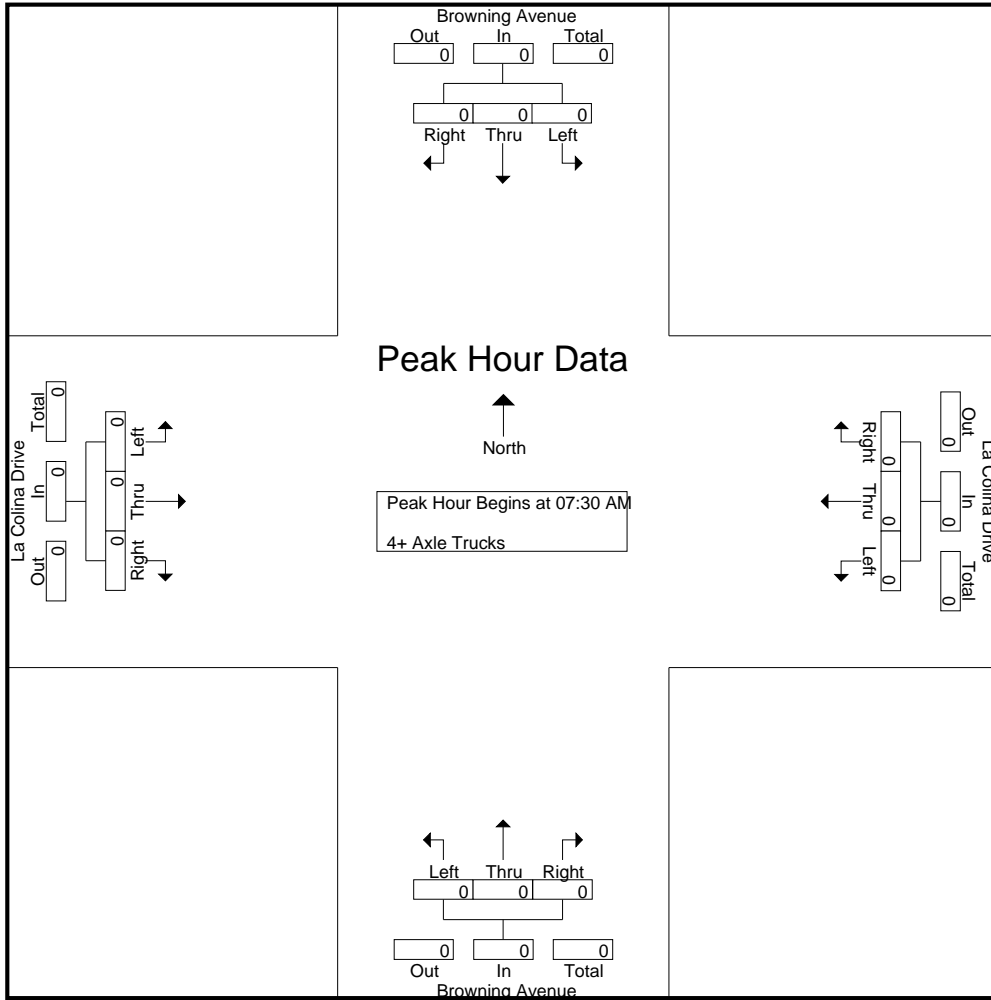
Groups Printed- 4+ Axle Trucks

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
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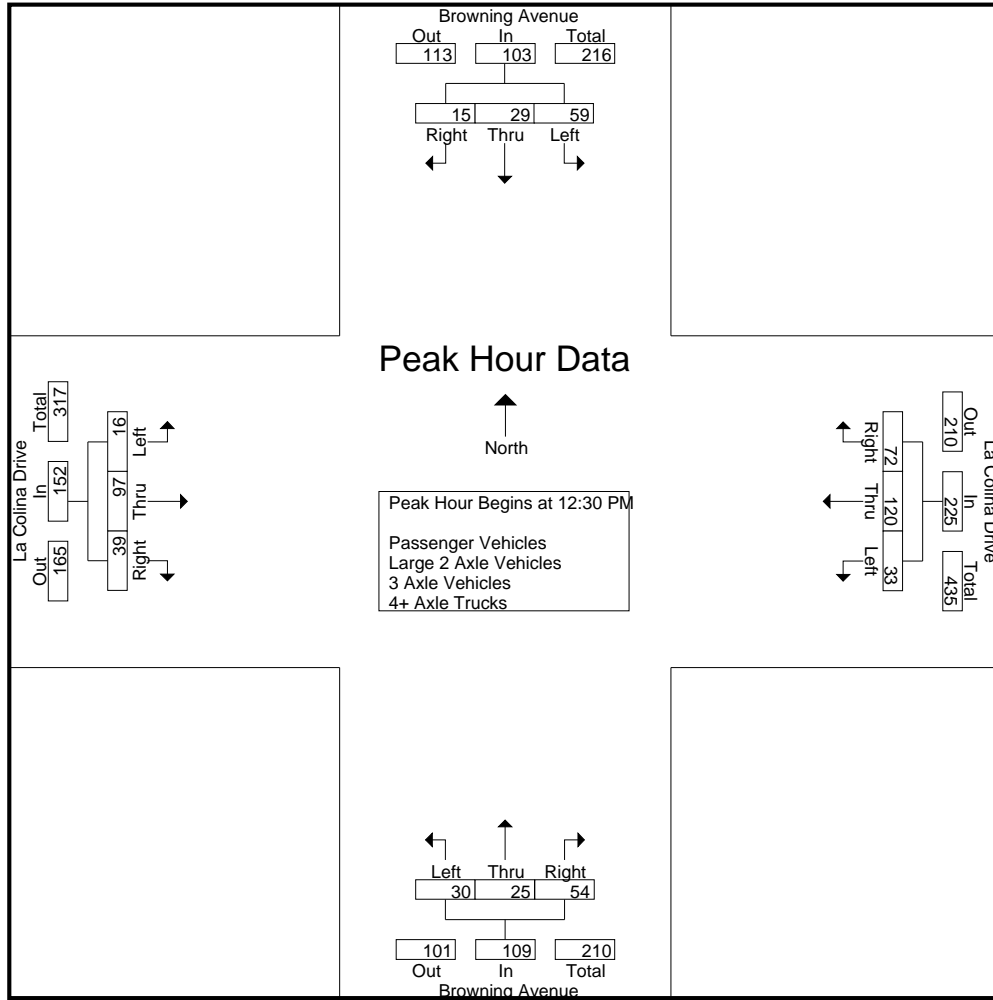
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	14	8	0	22	2	13	10	25	3	14	3	20	2	20	2	24	91
11:45 AM	15	13	0	28	1	22	14	37	1	5	4	10	3	15	1	19	94
Total	29	21	0	50	3	35	24	62	4	19	7	30	5	35	3	43	185
12:00 PM	16	6	2	24	0	22	11	33	0	4	2	6	5	17	3	25	88
12:15 PM	17	9	0	26	6	21	10	37	3	3	3	9	4	20	3	27	99
12:30 PM	12	10	1	23	2	16	22	40	2	3	0	5	2	16	6	24	92
12:45 PM	13	6	6	25	6	29	17	52	4	8	7	19	2	21	13	36	132
Total	58	31	9	98	14	88	60	162	9	18	12	39	13	74	25	112	411
01:00 PM	15	8	5	28	14	36	16	66	3	6	9	18	4	25	9	38	150
01:15 PM	19	5	3	27	11	39	17	67	21	8	38	67	8	35	11	54	215
Grand Total	121	65	17	203	42	198	117	357	37	51	66	154	30	169	48	247	961
Apprch %	59.6	32	8.4		11.8	55.5	32.8		24	33.1	42.9		12.1	68.4	19.4		
Total %	12.6	6.8	1.8	21.1	4.4	20.6	12.2	37.1	3.9	5.3	6.9	16	3.1	17.6	5	25.7	
Passenger Vehicles	116	61	17	194	42	191	113	346	36	49	64	149	29	164	48	241	930
% Passenger Vehicles	95.9	93.8	100	95.6	100	96.5	96.6	96.9	97.3	96.1	97	96.8	96.7	97	100	97.6	96.8
Large 2 Axle Vehicles	5	3	0	8	0	3	4	7	1	1	2	4	1	2	0	3	22
% Large 2 Axle Vehicles	4.1	4.6	0	3.9	0	1.5	3.4	2	2.7	2	3	2.6	3.3	1.2	0	1.2	2.3
3 Axle Vehicles	0	1	0	1	0	3	0	3	0	1	0	1	0	2	0	2	7
% 3 Axle Vehicles	0	1.5	0	0.5	0	1.5	0	0.8	0	2	0	0.6	0	1.2	0	0.8	0.7
4+ Axle Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% 4+ Axle Trucks	0	0	0	0	0	0.5	0	0.3	0	0	0	0	0	0.6	0	0.4	0.2

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	12	10	1	23	2	16	22	40	2	3	0	5	2	16	6	24	92
12:45 PM	13	6	6	25	6	29	17	52	4	8	7	19	2	21	13	36	132
01:00 PM	15	8	5	28	14	36	16	66	3	6	9	18	4	25	9	38	150
01:15 PM	19	5	3	27	11	39	17	67	21	8	38	67	8	35	11	54	215
Total Volume	59	29	15	103	33	120	72	225	30	25	54	109	16	97	39	152	589
% App. Total	57.3	28.2	14.6		14.7	53.3	32		27.5	22.9	49.5		10.5	63.8	25.7		
PHF	.776	.725	.625	.920	.589	.769	.818	.840	.357	.781	.355	.407	.500	.693	.750	.704	.685

County of Orange
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 E/W: La Colina Drive
 Weather: Clear

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Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	12	10	1	23	2	16	22	40	2	3	0	5	2	16	6	24
+15 mins.	13	6	6	25	6	29	17	52	4	8	7	19	2	21	13	36
+30 mins.	15	8	5	28	14	36	16	66	3	6	9	18	4	25	9	38
+45 mins.	19	5	3	27	11	39	17	67	21	8	38	67	8	35	11	54
Total Volume	59	29	15	103	33	120	72	225	30	25	54	109	16	97	39	152
% App. Total	57.3	28.2	14.6		14.7	53.3	32		27.5	22.9	49.5		10.5	63.8	25.7	
PHF	.776	.725	.625	.920	.589	.769	.818	.840	.357	.781	.355	.407	.500	.693	.750	.704

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
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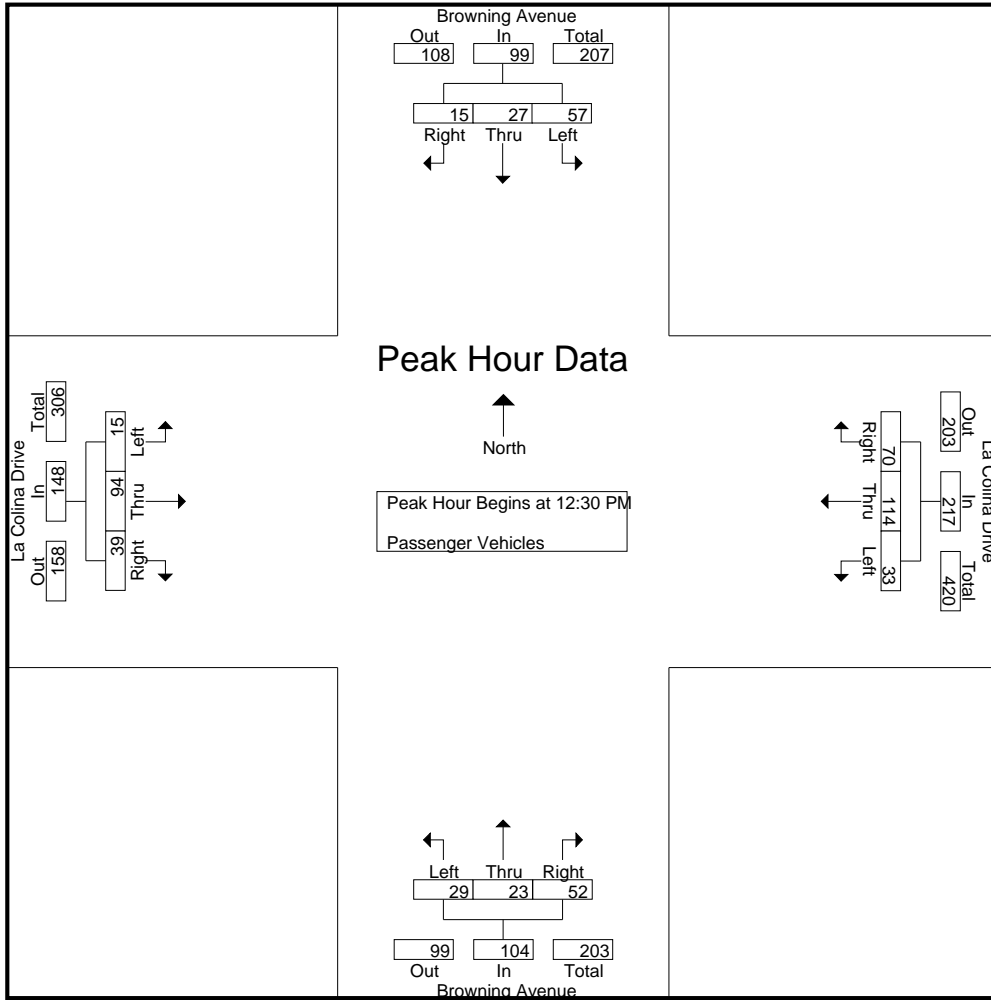
Groups Printed- Passenger Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	14	8	0	22	2	13	9	24	3	14	3	20	2	18	2	22	88
11:45 AM	15	11	0	26	1	22	13	36	1	5	4	10	3	15	1	19	91
Total	29	19	0	48	3	35	22	60	4	19	7	30	5	33	3	41	179
12:00 PM	15	6	2	23	0	22	11	33	0	4	2	6	5	17	3	25	87
12:15 PM	15	9	0	24	6	20	10	36	3	3	3	9	4	20	3	27	96
12:30 PM	11	10	1	22	2	15	20	37	1	3	0	4	2	16	6	24	87
12:45 PM	12	5	6	23	6	25	17	48	4	7	7	18	2	21	13	36	125
Total	53	30	9	92	14	82	58	154	8	17	12	37	13	74	25	112	395
01:00 PM	15	8	5	28	14	36	16	66	3	6	9	18	3	24	9	36	148
01:15 PM	19	4	3	26	11	38	17	66	21	7	36	64	8	33	11	52	208
Grand Total	116	61	17	194	42	191	113	346	36	49	64	149	29	164	48	241	930
Apprch %	59.8	31.4	8.8		12.1	55.2	32.7		24.2	32.9	43		12	68	19.9		
Total %	12.5	6.6	1.8	20.9	4.5	20.5	12.2	37.2	3.9	5.3	6.9	16	3.1	17.6	5.2	25.9	

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	11	10	1	22	2	15	20	37	1	3	0	4	2	16	6	24	87
12:45 PM	12	5	6	23	6	25	17	48	4	7	7	18	2	21	13	36	125
01:00 PM	15	8	5	28	14	36	16	66	3	6	9	18	3	24	9	36	148
01:15 PM	19	4	3	26	11	38	17	66	21	7	36	64	8	33	11	52	208
Total Volume	57	27	15	99	33	114	70	217	29	23	52	104	15	94	39	148	568
% App. Total	57.6	27.3	15.2		15.2	52.5	32.3		27.9	22.1	50		10.1	63.5	26.4		
PHF	.750	.675	.625	.884	.589	.750	.875	.822	.345	.821	.361	.406	.469	.712	.750	.712	.683

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	11	10	1	22	2	15	20	37	1	3	0	4	2	16	6	24
+15 mins.	12	5	6	23	6	25	17	48	4	7	7	18	2	21	13	36
+30 mins.	15	8	5	28	14	36	16	66	3	6	9	18	3	24	9	36
+45 mins.	19	4	3	26	11	38	17	66	21	7	36	64	8	33	11	52
Total Volume	57	27	15	99	33	114	70	217	29	23	52	104	15	94	39	148
% App. Total	57.6	27.3	15.2		15.2	52.5	32.3		27.9	22.1	50		10.1	63.5	26.4	
PHF	.750	.675	.625	.884	.589	.750	.875	.822	.345	.821	.361	.406	.469	.712	.750	.712

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCMD
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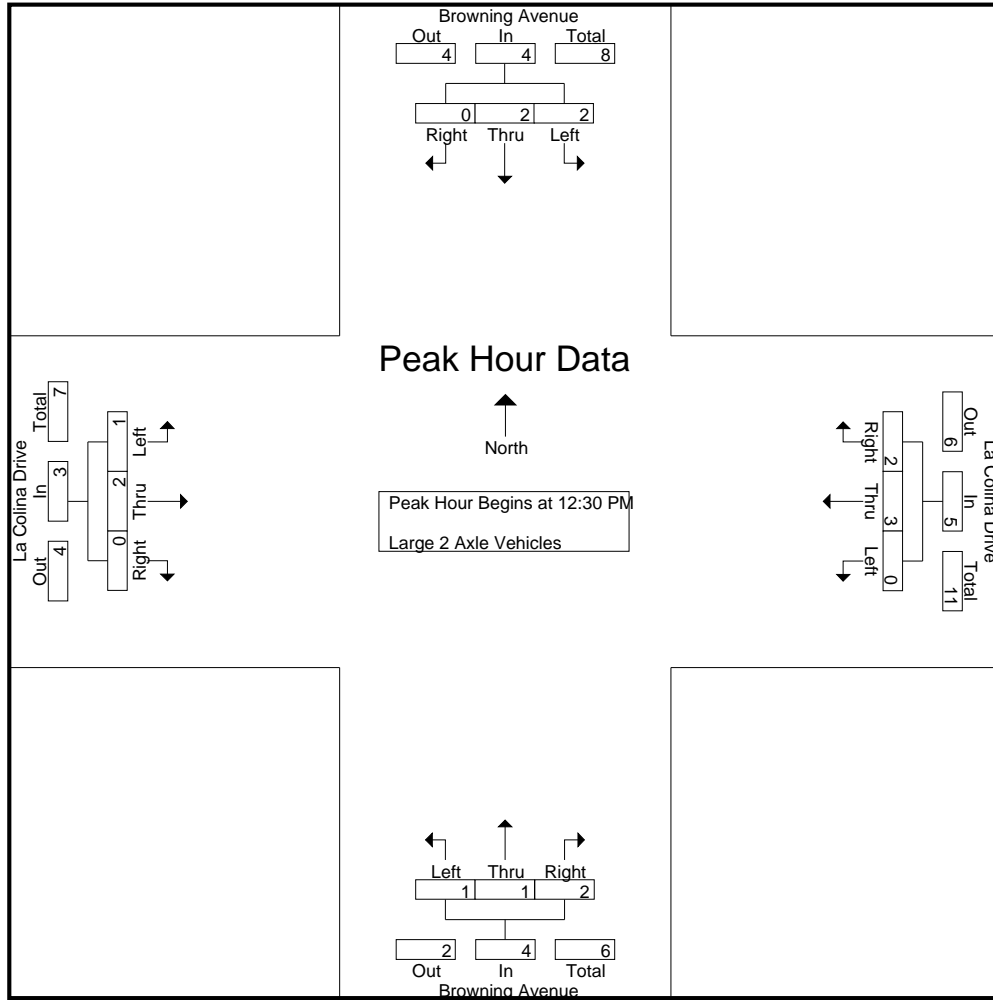
Groups Printed- Large 2 Axle Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
11:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	2
Total	0	1	0	1	0	0	2	2	0	0	0	0	0	0	0	0	0	3
12:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	1	0	0	1	0	0	2	2	1	0	0	1	0	0	0	0	0	4
12:45 PM	1	1	0	2	0	3	0	3	0	0	0	0	0	0	0	0	0	5
Total	5	1	0	6	0	3	2	5	1	0	0	1	0	0	0	0	0	12
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
01:15 PM	0	1	0	1	0	0	0	0	0	1	2	3	0	2	0	2	2	6
Grand Total	5	3	0	8	0	3	4	7	1	1	2	4	1	2	0	3	3	22
Apprch %	62.5	37.5	0		0	42.9	57.1		25	25	50		33.3	66.7	0			
Total %	22.7	13.6	0	36.4	0	13.6	18.2	31.8	4.5	4.5	9.1	18.2	4.5	9.1	0	13.6		

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 12:30 PM																		
12:30 PM	1	0	0	1	0	0	2	2	1	0	0	1	0	0	0	0	0	4
12:45 PM	1	1	0	2	0	3	0	3	0	0	0	0	0	0	0	0	0	5
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
01:15 PM	0	1	0	1	0	0	0	0	0	1	2	3	0	2	0	2	2	6
Total Volume	2	2	0	4	0	3	2	5	1	1	2	4	1	2	0	3	3	16
% App. Total	50	50	0		0	60	40		25	25	50		33.3	66.7	0			
PHF	.500	.500	.000	.500	.000	.250	.250	.417	.250	.250	.250	.333	.250	.250	.000	.375	.667	

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCMD
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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM				12:30 PM			
+0 mins.	1	0	0	1	0	0	2	2	1	0	0	1	0	0	0	0
+15 mins.	1	1	0	2	0	3	0	3	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
+45 mins.	0	1	0	1	0	0	0	0	0	1	2	3	0	2	0	2
Total Volume	2	2	0	4	0	3	2	5	1	1	2	4	1	2	0	3
% App. Total	50	50	0		0	60	40		25	25	50		33.3	66.7	0	
PHF	.500	.500	.000	.500	.000	.250	.250	.417	.250	.250	.250	.333	.250	.250	.000	.375

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
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Groups Printed- 3 Axle Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
11:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	1	0	1	0	0	0	0	3
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	1	0	3	0	3	0	1	0	1	0	2	0	2	7
Apprch %	0	100	0		0	100	0		0	100	0		0	100	0		
Total %	0	14.3	0	14.3	0	42.9	0	42.9	0	14.3	0	14.3	0	28.6	0	28.6	

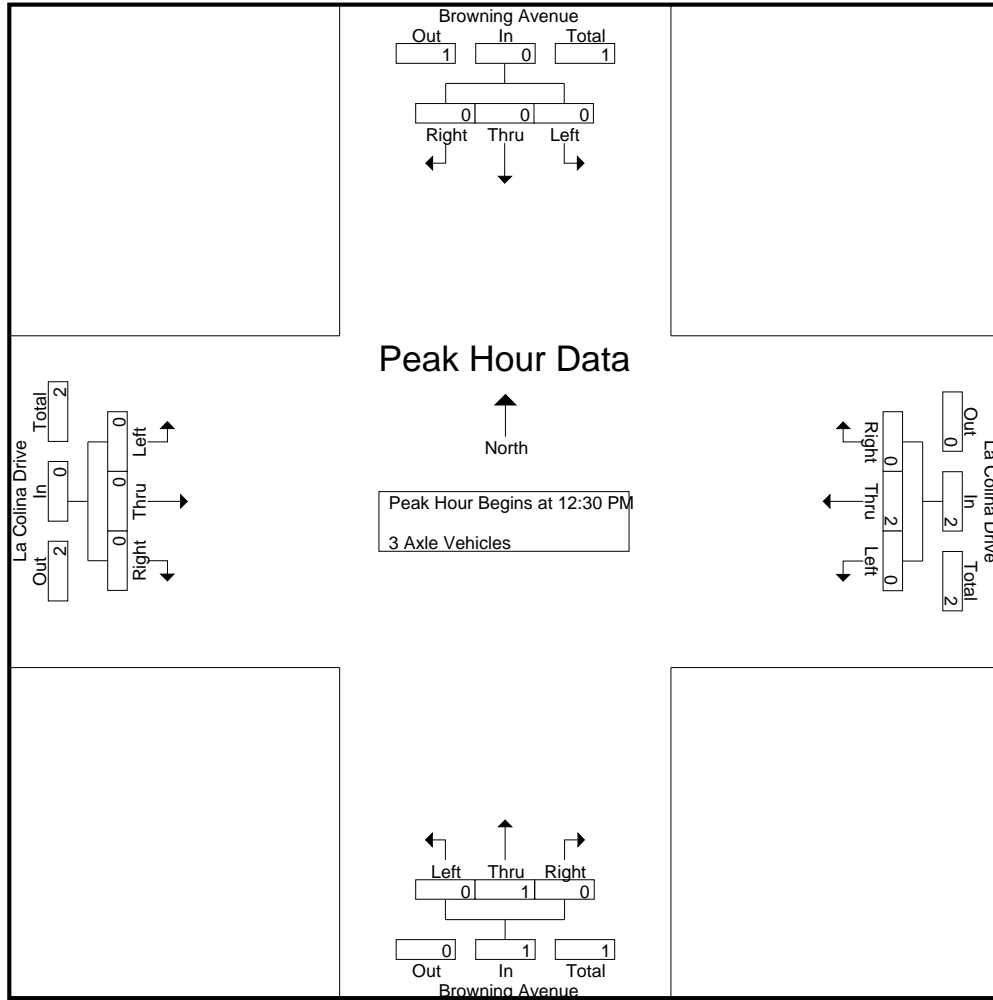
Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
12:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	0	1	0	1	0	0	0	0	3
% App. Total	0	0	0		0	100	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250	.000	.000	.000	.000	.750

Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:30 PM

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM				12:30 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	1	0	1	0	0	0	0
% App. Total	0	0	0	0	0	100	0	0	0	100	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250	.000	.000	.000	.000

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
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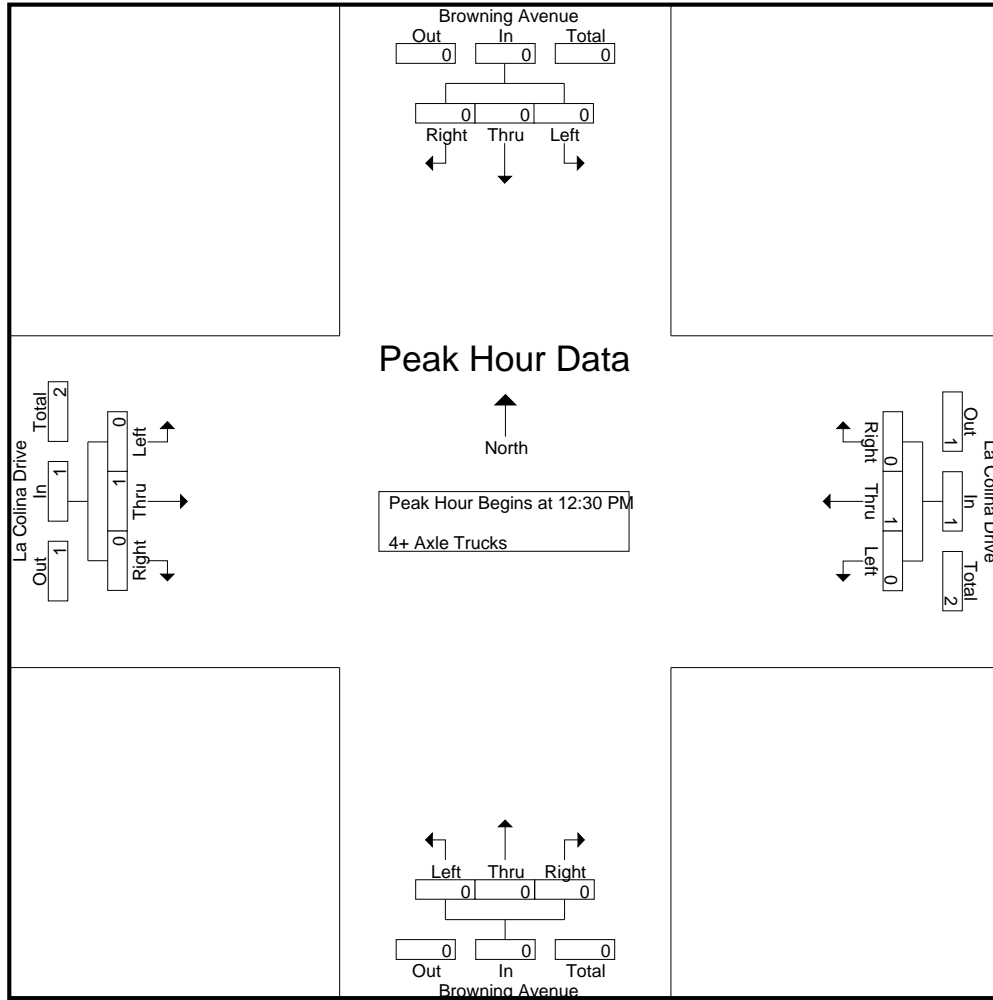
Groups Printed- 4+ Axle Trucks

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0		0	50	0	50	0	0	0		0	50	0	50	

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.500

Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:30 PM



Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM				12:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCPM
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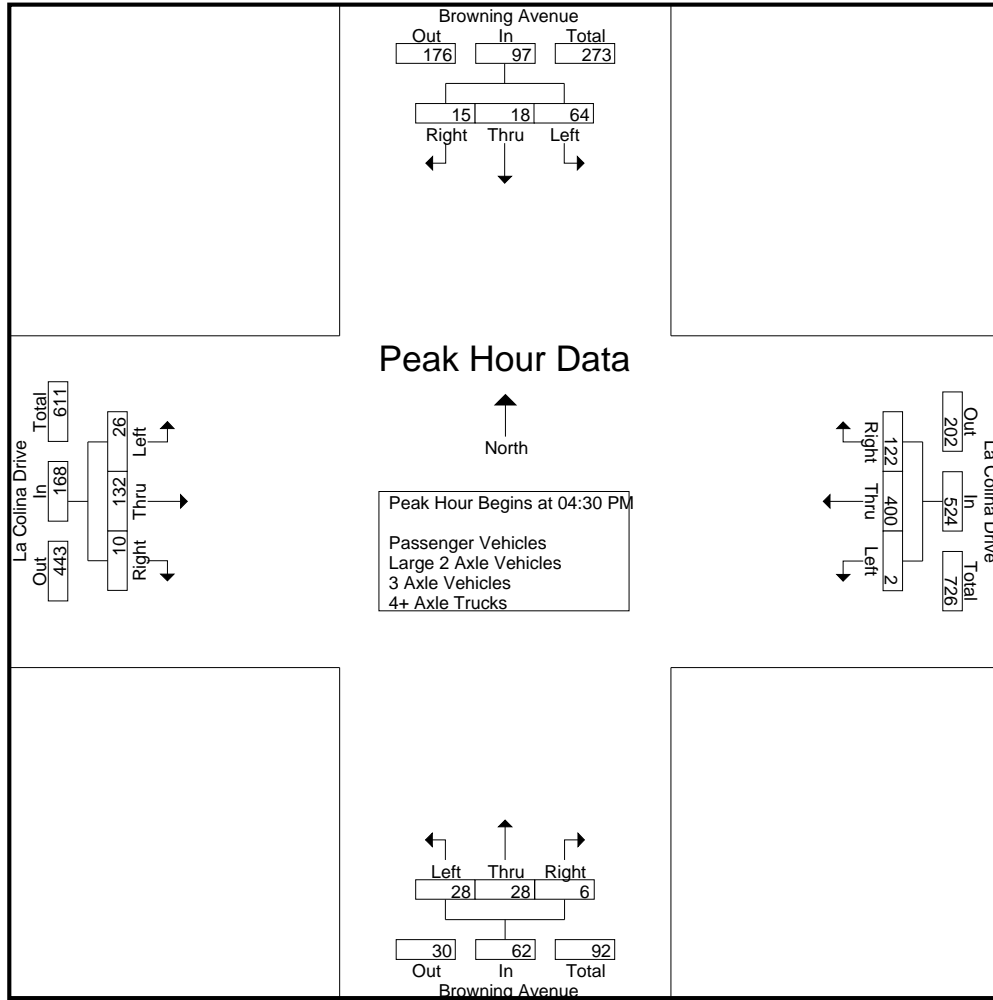
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	24	7	4	35	0	77	20	97	5	7	2	14	1	28	4	33	179
04:15 PM	15	5	4	24	0	80	25	105	5	8	1	14	6	28	2	36	179
04:30 PM	15	6	6	27	0	112	24	136	8	4	3	15	6	31	0	37	215
04:45 PM	15	6	5	26	0	78	30	108	2	7	1	10	6	34	1	41	185
Total	69	24	19	112	0	347	99	446	20	26	7	53	19	121	7	147	758
05:00 PM	15	3	3	21	1	96	24	121	6	6	0	12	5	25	1	31	185
05:15 PM	19	3	1	23	1	114	44	159	12	11	2	25	9	42	8	59	266
05:30 PM	34	9	3	46	1	72	19	92	4	8	1	13	4	24	1	29	180
05:45 PM	13	6	4	23	0	107	27	134	2	4	1	7	4	32	3	39	203
Total	81	21	11	113	3	389	114	506	24	29	4	57	22	123	13	158	834
Grand Total	150	45	30	225	3	736	213	952	44	55	11	110	41	244	20	305	1592
Apprch %	66.7	20	13.3		0.2	77.3	22.4		40	50	10		13.4	80	6.6		
Total %	9.4	2.8	1.9	14.1	0.2	46.2	13.4	59.8	2.8	3.5	0.7	6.9	2.6	15.3	1.3	19.2	
Passenger Vehicles	149	45	30	224	3	732	212	947	44	54	11	109	40	241	20	301	1581
% Passenger Vehicles	99.3	100	100	99.6	100	99.5	99.5	99.5	100	98.2	100	99.1	97.6	98.8	100	98.7	99.3
Large 2 Axle Vehicles	1	0	0	1	0	4	0	4	0	1	0	1	0	2	0	2	8
% Large 2 Axle Vehicles	0.7	0	0	0.4	0	0.5	0	0.4	0	1.8	0	0.9	0	0.8	0	0.7	0.5
3 Axle Vehicles	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
% 3 Axle Vehicles	0	0	0	0	0	0	0.5	0.1	0	0	0	0	2.4	0.4	0	0.7	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	15	6	6	27	0	112	24	136	8	4	3	15	6	31	0	37	215
04:45 PM	15	6	5	26	0	78	30	108	2	7	1	10	6	34	1	41	185
05:00 PM	15	3	3	21	1	96	24	121	6	6	0	12	5	25	1	31	185
05:15 PM	19	3	1	23	1	114	44	159	12	11	2	25	9	42	8	59	266
Total Volume	64	18	15	97	2	400	122	524	28	28	6	62	26	132	10	168	851
% App. Total	66	18.6	15.5		0.4	76.3	23.3		45.2	45.2	9.7		15.5	78.6	6		
PHF	.842	.750	.625	.898	.500	.877	.693	.824	.583	.636	.500	.620	.722	.786	.313	.712	.800

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	15	6	5	26	0	112	24	136	8	4	3	15	6	31	0	37
+15 mins.	15	3	3	21	0	78	30	108	2	7	1	10	6	34	1	41
+30 mins.	19	3	1	23	1	96	24	121	6	6	0	12	5	25	1	31
+45 mins.	34	9	3	46	1	114	44	159	12	11	2	25	9	42	8	59
Total Volume	83	21	12	116	2	400	122	524	28	28	6	62	26	132	10	168
% App. Total	71.6	18.1	10.3		0.4	76.3	23.3		45.2	45.2	9.7		15.5	78.6	6	
PHF	.610	.583	.600	.630	.500	.877	.693	.824	.583	.636	.500	.620	.722	.786	.313	.712

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

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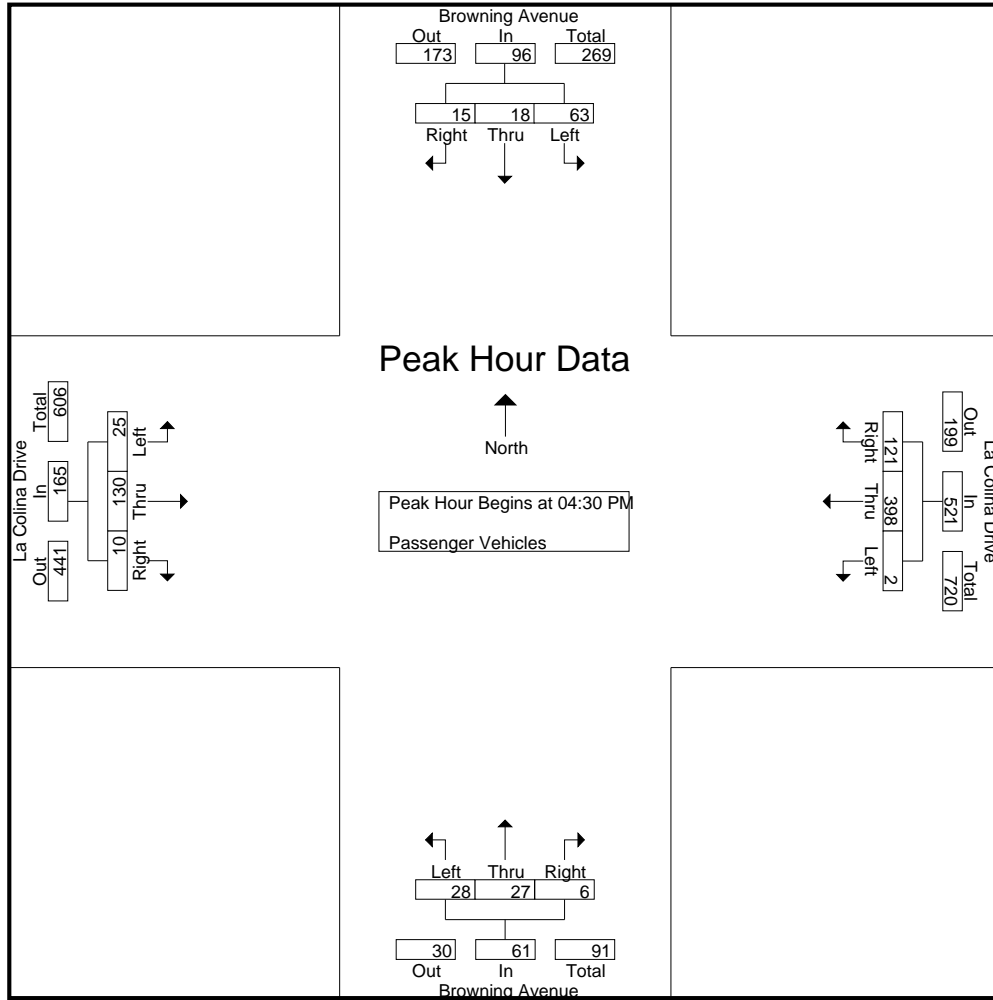
Groups Printed- Passenger Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	24	7	4	35	0	77	20	97	5	7	2	14	1	27	4	32	178
04:15 PM	15	5	4	24	0	79	25	104	5	8	1	14	6	28	2	36	178
04:30 PM	15	6	6	27	0	111	24	135	8	4	3	15	6	31	0	37	214
04:45 PM	14	6	5	25	0	77	29	106	2	7	1	10	5	33	1	39	180
Total	68	24	19	111	0	344	98	442	20	26	7	53	18	119	7	144	750
05:00 PM	15	3	3	21	1	96	24	121	6	6	0	12	5	25	1	31	185
05:15 PM	19	3	1	23	1	114	44	159	12	10	2	24	9	41	8	58	264
05:30 PM	34	9	3	46	1	72	19	92	4	8	1	13	4	24	1	29	180
05:45 PM	13	6	4	23	0	106	27	133	2	4	1	7	4	32	3	39	202
Total	81	21	11	113	3	388	114	505	24	28	4	56	22	122	13	157	831
Grand Total	149	45	30	224	3	732	212	947	44	54	11	109	40	241	20	301	1581
Apprch %	66.5	20.1	13.4		0.3	77.3	22.4		40.4	49.5	10.1		13.3	80.1	6.6		
Total %	9.4	2.8	1.9	14.2	0.2	46.3	13.4	59.9	2.8	3.4	0.7	6.9	2.5	15.2	1.3	19	

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	6	6	27	0	111	24	135	8	4	3	15	6	31	0	37	214
04:45 PM	14	6	5	25	0	77	29	106	2	7	1	10	5	33	1	39	180
05:00 PM	15	3	3	21	1	96	24	121	6	6	0	12	5	25	1	31	185
05:15 PM	19	3	1	23	1	114	44	159	12	10	2	24	9	41	8	58	264
Total Volume	63	18	15	96	2	398	121	521	28	27	6	61	25	130	10	165	843
% App. Total	65.6	18.8	15.6		0.4	76.4	23.2		45.9	44.3	9.8		15.2	78.8	6.1		
PHF	.829	.750	.625	.889	.500	.873	.688	.819	.583	.675	.500	.635	.694	.793	.313	.711	.798

County of Orange
 N/S: Browning Avenue
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM							
+0 mins.	15	6	6	27	0	111	24	135	8	4	3	15	6	31	0	37
+15 mins.	14	6	5	25	0	77	29	106	2	7	1	10	5	33	1	39
+30 mins.	15	3	3	21	1	96	24	121	6	6	0	12	5	25	1	31
+45 mins.	19	3	1	23	1	114	44	159	12	10	2	24	9	41	8	58
Total Volume	63	18	15	96	2	398	121	521	28	27	6	61	25	130	10	165
% App. Total	65.6	18.8	15.6		0.4	76.4	23.2		45.9	44.3	9.8		15.2	78.8	6.1	
PHF	.829	.750	.625	.889	.500	.873	.688	.819	.583	.675	.500	.635	.694	.793	.313	.711

County of Orange
 N/S: Browning Avenue
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 Weather: Clear

File Name : 01_ORCBRLCPM
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Groups Printed- Large 2 Axle Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
04:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
Grand Total	1	0	0	1	0	4	0	4	0	1	0	1	0	2	0	2	8
Apprch %	100	0	0		0	100	0		0	100	0		0	100	0		
Total %	12.5	0	0	12.5	0	50	0	50	0	12.5	0	12.5	0	25	0	25	

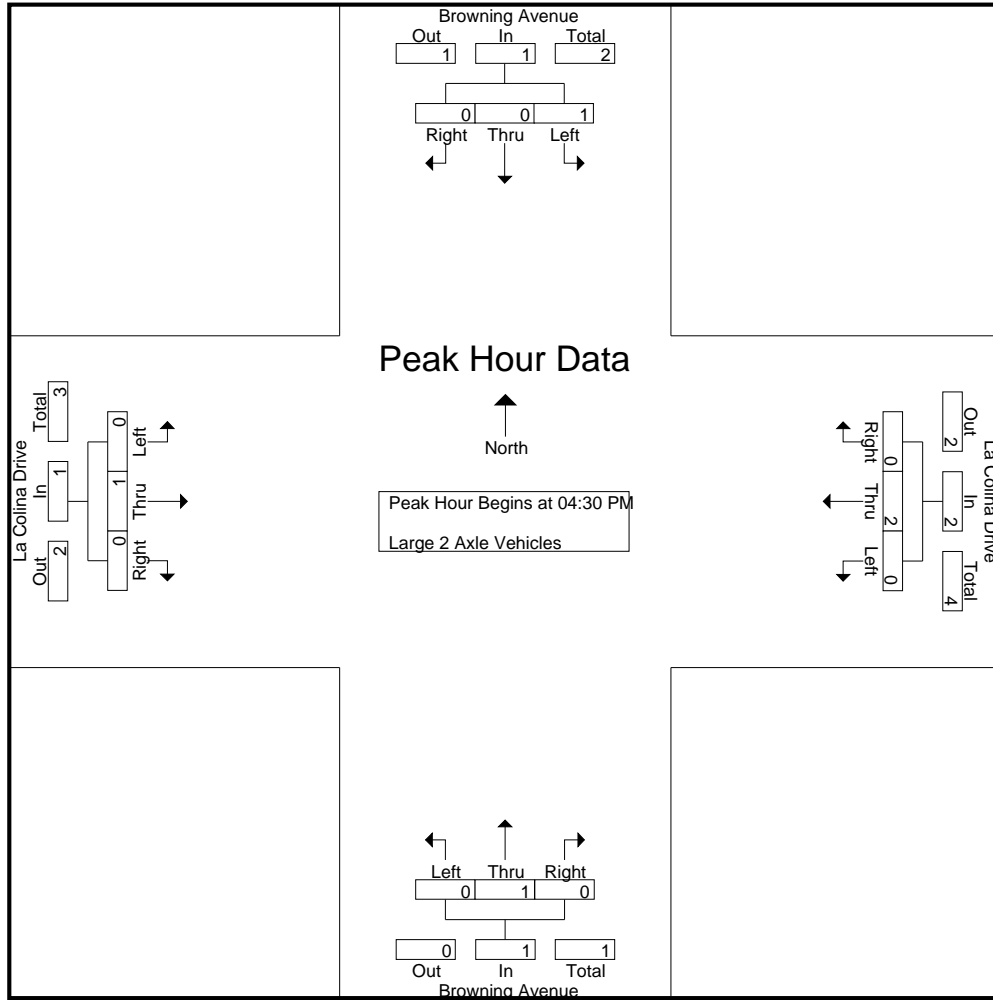
Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Total Volume	1	0	0	1	0	2	0	2	0	1	0	1	0	1	0	1	5
% App. Total	100	0	0		0	100	0		0	100	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.500	.000	.500	.000	.250	.000	.250	.000	.250	.000	.250	.625

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Total Volume	1	0	0	1	0	2	0	2	0	1	0	1	0	1	0	1
% App. Total	100	0	0	0	0	100	0	0	0	100	0	0	0	100	0	0
PHF	.250	.000	.000	.250	.000	.500	.000	.500	.000	.250	.000	.250	.000	.250	.000	.250

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCPM
 Site Code : 21717852
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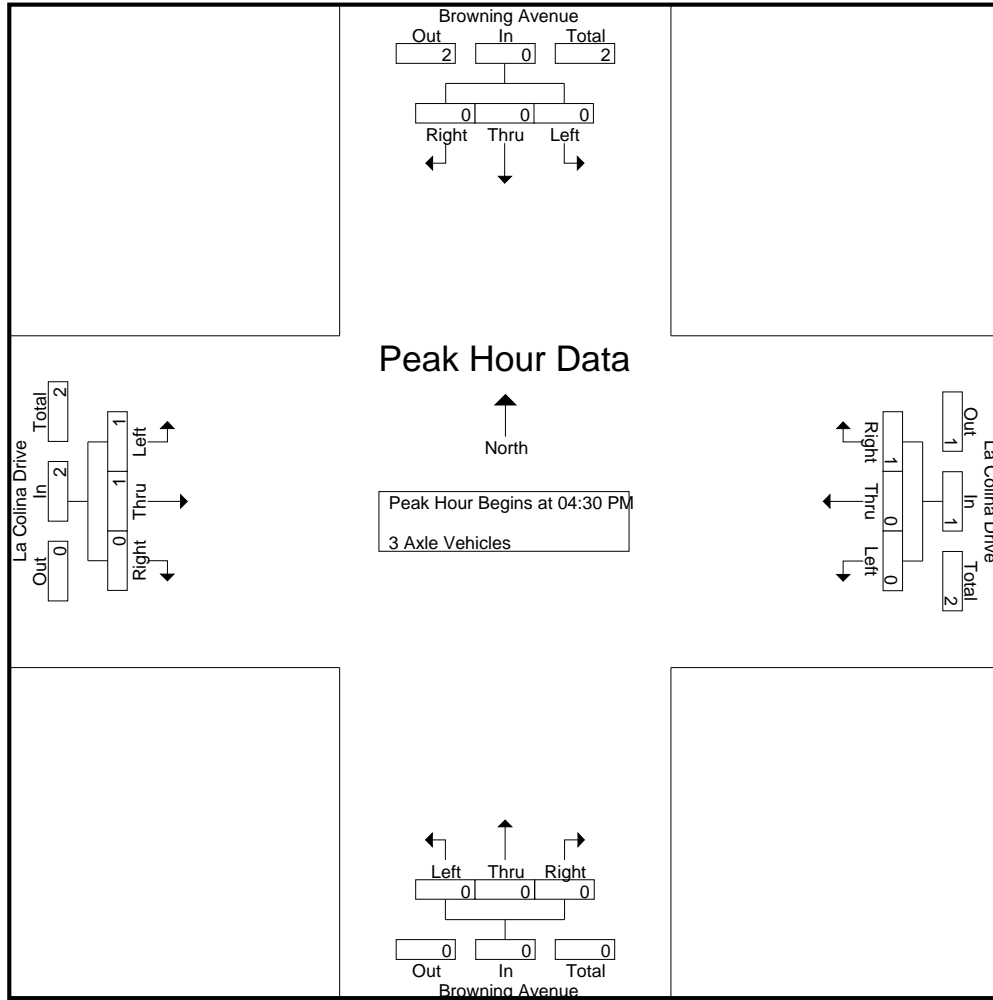
Groups Printed- 3 Axle Vehicles

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
Total	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
Apprch %	0	0	0		0	0	100		0	0	0		50	50	0		
Total %	0	0	0		0	0	33.3	33.3	0	0	0		33.3	33.3	0	66.7	

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
% App. Total	0	0	0		0	0	100		0	0	0		50	50	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250	.250	.000	.250	.250

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2
% App. Total	0	0	0	0	0	0	100	100	0	0	0	0	50	50	0	0
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250	.250	.000	.250

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCPM
 Site Code : 21717852
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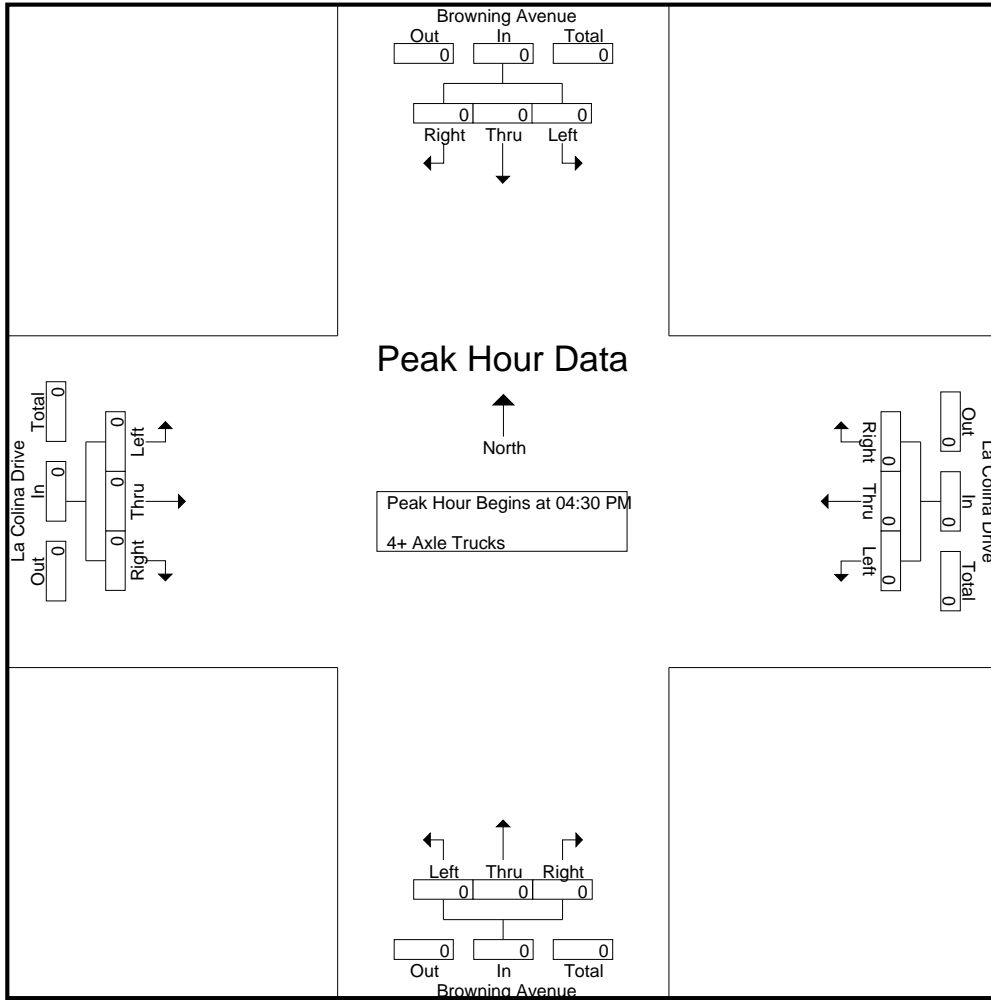
Groups Printed- 4+ Axle Trucks

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

Start Time	Browning Avenue Southbound				La Colina Drive Westbound				Browning Avenue Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Browning Avenue
 E/W: La Colina Drive
 Weather: Clear

File Name : 01_ORCBRLCPM
 Site Code : 21717852
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	173	9	183	5	0	3	8	6	69	4	79	28	0	30	58	328
07:15 AM	0	215	11	226	5	2	4	11	17	111	2	130	34	1	34	69	436
07:30 AM	1	232	31	264	9	0	6	15	20	116	2	138	37	0	37	74	491
07:45 AM	3	267	45	315	13	4	3	20	20	92	3	115	35	0	40	75	525
Total	5	887	96	988	32	6	16	54	63	388	11	462	134	1	141	276	1780
08:00 AM	6	323	61	390	14	4	9	27	24	175	3	202	61	5	84	150	769
08:15 AM	11	422	44	477	12	1	18	31	8	249	2	259	48	5	71	124	891
08:30 AM	5	438	32	475	11	0	3	14	15	158	4	177	32	2	47	81	747
08:45 AM	1	341	27	369	13	2	2	17	16	132	3	151	39	0	32	71	608
Total	23	1524	164	1711	50	7	32	89	63	714	12	789	180	12	234	426	3015
Grand Total	28	2411	260	2699	82	13	48	143	126	1102	23	1251	314	13	375	702	4795
Apprch %	1	89.3	9.6		57.3	9.1	33.6		10.1	88.1	1.8		44.7	1.9	53.4		
Total %	0.6	50.3	5.4	56.3	1.7	0.3	1	3	2.6	23	0.5	26.1	6.5	0.3	7.8	14.6	
Passenger Vehicles	26	2389	257	2672	81	12	48	141	120	1079	21	1220	310	13	374	697	4730
% Passenger Vehicles	92.9	99.1	98.8	99	98.8	92.3	100	98.6	95.2	97.9	91.3	97.5	98.7	100	99.7	99.3	98.6
Large 2 Axle Vehicles	2	14	3	19	1	0	0	1	5	20	1	26	4	0	1	5	51
% Large 2 Axle Vehicles	7.1	0.6	1.2	0.7	1.2	0	0	0.7	4	1.8	4.3	2.1	1.3	0	0.3	0.7	1.1
3 Axle Vehicles	0	4	0	4	0	1	0	1	1	2	1	4	0	0	0	0	9
% 3 Axle Vehicles	0	0.2	0	0.1	0	7.7	0	0.7	0.8	0.2	4.3	0.3	0	0	0	0	0.2
4+ Axle Trucks	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
% 4+ Axle Trucks	0	0.2	0	0.1	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.1

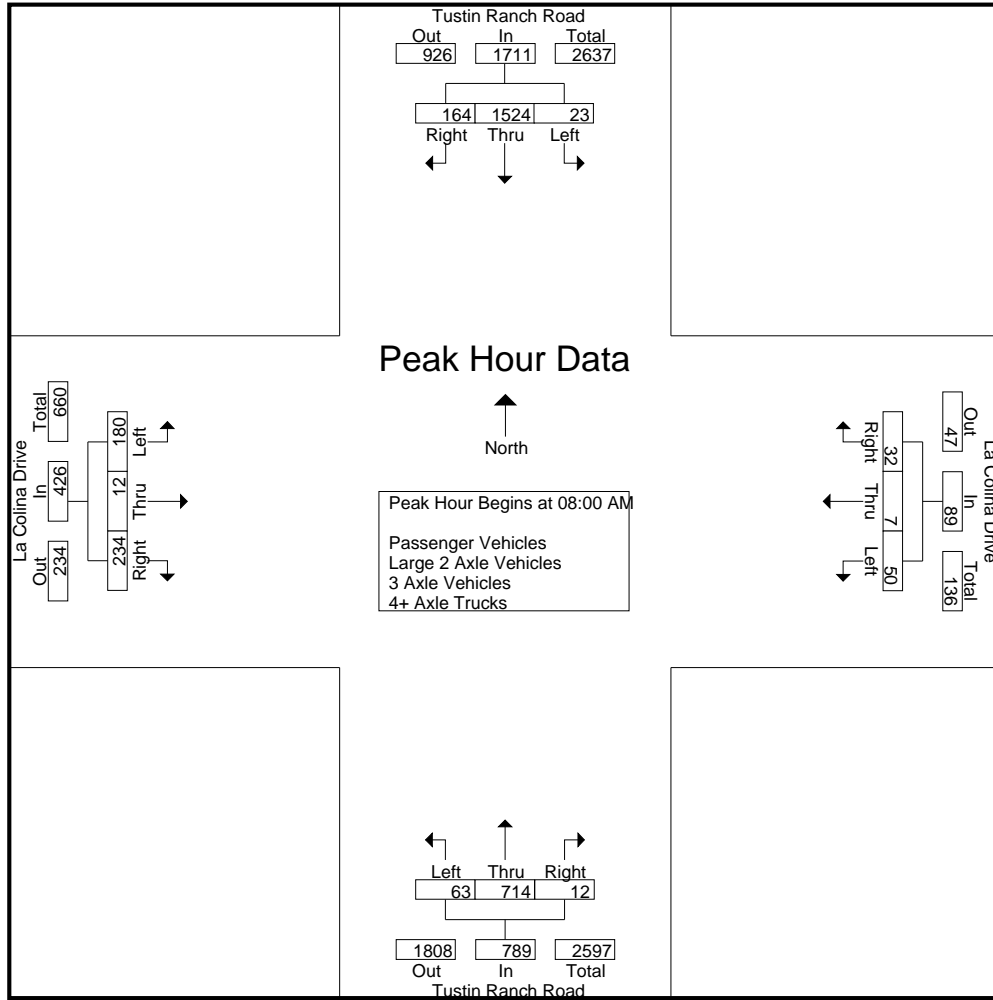
Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	6	323	61	390	14	4	9	27	24	175	3	202	61	5	84	150	769
08:15 AM	11	422	44	477	12	1	18	31	8	249	2	259	48	5	71	124	891
08:30 AM	5	438	32	475	11	0	3	14	15	158	4	177	32	2	47	81	747
08:45 AM	1	341	27	369	13	2	2	17	16	132	3	151	39	0	32	71	608
Total Volume	23	1524	164	1711	50	7	32	89	63	714	12	789	180	12	234	426	3015
% App. Total	1.3	89.1	9.6		56.2	7.9	36		8	90.5	1.5		42.3	2.8	54.9		
PHF	.523	.870	.672	.897	.893	.438	.444	.718	.656	.717	.750	.762	.738	.600	.696	.710	.846

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				07:30 AM				08:00 AM				07:45 AM			
+0 mins.	6	323	61	390	9	0	6	15	24	175	3	202	35	0	40	75
+15 mins.	11	422	44	477	13	4	3	20	8	249	2	259	61	5	84	150
+30 mins.	5	438	32	475	14	4	9	27	15	158	4	177	48	5	71	124
+45 mins.	1	341	27	369	12	1	18	31	16	132	3	151	32	2	47	81
Total Volume	23	1524	164	1711	48	9	36	93	63	714	12	789	176	12	242	430
% App. Total	1.3	89.1	9.6		51.6	9.7	38.7		8	90.5	1.5		40.9	2.8	56.3	
PHF	.523	.870	.672	.897	.857	.563	.500	.750	.656	.717	.750	.762	.721	.600	.720	.717

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	172	9	182	5	0	3	8	6	66	3	75	28	0	30	58	323
07:15 AM	0	213	11	224	5	2	4	11	16	104	2	122	33	1	34	68	425
07:30 AM	1	230	31	262	9	0	6	15	20	116	2	138	36	0	37	73	488
07:45 AM	2	265	45	312	13	3	3	19	20	91	3	114	35	0	40	75	520
Total	4	880	96	980	32	5	16	53	62	377	10	449	132	1	141	274	1756
08:00 AM	6	321	61	388	13	4	9	26	24	171	3	198	60	5	84	149	761
08:15 AM	10	420	44	474	12	1	18	31	6	247	2	255	48	5	71	124	884
08:30 AM	5	433	31	469	11	0	3	14	12	158	4	174	32	2	46	80	737
08:45 AM	1	335	25	361	13	2	2	17	16	126	2	144	38	0	32	70	592
Total	22	1509	161	1692	49	7	32	88	58	702	11	771	178	12	233	423	2974
Grand Total	26	2389	257	2672	81	12	48	141	120	1079	21	1220	310	13	374	697	4730
Apprch %	1	89.4	9.6		57.4	8.5	34		9.8	88.4	1.7		44.5	1.9	53.7		
Total %	0.5	50.5	5.4	56.5	1.7	0.3	1	3	2.5	22.8	0.4	25.8	6.6	0.3	7.9	14.7	

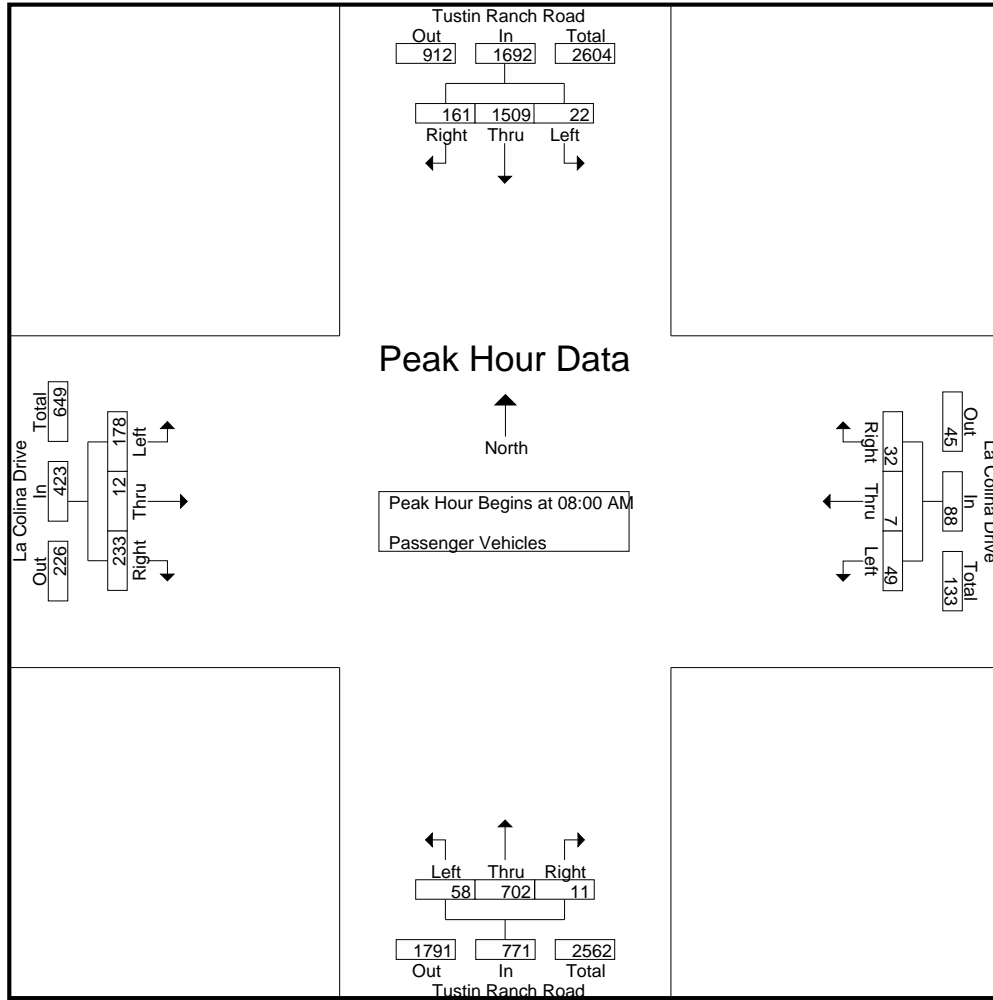
Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	6	321	61	388	13	4	9	26	24	171	3	198	60	5	84	149	761
08:15 AM	10	420	44	474	12	1	18	31	6	247	2	255	48	5	71	124	884
08:30 AM	5	433	31	469	11	0	3	14	12	158	4	174	32	2	46	80	737
08:45 AM	1	335	25	361	13	2	2	17	16	126	2	144	38	0	32	70	592
Total Volume	22	1509	161	1692	49	7	32	88	58	702	11	771	178	12	233	423	2974
% App. Total	1.3	89.2	9.5		55.7	8	36.4		7.5	91.1	1.4		42.1	2.8	55.1		
PHF	.550	.871	.660	.892	.942	.438	.444	.710	.604	.711	.688	.756	.742	.600	.693	.710	.841

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM							
+0 mins.	6	321	61	388	13	4	9	26	24	171	3	198	60	5	84	149
+15 mins.	10	420	44	474	12	1	18	31	6	247	2	255	48	5	71	124
+30 mins.	5	433	31	469	11	0	3	14	12	158	4	174	32	2	46	80
+45 mins.	1	335	25	361	13	2	2	17	16	126	2	144	38	0	32	70
Total Volume	22	1509	161	1692	49	7	32	88	58	702	11	771	178	12	233	423
% App. Total	1.3	89.2	9.5		55.7	8	36.4		7.5	91.1	1.4		42.1	2.8	55.1	
PHF	.550	.871	.660	.892	.942	.438	.444	.710	.604	.711	.688	.756	.742	.600	.693	.710

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

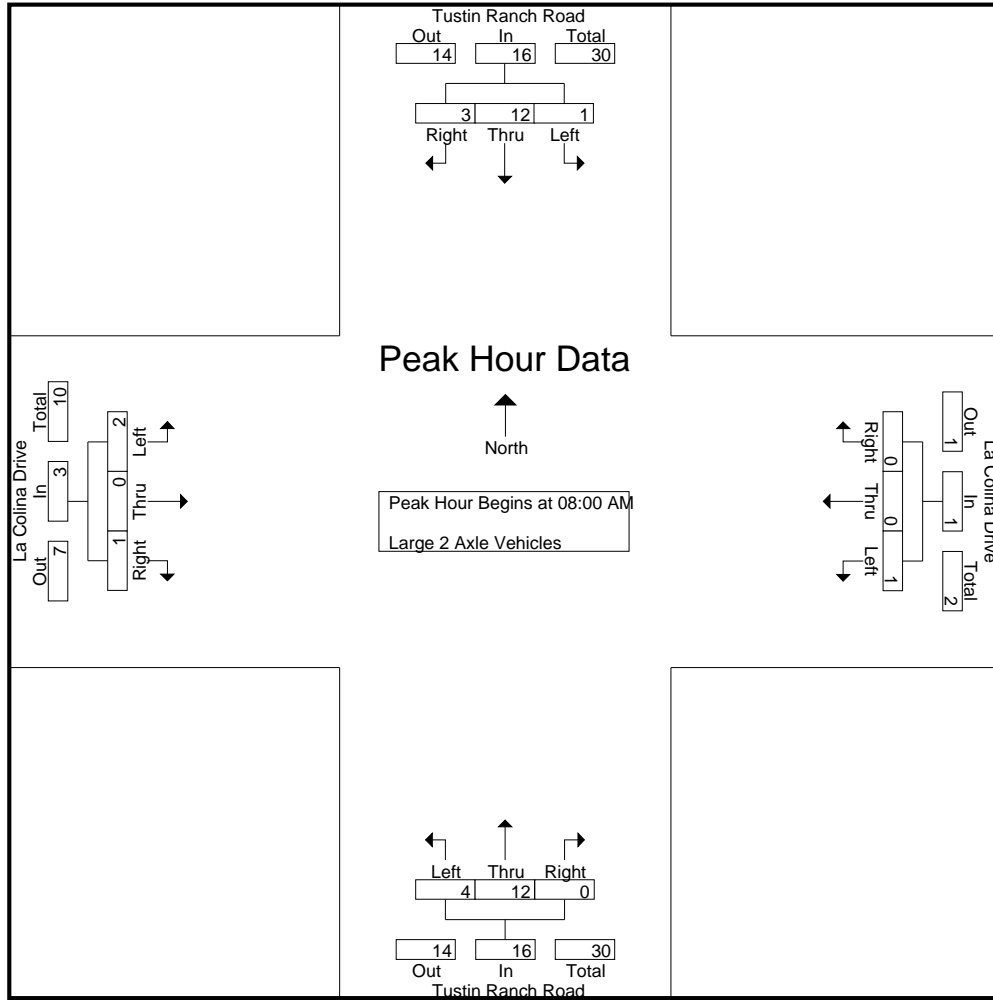
Groups Printed- Large 2 Axle Vehicles

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	0	1	0	0	0	0	0	2	1	3	0	0	0	0	4
07:15 AM	0	1	0	1	0	0	0	0	1	5	0	6	1	0	0	1	8
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	1	2	0	3	0	0	0	0	1	8	1	10	2	0	0	2	15
08:00 AM	0	0	0	0	1	0	0	1	0	4	0	4	1	0	0	1	6
08:15 AM	1	2	0	3	0	0	0	0	1	2	0	3	0	0	0	0	6
08:30 AM	0	4	1	5	0	0	0	0	3	0	0	3	0	0	1	1	9
08:45 AM	0	6	2	8	0	0	0	0	0	6	0	6	1	0	0	1	15
Total	1	12	3	16	1	0	0	1	4	12	0	16	2	0	1	3	36
Grand Total	2	14	3	19	1	0	0	1	5	20	1	26	4	0	1	5	51
Apprch %	10.5	73.7	15.8		100	0	0		19.2	76.9	3.8		80	0	20		
Total %	3.9	27.5	5.9	37.3	2	0	0	2	9.8	39.2	2	51	7.8	0	2	9.8	

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	0	0	0	0	1	0	0	1	0	4	0	4	1	0	0	1	6
08:15 AM	1	2	0	3	0	0	0	0	1	2	0	3	0	0	0	0	6
08:30 AM	0	4	1	5	0	0	0	0	3	0	0	3	0	0	1	1	9
08:45 AM	0	6	2	8	0	0	0	0	0	6	0	6	1	0	0	1	15
Total Volume	1	12	3	16	1	0	0	1	4	12	0	16	2	0	1	3	36
% App. Total	6.2	75	18.8		100	0	0		25	75	0		66.7	0	33.3		
PHF	.250	.500	.375	.500	.250	.000	.000	.250	.333	.500	.000	.667	.500	.000	.250	.750	.600

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM



Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	0	0	0	1	0	0	1	0	4	0	4	1	0	0	1
+15 mins.	1	2	0	3	0	0	0	0	1	2	0	3	0	0	0	0
+30 mins.	0	4	1	5	0	0	0	0	3	0	0	3	0	0	1	1
+45 mins.	0	6	2	8	0	0	0	0	0	6	0	6	1	0	0	1
Total Volume	1	12	3	16	1	0	0	1	4	12	0	16	2	0	1	3
% App. Total	6.2	75	18.8		100	0	0		25	75	0		66.7	0	33.3	
PHF	.250	.500	.375	.500	.250	.000	.000	.250	.333	.500	.000	.667	.500	.000	.250	.750

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
Total	0	3	0	3	0	1	0	1	0	2	0	2	0	0	0	0	6
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	1	0	1	2	0	0	0	0	3
Grand Total	0	4	0	4	0	1	0	1	1	2	1	4	0	0	0	0	9
Apprch %	0	100	0		0	100	0		25	50	25		0	0	0		
Total %	0	44.4	0	44.4	0	11.1	0	11.1	11.1	22.2	11.1	44.4	0	0	0	0	

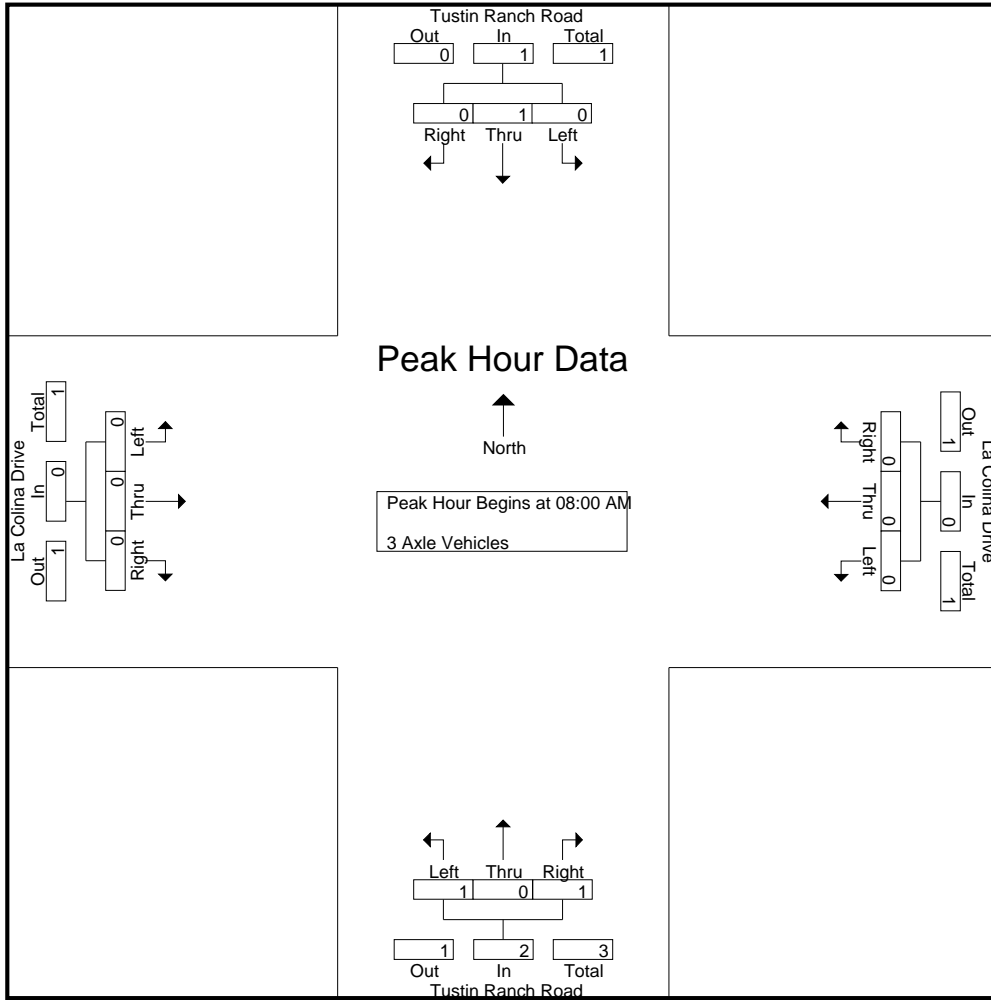
Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Volume	0	1	0	1	0	0	0	0	1	0	1	2	0	0	0	0	3
% App. Total	0	100	0		0	0	0		50	0	50		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.000	.000	.750

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 2



Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	1	0	1	2	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	50	0	50	100	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.000	.000

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	80	0	80	0	0	0	0	0	20	0	20	0	0	0	0	

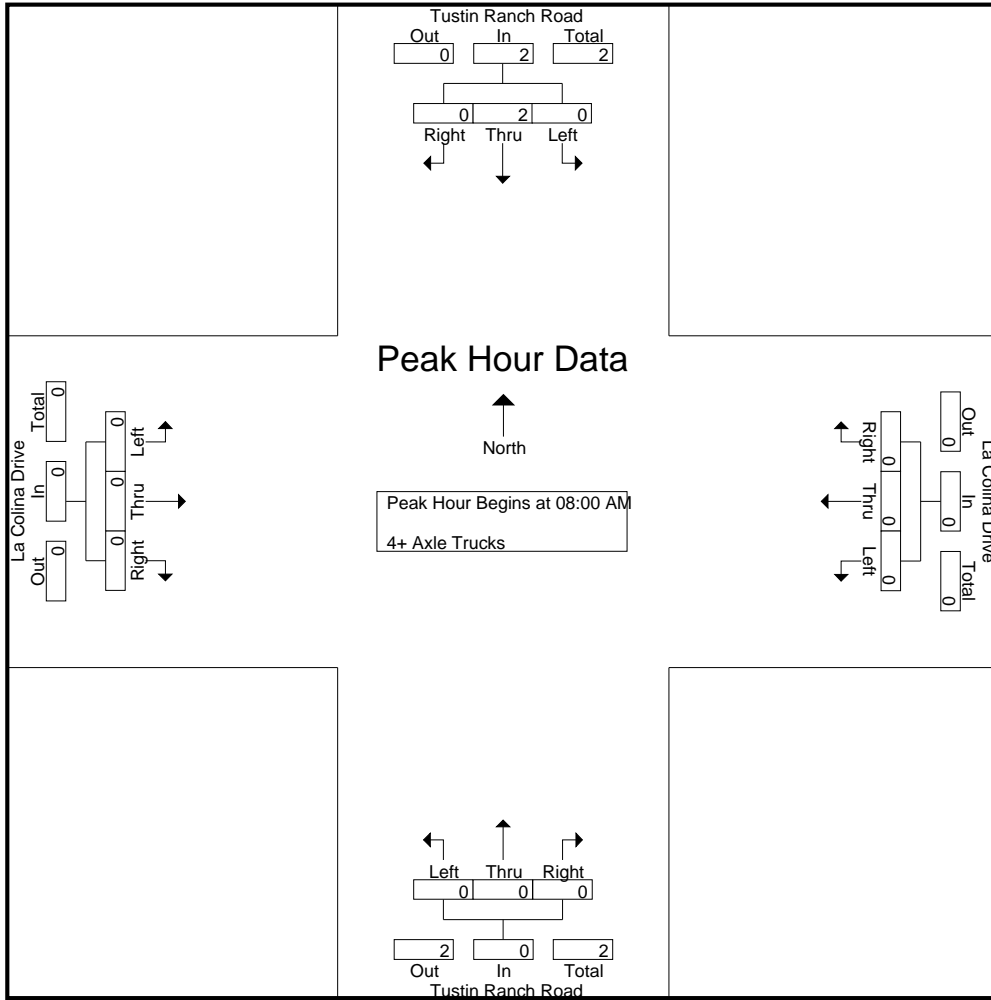
Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCAM
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

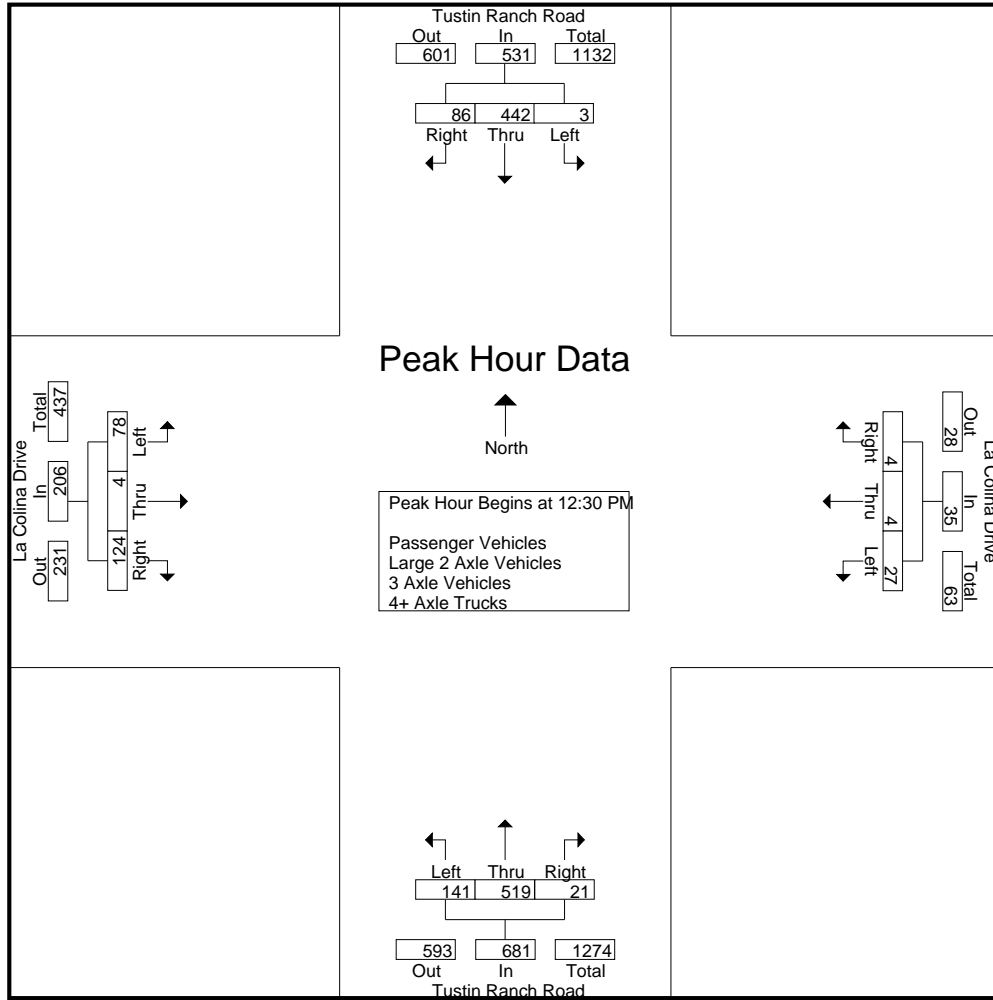
County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	93	9	102	10	0	3	13	22	104	8	134	15	1	24	40	289
11:45 AM	1	128	15	144	5	2	3	10	24	99	5	128	11	3	23	37	319
Total	1	221	24	246	15	2	6	23	46	203	13	262	26	4	47	77	608
12:00 PM	2	125	13	140	7	0	0	7	27	88	7	122	12	1	26	39	308
12:15 PM	3	116	15	134	2	1	2	5	20	107	7	134	13	3	31	47	320
12:30 PM	0	104	15	119	8	3	1	12	27	99	7	133	8	0	21	29	293
12:45 PM	1	102	20	123	7	0	2	9	35	121	5	161	14	0	27	41	334
Total	6	447	63	516	24	4	5	33	109	415	26	550	47	4	105	156	1255
01:00 PM	1	129	23	153	5	1	1	7	43	132	5	180	15	0	28	43	383
01:15 PM	1	107	28	136	7	0	0	7	36	167	4	207	41	4	48	93	443
Grand Total	9	904	138	1051	51	7	12	70	234	917	48	1199	129	12	228	369	2689
Apprch %	0.9	86	13.1		72.9	10	17.1		19.5	76.5	4		35	3.3	61.8		
Total %	0.3	33.6	5.1	39.1	1.9	0.3	0.4	2.6	8.7	34.1	1.8	44.6	4.8	0.4	8.5	13.7	
Passenger Vehicles	9	886	128	1023	48	7	12	67	231	904	46	1181	125	12	221	358	2629
% Passenger Vehicles	100	98	92.8	97.3	94.1	100	100	95.7	98.7	98.6	95.8	98.5	96.9	100	96.9	97	97.8
Large 2 Axle Vehicles	0	14	5	19	1	0	0	1	3	12	0	15	1	0	7	8	43
% Large 2 Axle Vehicles	0	1.5	3.6	1.8	2	0	0	1.4	1.3	1.3	0	1.3	0.8	0	3.1	2.2	1.6
3 Axle Vehicles	0	1	4	5	2	0	0	2	0	1	2	3	2	0	0	2	12
% 3 Axle Vehicles	0	0.1	2.9	0.5	3.9	0	0	2.9	0	0.1	4.2	0.3	1.6	0	0	0.5	0.4
4+ Axle Trucks	0	3	1	4	0	0	0	0	0	0	0	0	1	0	0	1	5
% 4+ Axle Trucks	0	0.3	0.7	0.4	0	0	0	0	0	0	0	0	0.8	0	0	0.3	0.2

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	104	15	119	8	3	1	12	27	99	7	133	8	0	21	29	293
12:45 PM	1	102	20	123	7	0	2	9	35	121	5	161	14	0	27	41	334
01:00 PM	1	129	23	153	5	1	1	7	43	132	5	180	15	0	28	43	383
01:15 PM	1	107	28	136	7	0	0	7	36	167	4	207	41	4	48	93	443
Total Volume	3	442	86	531	27	4	4	35	141	519	21	681	78	4	124	206	1453
% App. Total	0.6	83.2	16.2		77.1	11.4	11.4		20.7	76.2	3.1		37.9	1.9	60.2		
PHF	.750	.857	.768	.868	.844	.333	.500	.729	.820	.777	.750	.822	.476	.250	.646	.554	.820



Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	11:45 AM				11:30 AM				12:30 PM				12:30 PM			
+0 mins.	1	128	15	144	10	0	3	13	27	99	7	133	8	0	21	29
+15 mins.	2	125	13	140	5	2	3	10	35	121	5	161	14	0	27	41
+30 mins.	3	116	15	134	7	0	0	7	43	132	5	180	15	0	28	43
+45 mins.	0	104	15	119	2	1	2	5	36	167	4	207	41	4	48	93
Total Volume	6	473	58	537	24	3	8	35	141	519	21	681	78	4	124	206
% App. Total	1.1	88.1	10.8		68.6	8.6	22.9		20.7	76.2	3.1		37.9	1.9	60.2	
PHF	.500	.924	.967	.932	.600	.375	.667	.673	.820	.777	.750	.822	.476	.250	.646	.554

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

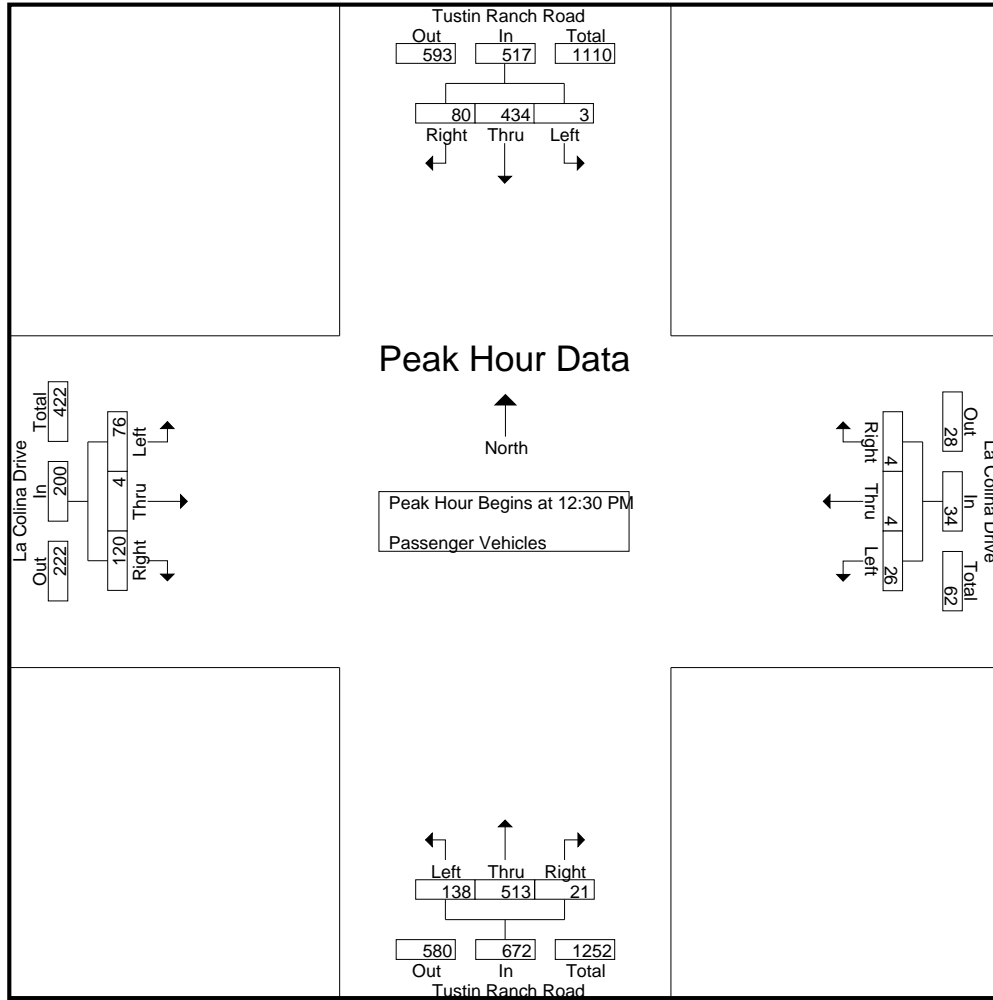
Groups Printed- Passenger Vehicles

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	91	7	98	9	0	3	12	22	102	7	131	13	1	24	38	279
11:45 AM	1	122	14	137	4	2	3	9	24	98	5	127	11	3	23	37	310
Total	1	213	21	235	13	2	6	21	46	200	12	258	24	4	47	75	589
12:00 PM	2	124	13	139	7	0	0	7	27	87	7	121	12	1	25	38	305
12:15 PM	3	115	14	132	2	1	2	5	20	104	6	130	13	3	29	45	312
12:30 PM	0	101	14	115	8	3	1	12	25	96	7	128	8	0	20	28	283
12:45 PM	1	99	16	116	6	0	2	8	35	120	5	160	14	0	26	40	324
Total	6	439	57	502	23	4	5	32	107	407	25	539	47	4	100	151	1224
01:00 PM	1	127	23	151	5	1	1	7	42	130	5	177	14	0	28	42	377
01:15 PM	1	107	27	135	7	0	0	7	36	167	4	207	40	4	46	90	439
Grand Total	9	886	128	1023	48	7	12	67	231	904	46	1181	125	12	221	358	2629
Apprch %	0.9	86.6	12.5		71.6	10.4	17.9		19.6	76.5	3.9		34.9	3.4	61.7		
Total %	0.3	33.7	4.9	38.9	1.8	0.3	0.5	2.5	8.8	34.4	1.7	44.9	4.8	0.5	8.4	13.6	

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	101	14	115	8	3	1	12	25	96	7	128	8	0	20	28	283
12:45 PM	1	99	16	116	6	0	2	8	35	120	5	160	14	0	26	40	324
01:00 PM	1	127	23	151	5	1	1	7	42	130	5	177	14	0	28	42	377
01:15 PM	1	107	27	135	7	0	0	7	36	167	4	207	40	4	46	90	439
Total Volume	3	434	80	517	26	4	4	34	138	513	21	672	76	4	120	200	1423
% App. Total	0.6	83.9	15.5		76.5	11.8	11.8		20.5	76.3	3.1		38	2	60		
PHF	.750	.854	.741	.856	.813	.333	.500	.708	.821	.768	.750	.812	.475	.250	.652	.556	.810

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCMD
 Site Code : 21717852
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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	101	14	115	8	3	1	12	25	96	7	128	8	0	20	28
+15 mins.	1	99	16	116	6	0	2	8	35	120	5	160	14	0	26	40
+30 mins.	1	127	23	151	5	1	1	7	42	130	5	177	14	0	28	42
+45 mins.	1	107	27	135	7	0	0	7	36	167	4	207	40	4	46	90
Total Volume	3	434	80	517	26	4	4	34	138	513	21	672	76	4	120	200
% App. Total	0.6	83.9	15.5		76.5	11.8	11.8		20.5	76.3	3.1		38	2	60	
PHF	.750	.854	.741	.856	.813	.333	.500	.708	.821	.768	.750	.812	.475	.250	.652	.556

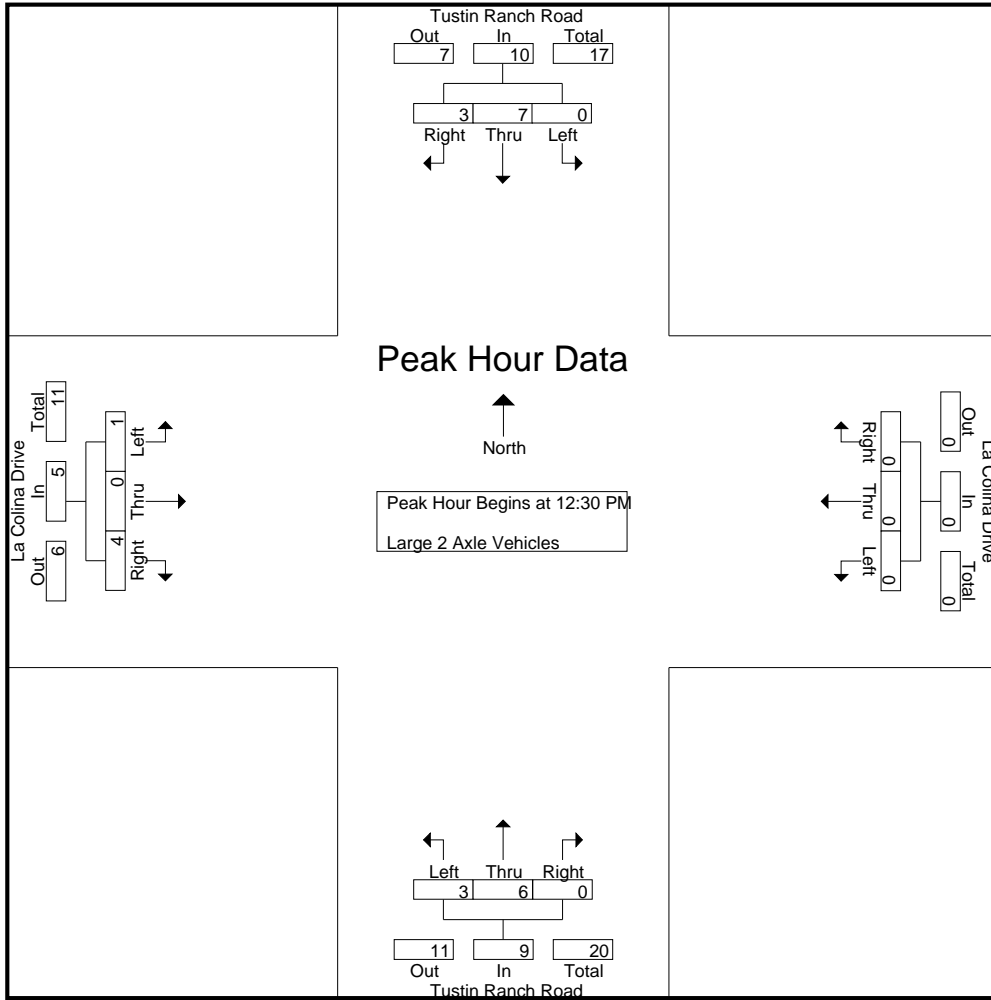
County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	2	1	3	1	0	0	1	0	1	0	1	0	0	0	0	5
11:45 AM	0	3	1	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total	0	5	2	7	1	0	0	1	0	2	0	2	0	0	0	0	10
12:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
12:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	2	2	6
12:30 PM	0	2	0	2	0	0	0	0	2	3	0	5	0	0	1	1	8
12:45 PM	0	3	3	6	0	0	0	0	0	1	0	1	0	0	1	1	8
Total	0	7	3	10	0	0	0	0	2	8	0	10	0	0	5	5	25
01:00 PM	0	2	0	2	0	0	0	0	1	2	0	3	0	0	0	0	5
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
Grand Total	0	14	5	19	1	0	0	1	3	12	0	15	1	0	7	8	43
Apprch %	0	73.7	26.3		100	0	0		20	80	0		12.5	0	87.5		
Total %	0	32.6	11.6	44.2	2.3	0	0	2.3	7	27.9	0	34.9	2.3	0	16.3	18.6	

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	2	0	2	0	0	0	0	2	3	0	5	0	0	1	1	8
12:45 PM	0	3	3	6	0	0	0	0	0	1	0	1	0	0	1	1	8
01:00 PM	0	2	0	2	0	0	0	0	1	2	0	3	0	0	0	0	5
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
Total Volume	0	7	3	10	0	0	0	0	3	6	0	9	1	0	4	5	24
% App. Total	0	70	30		0	0	0		33.3	66.7	0		20	0	80		
PHF	.000	.583	.250	.417	.000	.000	.000	.000	.375	.500	.000	.450	.250	.000	.500	.417	.750



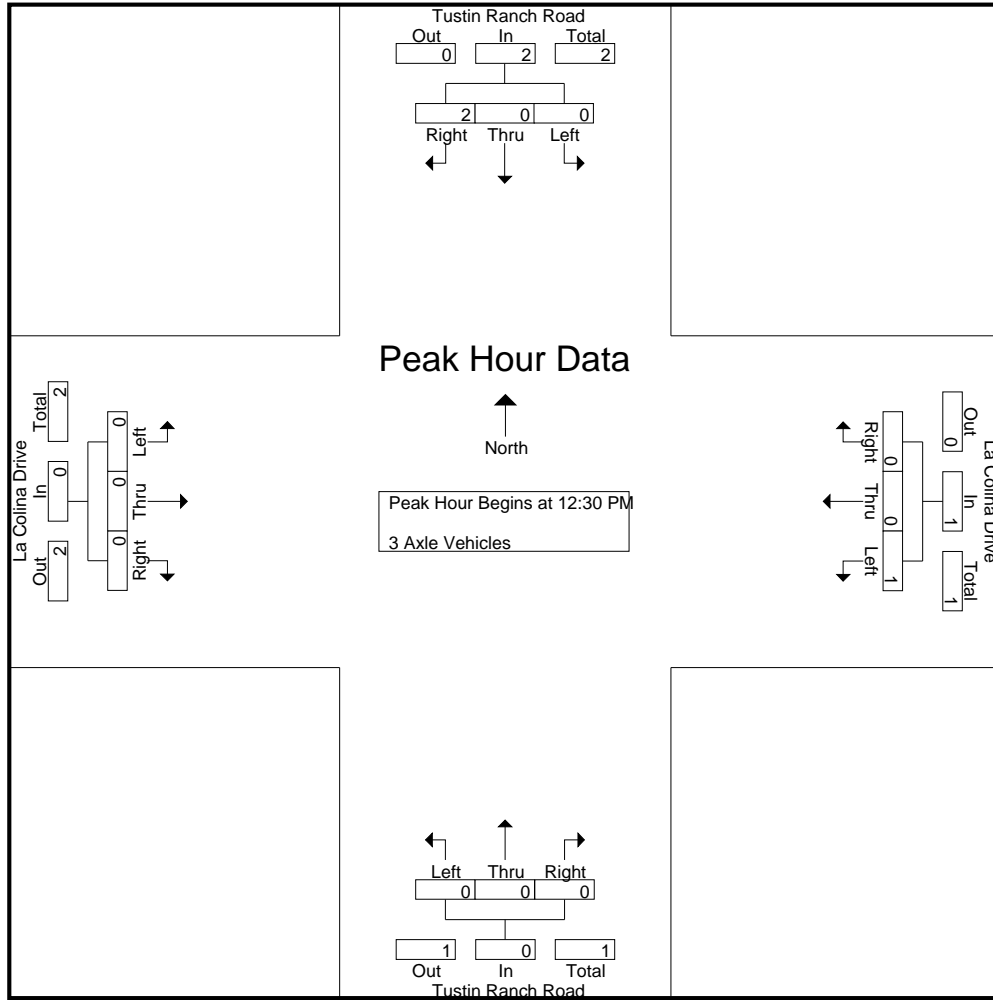
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	2	0	2	0	0	0	0	2	3	0	5	0	0	1	1
+15 mins.	0	3	3	6	0	0	0	0	0	1	0	1	0	0	1	1
+30 mins.	0	2	0	2	0	0	0	0	1	2	0	3	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3
Total Volume	0	7	3	10	0	0	0	0	3	6	0	9	1	0	4	5
% App. Total	0	70	30		0	0	0		33.3	66.7	0		20	0	80	
PHF	.000	.583	.250	.417	.000	.000	.000	.000	.375	.500	.000	.450	.250	.000	.500	.417

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
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Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM				12:30 PM			
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	2	2	1	0	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	100		100	0	0		0	0	0		0	0	0	
PHF	.000	.000	.500	.500	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

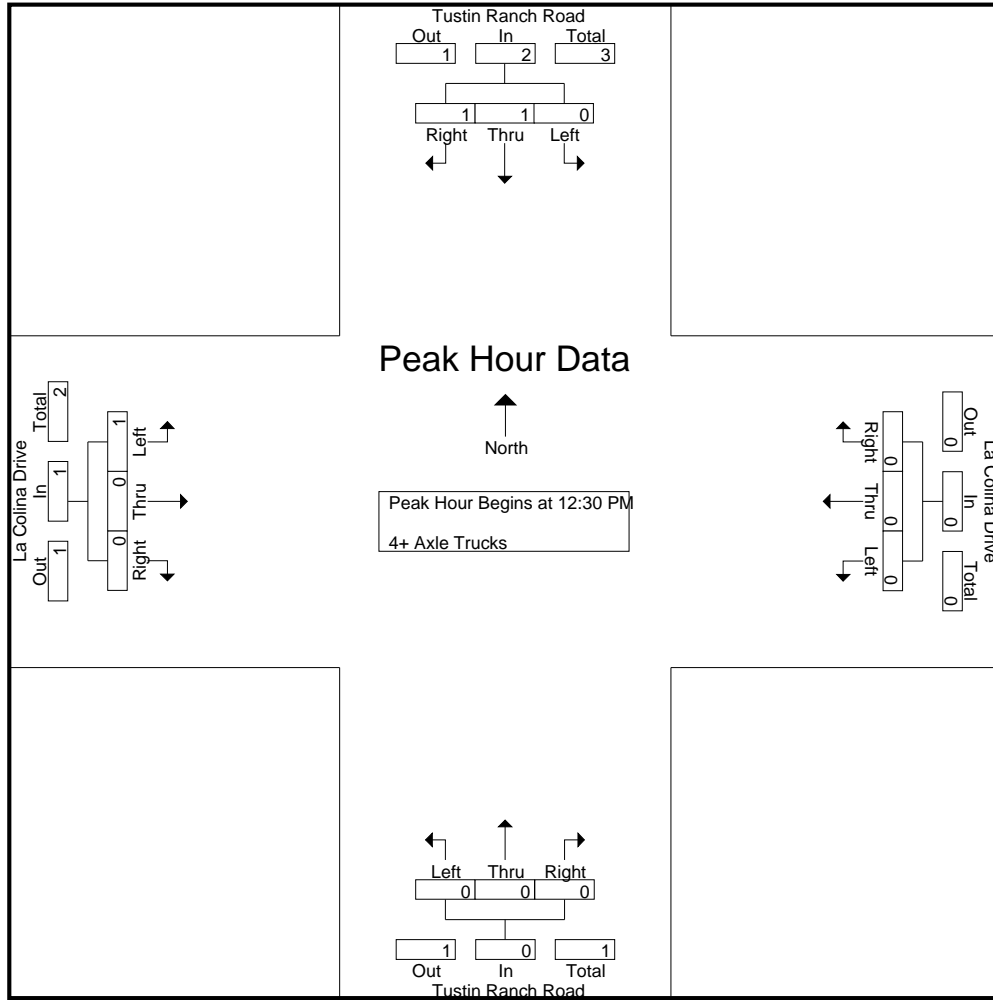
Groups Printed- 4+ Axle Trucks

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	3	1	4	0	0	0	0	0	0	0	0	1	0	0	1	5
Apprch %	0	75	25		0	0	0		0	0	0		100	0	0		
Total %	0	60	20	80	0	0	0	0	0	0	0	0	20	0	0	20	

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
% App. Total	0	50	50		0	0	0		0	0	0		100	0	0		
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.750

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCMD
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 2



Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	12:30 PM				12:30 PM				12:30 PM							
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1
% App. Total	0	50	50		0	0	0		0	0	0		100	0	0	
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	8	200	49	257	11	4	2	17	56	160	6	222	24	2	28	54	550
04:15 PM	3	205	47	255	5	1	0	6	70	145	7	222	28	0	27	55	538
04:30 PM	3	210	70	283	8	2	0	10	66	155	8	229	19	0	28	47	569
04:45 PM	1	163	55	219	6	0	4	10	57	178	3	238	30	0	26	56	523
Total	15	778	221	1014	30	7	6	43	249	638	24	911	101	2	109	212	2180
05:00 PM	1	161	68	230	6	2	3	11	59	205	11	275	17	0	26	43	559
05:15 PM	7	194	74	275	6	0	1	7	62	216	6	284	26	1	24	51	617
05:30 PM	6	169	66	241	9	1	0	10	79	197	9	285	32	2	31	65	601
05:45 PM	4	137	69	210	6	1	2	9	72	201	9	282	29	0	20	49	550
Total	18	661	277	956	27	4	6	37	272	819	35	1126	104	3	101	208	2327
Grand Total	33	1439	498	1970	57	11	12	80	521	1457	59	2037	205	5	210	420	4507
Apprch %	1.7	73	25.3		71.2	13.8	15		25.6	71.5	2.9		48.8	1.2	50		
Total %	0.7	31.9	11	43.7	1.3	0.2	0.3	1.8	11.6	32.3	1.3	45.2	4.5	0.1	4.7	9.3	
Passenger Vehicles	30	1413	493	1936	56	10	12	78	519	1446	59	2024	201	5	209	415	4453
% Passenger Vehicles	90.9	98.2	99	98.3	98.2	90.9	100	97.5	99.6	99.2	100	99.4	98	100	99.5	98.8	98.8
Large 2 Axle Vehicles	2	10	5	17	1	0	0	1	2	8	0	10	4	0	0	4	32
% Large 2 Axle Vehicles	6.1	0.7	1	0.9	1.8	0	0	1.2	0.4	0.5	0	0.5	2	0	0	1	0.7
3 Axle Vehicles	1	16	0	17	0	1	0	1	0	1	0	1	0	0	1	1	20
% 3 Axle Vehicles	3	1.1	0	0.9	0	9.1	0	1.2	0	0.1	0	0	0	0	0.5	0.2	0.4
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0

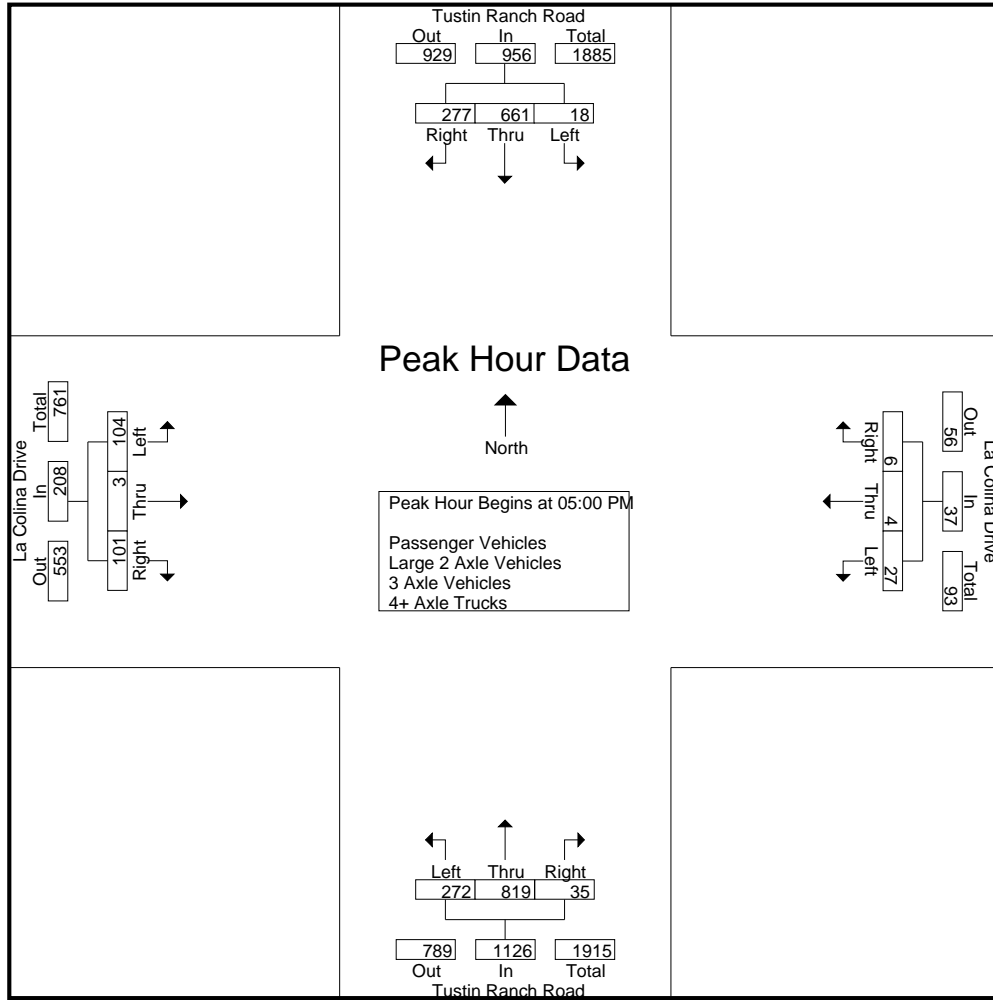
Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	1	161	68	230	6	2	3	11	59	205	11	275	17	0	26	43	559
05:15 PM	7	194	74	275	6	0	1	7	62	216	6	284	26	1	24	51	617
05:30 PM	6	169	66	241	9	1	0	10	79	197	9	285	32	2	31	65	601
05:45 PM	4	137	69	210	6	1	2	9	72	201	9	282	29	0	20	49	550
Total Volume	18	661	277	956	27	4	6	37	272	819	35	1126	104	3	101	208	2327
% App. Total	1.9	69.1	29		7.3	10.8	16.2		24.2	72.7	3.1		50	1.4	48.6		
PHF	.643	.852	.936	.869	.750	.500	.500	.841	.861	.948	.795	.988	.813	.375	.815	.800	.943

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCPM
 Site Code : 21717852
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				05:00 PM				04:45 PM			
+0 mins.	8	200	49	257	11	4	2	17	59	205	11	275	30	0	26	56
+15 mins.	3	205	47	255	5	1	0	6	62	216	6	284	17	0	26	43
+30 mins.	3	210	70	283	8	2	0	10	79	197	9	285	26	1	24	51
+45 mins.	1	163	55	219	6	0	4	10	72	201	9	282	32	2	31	65
Total Volume	15	778	221	1014	30	7	6	43	272	819	35	1126	105	3	107	215
% App. Total	1.5	76.7	21.8		69.8	16.3	14		24.2	72.7	3.1		48.8	1.4	49.8	
PHF	.469	.926	.789	.896	.682	.438	.375	.632	.861	.948	.795	.988	.820	.375	.863	.827

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

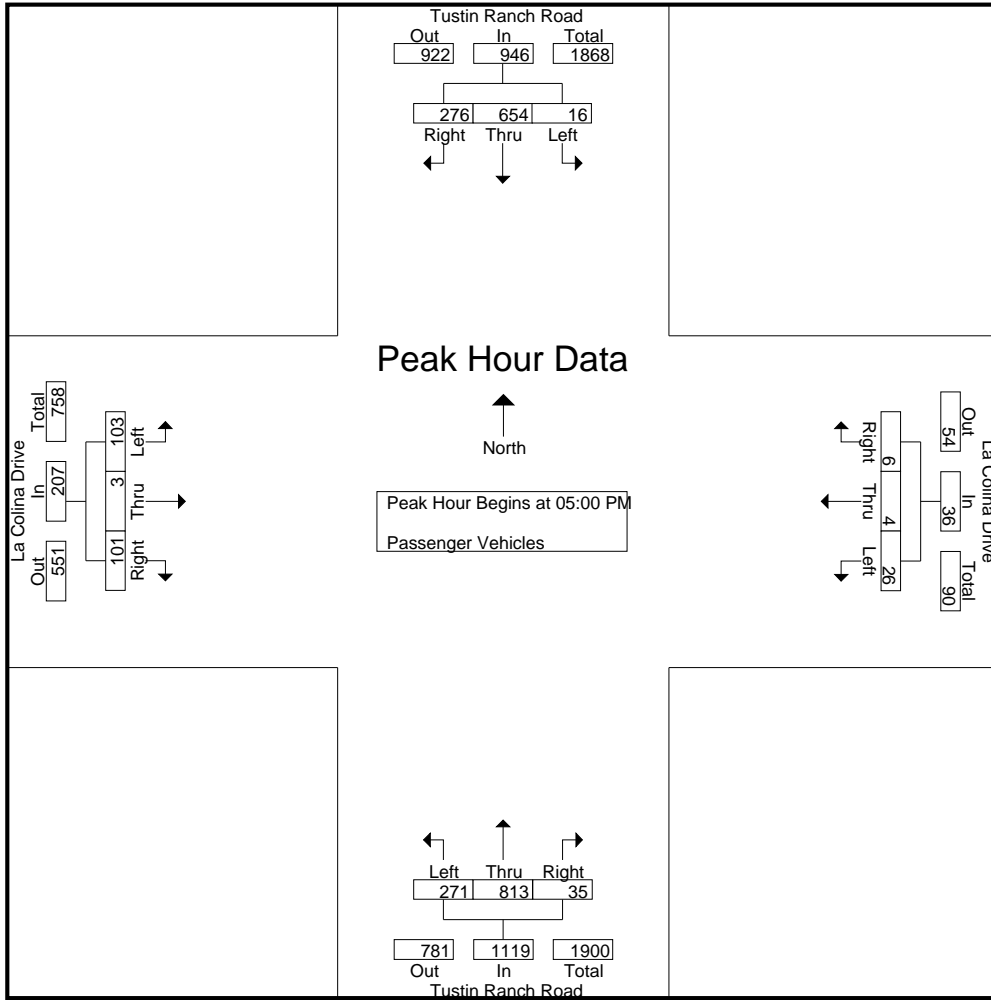
Groups Printed- Passenger Vehicles

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	7	196	48	251	11	3	2	16	56	157	6	219	23	2	28	53	539
04:15 PM	3	196	47	246	5	1	0	6	69	145	7	221	28	0	27	55	528
04:30 PM	3	207	69	279	8	2	0	10	66	154	8	228	19	0	28	47	564
04:45 PM	1	160	53	214	6	0	4	10	57	177	3	237	28	0	25	53	514
Total	14	759	217	990	30	6	6	42	248	633	24	905	98	2	108	208	2145
05:00 PM	1	161	68	230	6	2	3	11	59	205	11	275	17	0	26	43	559
05:15 PM	6	192	74	272	5	0	1	6	61	212	6	279	25	1	24	50	607
05:30 PM	5	167	66	238	9	1	0	10	79	196	9	284	32	2	31	65	597
05:45 PM	4	134	68	206	6	1	2	9	72	200	9	281	29	0	20	49	545
Total	16	654	276	946	26	4	6	36	271	813	35	1119	103	3	101	207	2308
Grand Total	30	1413	493	1936	56	10	12	78	519	1446	59	2024	201	5	209	415	4453
Apprch %	1.5	73	25.5		71.8	12.8	15.4		25.6	71.4	2.9		48.4	1.2	50.4		
Total %	0.7	31.7	11.1	43.5	1.3	0.2	0.3	1.8	11.7	32.5	1.3	45.5	4.5	0.1	4.7	9.3	

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	1	161	68	230	6	2	3	11	59	205	11	275	17	0	26	43	559
05:15 PM	6	192	74	272	5	0	1	6	61	212	6	279	25	1	24	50	607
05:30 PM	5	167	66	238	9	1	0	10	79	196	9	284	32	2	31	65	597
05:45 PM	4	134	68	206	6	1	2	9	72	200	9	281	29	0	20	49	545
Total Volume	16	654	276	946	26	4	6	36	271	813	35	1119	103	3	101	207	2308
% App. Total	1.7	69.1	29.2		72.2	11.1	16.7		24.2	72.7	3.1		49.8	1.4	48.8		
PHF	.667	.852	.932	.869	.722	.500	.500	.818	.858	.959	.795	.985	.805	.375	.815	.796	.951

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM							
+0 mins.	1	161	68	230	6	2	3	11	59	205	11	275	17	0	26	43
+15 mins.	6	192	74	272	5	0	1	6	61	212	6	279	25	1	24	50
+30 mins.	5	167	66	238	9	1	0	10	79	196	9	284	32	2	31	65
+45 mins.	4	134	68	206	6	1	2	9	72	200	9	281	29	0	20	49
Total Volume	16	654	276	946	26	4	6	36	271	813	35	1119	103	3	101	207
% App. Total	1.7	69.1	29.2		72.2	11.1	16.7		24.2	72.7	3.1		49.8	1.4	48.8	
PHF	.667	.852	.932	.869	.722	.500	.500	.818	.858	.959	.795	.985	.805	.375	.815	.796

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 1

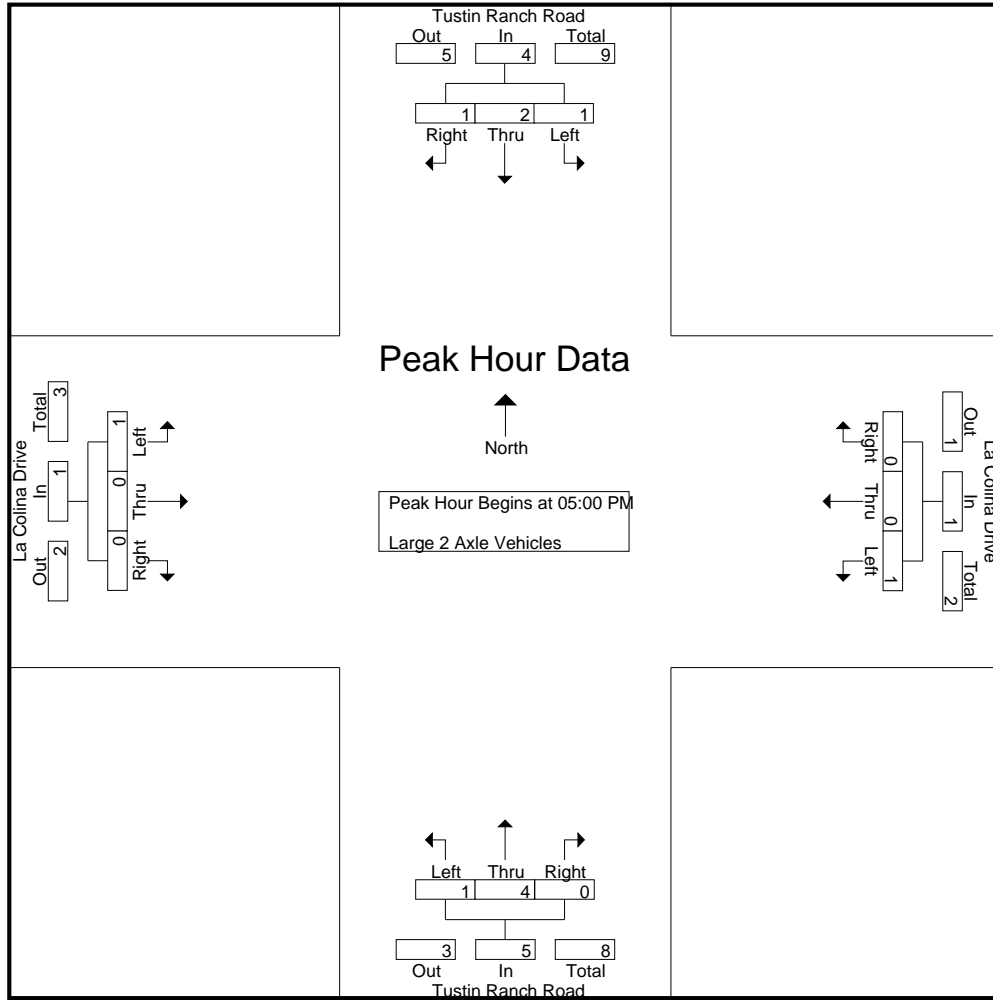
Groups Printed- Large 2 Axle Vehicles

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	1	3	1	5	0	0	0	0	0	2	0	2	1	0	0	1	8
04:15 PM	0	2	0	2	0	0	0	0	1	0	0	1	0	0	0	0	3
04:30 PM	0	2	1	3	0	0	0	0	0	1	0	1	0	0	0	0	4
04:45 PM	0	1	2	3	0	0	0	0	0	1	0	1	2	0	0	2	6
Total	1	8	4	13	0	0	0	0	1	4	0	5	3	0	0	3	21
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	1	0	2	1	0	0	1	1	2	0	3	1	0	0	1	7
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	1	2	1	4	1	0	0	1	1	4	0	5	1	0	0	1	11
Grand Total	2	10	5	17	1	0	0	1	2	8	0	10	4	0	0	4	32
Apprch %	11.8	58.8	29.4		100	0	0		20	80	0		100	0	0		
Total %	6.2	31.2	15.6	53.1	3.1	0	0	3.1	6.2	25	0	31.2	12.5	0	0	12.5	

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	1	0	2	1	0	0	1	1	2	0	3	1	0	0	1	7
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total Volume	1	2	1	4	1	0	0	1	1	4	0	5	1	0	0	1	11
% App. Total	25	50	25		100	0	0		20	80	0		100	0	0		
PHF	.250	.500	.250	.500	.250	.000	.000	.250	.250	.500	.000	.417	.250	.000	.000	.250	.393

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
 Page No : 2

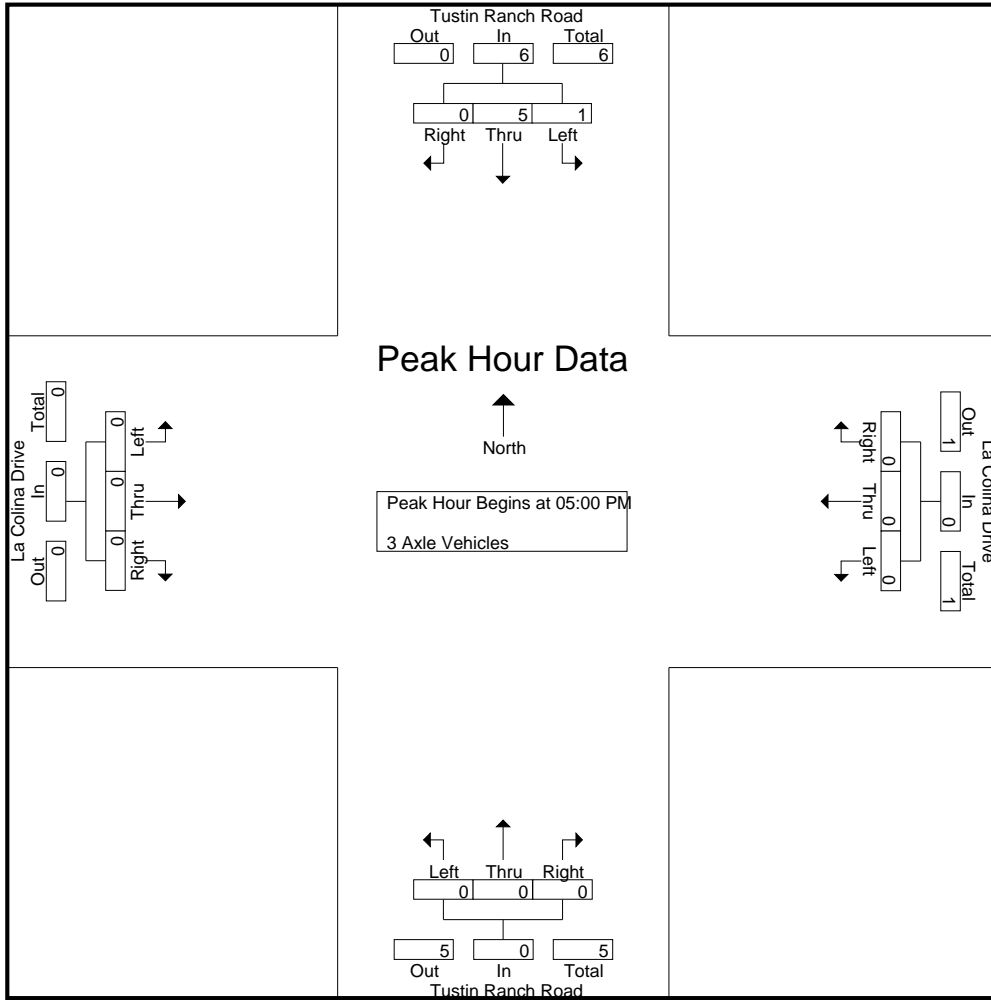


Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM							
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	1	0	2	1	0	0	1	1	2	0	3	1	0	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	1	2	1	4	1	0	0	1	1	4	0	5	1	0	0	1
% App. Total	25	50	25		100	0	0		20	80	0		100	0	0	
PHF	.250	.500	.250	.500	.250	.000	.000	.250	.250	.500	.000	.417	.250	.000	.000	.250

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCPM
 Site Code : 21717852
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	5	0	6	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	16.7	83.3	0		0	0	0		0	0	0		0	0	0	
PHF	.250	.625	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCPM
 Site Code : 21717852
 Start Date : 12/13/2017
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Groups Printed- 4+ Axle Trucks

Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0		0	0	0		0	100	0	100	0	0	0		

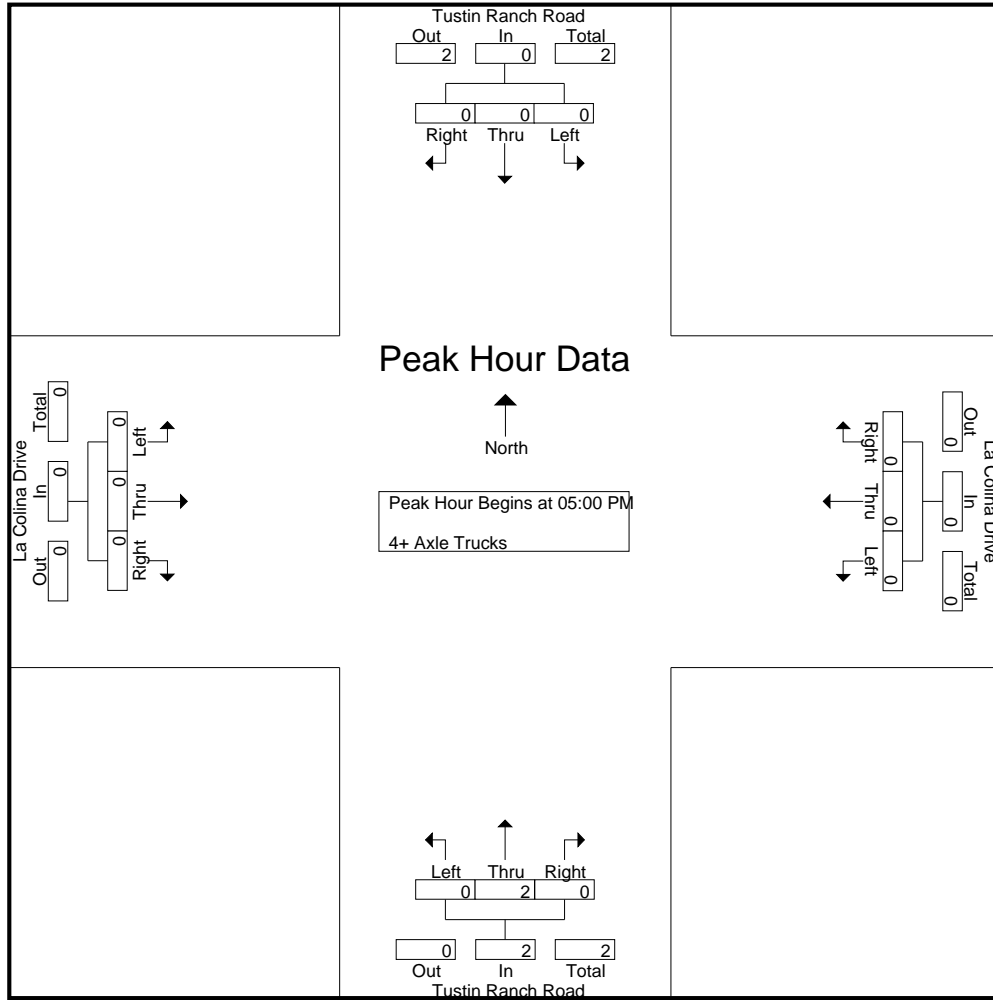
Start Time	Tustin Ranch Road Southbound				La Colina Drive Westbound				Tustin Ranch Road Northbound				La Colina Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

County of Orange
 N/S: Tustin Ranch Road
 E/W: La Colina Drive
 Weather: Clear

File Name : 05_TUSTRLCPM
 Site Code : 21717852
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

ICU Calculation Sheets

E-W Street: La Colina
 N-S Street: Newport Avenue
 Scenario:
 Lane Capacity: 1700

Movement	AM Existing				Midday Existing				PM Existing				AM Exst+Construction				Midday Exst+Construction				PM Exst+Construction			
	Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	8	0	0.19	0.03	2	0	0.40	0.00	12	0	0.29	0.02	8	0	0.19	0.03	2	0	0.40	0.00	12	0	0.29	0.02
Comb. L-T		0				0				0				0				0				0		
EB Thru	9	0	0.21	0.03	0	0	0.00	0.00	9	0	0.22	0.02	9	0	0.21	0.03	0	0	0.00	0.00	9	0	0.22	0.02
Comb. T-R		0				0				0				0				0				0		
EB Right	26	0	0.60	0.03	3	0	0.60	0.00	20	0	0.49	0.02	26	0	0.60	0.03	3	0	0.60	0.00	20	0	0.49	0.02
Comb. L-T-R		1				1				1				1				1				1		
WB Left	91	1	1.00	0.05	41	1	1.00	0.02	55	1	1.00	0.03	95	1	1.00	0.06	42	1	1.00	0.02	68	1	1.00	0.04
Comb. L-T		0				0				0				0				0				0		
WB Thru	1	0	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	1	0	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0				0				0				0				0		
WB Right	173	1	1.00	0.10	91	1	1.00	0.05	300	1	1.00	0.18	177	1	1.00	0.10	92	1	1.00	0.05	313	1	1.00	0.18
Comb. L-T-R		0				0				0				0				0				0		
NB Left																								
Comb. L-T																								
NB Thru	734	2	2.00	0.22	842	2	2.00	0.25	1687	2	2.00	0.50	734	2	2.00	0.22	842	2	2.00	0.25	1687	2	2.00	0.50
Comb. T-R		0				0				0				0				0				0		
NB Right	45	1	1.00	0.03	61	1	1.00	0.04	71	1	1.00	0.04	57	1	1.00	0.03	61	1	1.00	0.04	74	1	1.00	0.04
Comb. L-T-R		0				0				0				0				0				0		
SB Left	179	1	1.00	0.11	87	1	1.00	0.05	148	1	1.00	0.09	191	1	1.00	0.11	87	1	1.00	0.05	151	1	1.00	0.09
Comb. L-T		0				0				0				0				0				0		
SB Thru	1899	2	2.00	0.56	801	2	2.00	0.24	893	2	2.00	0.26	1899	2	2.00	0.56	801	2	2.00	0.24	893	2	2.00	0.26
Comb. T-R		0				0				0				0				0				0		
SB Right																								
Comb. L-T-R																								
Critical Volumes			E-W: 0.13 N-S: 0.56 Total: 0.69				E-W: 0.06 N-S: 0.30 Total: 0.36					E-W: 0.20 N-S: 0.58 Total: 0.78				E-W: 0.13 N-S: 0.56 Total: 0.69				E-W: 0.06 N-S: 0.30 Total: 0.36			E-W: 0.21 N-S: 0.59 Total: 0.79	
Lost Time			0.05				0.05					0.05				0.05				0.05				0.05
ICU			0.736				0.405					0.834				0.738				0.406				0.843
Level of Service			C				A					D				C				A				D

Synchro Reports

Intersection Capacity Utilization
4: Browning Ave & La Colina Dr




















01/09/2018



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	13	173	64	61	163	43	68	18	116	92	51	25
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	250	0	0	224	43	0	202	0	0	168	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.99	0.85	0.95	0.90	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1822	0	0	1874	1615	0	1707	0	0	1807	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00		0.00			0.00	
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			3.2			0.0			0.0		
Adj Reference Time (s)	0.0			8.0			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1041	0		685	0		1579	0		1096	
Reference Time A (s)	0.0	28.8	0.0		39.2	0.0		15.4	0.0		18.4	
Adj Saturation B (vph)	NA	NA	NA		NA	0		0	NA		NA	
Reference Time B (s)	NA	NA	NA		NA	12.5		22.2	NA		NA	
Reference Time (s)	28.8		39.2			15.4		18.4				
Adj Reference Time (s)	32.8		43.2			19.4		22.4				
Split Option												
Ref Time Combined (s)	0.0	16.5	0.0		14.3	0.0		14.2	0.0		11.2	
Ref Time Seperate (s)	0.9	11.4	4.1		10.3	4.5		1.3	6.1		3.4	
Reference Time (s)	16.5	16.5	14.3		14.3	14.2		14.2	11.2		11.2	
Adj Reference Time (s)	20.5	20.5	18.3		18.3	18.2		18.2	15.2		15.2	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	43.2		22.4									
Split Option (s)	38.8		33.4									
Minimum (s)	38.8		22.4		61.2							
Right Turns	NWR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	18.2											
Oncoming Left Ref Time (s)	18.5											
Combined (s)	46.7											
Intersection Summary												
Intersection Capacity Utilization	51.0%				ICU Level of Service				A			
Reference Times and Phasing Options do not represent an optimized timing plan.												


















Intersection Capacity Utilization
6: Red Hill Ave & La Colina Dr

01/09/2018

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	161	64	78	174	44	22	158	46	49	364	25
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	176	64	0	296	0	0	180	46	0	438	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1892	1615	0	1833	0	0	1888	1615	0	1873	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			No			No		
Reference Time (s)	4.8			0.0			3.4			0.0		
Adj Reference Time (s)	8.8			0.0			8.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1759		0	363		0	1385		0	705	
Reference Time A (s)	0.0	12.0		0.0	97.9		0.0	15.6		0.0	74.5	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)	12.0				97.9				15.6		74.5	
Adj Reference Time (s)	16.0				101.9				19.6		78.5	
Split Option												
Ref Time Combined (s)	0.0	11.2			0.0	19.4			0.0	11.4	0.0	28.1
Ref Time Seperate (s)	1.0	10.2			5.2	11.3			1.5	10.0	3.3	23.2
Reference Time (s)	11.2	11.2			19.4	19.4			11.4	11.4	28.1	28.1
Adj Reference Time (s)	15.2	15.2			23.4	23.4			15.4	15.4	32.1	32.1
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	101.9		78.5									
Split Option (s)	38.5		47.5									
Minimum (s)	38.5		47.5		86.0							
Right Turns	SER		NER									
Adj Reference Time (s)	8.8		8.0									
Cross Thru Ref Time (s)	32.1		15.2									
Oncoming Left Ref Time (s)	32.1		32.1									
Combined (s)	64.2		55.2									
Intersection Summary												
Intersection Capacity Utilization	71.7%				ICU Level of Service				C			
Reference Times and Phasing Options do not represent an optimized timing plan.												




















Intersection Capacity Utilization
4: Browning Ave & La Colina Dr

01/09/2018

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	97	39	33	120	72	30	25	54	59	29	15
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	152	0	0	153	72	0	109	0	0	103	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.99	0.85	0.95	0.91	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1817	0	0	1880	1615	0	1735	0	0	1805	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		No		No		No		No	
Reference Time (s)	0.0		5.3		0.0		0.0		0.0		0.0	
Adj Reference Time (s)	0.0		9.3		0.0		0.0		0.0		0.0	
Permitted Option												
Adj Saturation A (vph)	0	711	0	1069	0	1673	0	935	0	935	0	935
Reference Time A (s)	0.0	25.6	0.0	17.2	0.0	7.8	0.0	13.2	0.0	13.2	0.0	13.2
Adj Saturation B (vph)	0	0	NA	NA	0	0	0	0	0	0	0	0
Reference Time B (s)	9.1	18.0	NA	NA	10.0	15.5	11.9	14.8	11.9	14.8	11.9	14.8
Reference Time (s)	18.0		17.2		7.8		13.2		13.2		13.2	
Adj Reference Time (s)	22.0		21.2		11.8		17.2		17.2		17.2	
Split Option												
Ref Time Combined (s)	0.0	10.0	0.0	9.8	0.0	7.5	0.0	6.8	0.0	6.8	0.0	6.8
Ref Time Seperate (s)	1.1	6.4	2.2	7.6	2.0	1.8	3.9	1.9	3.9	1.9	3.9	1.9
Reference Time (s)	10.0	10.0	9.8	9.8	7.5	7.5	6.8	6.8	6.8	6.8	6.8	6.8
Adj Reference Time (s)	14.0	14.0	13.8	13.8	11.5	11.5	10.8	10.8	10.8	10.8	10.8	10.8
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	22.0		17.2									
Split Option (s)	27.8		22.4									
Minimum (s)	22.0		17.2		39.3							
Right Turns	NWR											
Adj Reference Time (s)	9.3											
Cross Thru Ref Time (s)	11.5											
Oncoming Left Ref Time (s)	11.0											
Combined (s)	34.9											
Intersection Summary												
Intersection Capacity Utilization	32.7%				ICU Level of Service				A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
6: Red Hill Ave & La Colina Dr

01/09/2018

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	14	87	38	32	74	59	34	241	24	47	212	11
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	101	38	0	165	0	0	275	24	0	270	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.94	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1887	1615	0	1781	0	0	1888	1615	0	1872	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			2.8			0.0			1.8			0.0
Adj Reference Time (s)			8.0			0.0			8.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	1543		0	452		0	1543		0	516	
Reference Time A (s)	0.0	7.9		0.0	43.9		0.0	21.4		0.0	62.8	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		10.1	19.1		NA	NA		NA	NA	
Reference Time (s)		7.9			19.1			21.4			62.8	
Adj Reference Time (s)		11.9			23.1			25.4			66.8	
Split Option												
Ref Time Combined (s)	0.0	6.4		0.0	11.1		0.0	17.5		0.0	17.3	
Ref Time Seperate (s)	0.9	5.5		2.1	5.0		2.3	15.2		3.1	13.5	
Reference Time (s)	6.4	6.4		11.1	11.1		17.5	17.5		17.3	17.3	
Adj Reference Time (s)	10.4	10.4		15.1	15.1		21.5	21.5		21.3	21.3	
Summary		NW SE		NE SW		Combined						
Protected Option (s)		NA		NA								
Permitted Option (s)		23.1		66.8								
Split Option (s)		25.5		42.8								
Minimum (s)		23.1		42.8		65.9						
Right Turns		SER		NER								
Adj Reference Time (s)		8.0		8.0								
Cross Thru Ref Time (s)		21.3		10.4								
Oncoming Left Ref Time (s)		15.1		21.3								
Combined (s)		44.4		39.7								

Intersection Summary

Intersection Capacity Utilization 54.9% ICU Level of Service A
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
4: Browning Ave & La Colina Dr

01/16/2018



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	26	132	10	2	400	122	28	28	6	64	18	15
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	168	0	0	402	122	0	62	0	0	97	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.94	0.85
Saturated Flow (vph)	0	1868	0	0	1900	1615	0	1830	0	0	1795	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			9.1			0.0			0.0		
Adj Reference Time (s)	0.0			13.1			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	562	0	1884	0	1729	0	1190	0	1190	0	1190
Reference Time A (s)	0.0	35.9	0.0	25.6	0.0	4.3	0.0	9.8	0.0	9.8	0.0	9.8
Adj Saturation B (vph)	NA	NA	NA	NA	0	0	0	0	0	0	0	0
Reference Time B (s)	NA	NA	NA	NA	9.9	12.1	12.3	14.5	12.3	14.5	12.3	14.5
Reference Time (s)	35.9		25.6			4.3			9.8			
Adj Reference Time (s)	39.9		29.6			8.3			13.8			
Split Option												
Ref Time Combined (s)	0.0	10.8	0.0	25.4	0.0	4.1	0.0	6.5	0.0	6.5	0.0	6.5
Ref Time Seperate (s)	1.7	8.4	0.1	25.3	1.9	1.8	4.3	1.2	4.3	1.2	4.3	1.2
Reference Time (s)	10.8	10.8	25.4	25.4	4.1	4.1	6.5	6.5	6.5	6.5	6.5	6.5
Adj Reference Time (s)	14.8	14.8	29.4	29.4	8.1	8.1	10.5	10.5	10.5	10.5	10.5	10.5
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	39.9		13.8									
Split Option (s)	44.2		18.6									
Minimum (s)	39.9		13.8		53.6							
Right Turns	NWR											
Adj Reference Time (s)	13.1											
Cross Thru Ref Time (s)	8.1											
Oncoming Left Ref Time (s)	8.1											
Combined (s)	35.9											
Intersection Summary												
Intersection Capacity Utilization	44.7%				ICU Level of Service				A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
6: Red Hill Ave & La Colina Dr

01/16/2018



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↕		↕			↕	↕		↕	
Volume (vph)	12	93	57	24	235	134	64	257	38	40	198	7
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	105	57	0	393	0	0	321	38	0	245	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1889	1615	0	1797	0	0	1881	1615	0	1876	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			4.2			0.0			2.8			0.0
Adj Reference Time (s)			8.2			0.0			8.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	1204		0	954		0	1310		0	543	
Reference Time A (s)	0.0	10.5		0.0	49.5		0.0	29.4		0.0	54.2	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		9.6	34.2		NA	NA		NA	NA	
Reference Time (s)		10.5			34.2			29.4			54.2	
Adj Reference Time (s)		14.5			38.2			33.4			58.2	
Split Option												
Ref Time Combined (s)	0.0	6.7		0.0	26.2		0.0	20.5		0.0	15.7	
Ref Time Seperate (s)	0.8	5.9		1.6	15.7		4.3	16.2		2.7	12.6	
Reference Time (s)	6.7	6.7		26.2	26.2		20.5	20.5		15.7	15.7	
Adj Reference Time (s)	10.7	10.7		30.2	30.2		24.5	24.5		19.7	19.7	
Summary		NW SE		NE SW		Combined						
Protected Option (s)		NA		NA								
Permitted Option (s)		38.2		58.2								
Split Option (s)		40.9		44.1								
Minimum (s)		38.2		44.1		82.4						
Right Turns		SER		NER								
Adj Reference Time (s)		8.2		8.0								
Cross Thru Ref Time (s)		19.7		10.7								
Oncoming Left Ref Time (s)		19.7		19.7								
Combined (s)		58.1		38.3								

Intersection Summary

Intersection Capacity Utilization 68.7% ICU Level of Service C
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
4: Browning Ave & La Colina Dr

10/31/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	37	173	64	61	163	67	68	18	116	100	51	33
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	274	0	0	224	67	0	202	0	0	184	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.99	0.85	0.95	0.90	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1821	0	0	1874	1615	0	1707	0	0	1799	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			5.0			0.0			0.0		
Adj Reference Time (s)	0.0			9.0			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	604	0	1044	0	1574	0	1096	0	1096	0	1096
Reference Time A (s)	0.0	54.4	0.0	25.7	0.0	15.4	0.0	20.2	0.0	20.2	0.0	20.2
Adj Saturation B (vph)	NA	NA	NA	NA	0	0	NA	NA	NA	NA	NA	NA
Reference Time B (s)	NA	NA	NA	NA	12.5	22.2	NA	NA	NA	NA	NA	NA
Reference Time (s)	54.4		25.7			15.4			20.2			
Adj Reference Time (s)	58.4		29.7			19.4			24.2			
Split Option												
Ref Time Combined (s)	0.0	18.1	0.0	14.3	0.0	14.2	0.0	14.2	0.0	12.3	0.0	12.3
Ref Time Seperate (s)	2.5	11.4	4.1	10.3	4.5	1.3	6.6	3.4	6.6	3.4	6.6	3.4
Reference Time (s)	18.1	18.1	14.3	14.3	14.2	14.2	12.3	12.3	12.3	12.3	12.3	12.3
Adj Reference Time (s)	22.1	22.1	18.3	18.3	18.2	18.2	16.3	16.3	16.3	16.3	16.3	16.3
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	58.4		24.2									
Split Option (s)	40.4		34.5									
Minimum (s)	40.4		24.2		64.5							
Right Turns	NWR											
Adj Reference Time (s)	9.0											
Cross Thru Ref Time (s)	18.2											
Oncoming Left Ref Time (s)	22.1											
Combined (s)	49.2											
Intersection Summary												
Intersection Capacity Utilization	53.8%				ICU Level of Service				A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
6: Red Hill Ave & La Colina Dr

10/31/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	185	64	78	182	44	22	158	46	49	364	25
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	200	64	0	304	0	0	180	46	0	438	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1893	1615	0	1835	0	0	1888	1615	0	1873	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			No			No		
Reference Time (s)	4.8			0.0			3.4			0.0		
Adj Reference Time (s)	8.8			0.0			8.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1772		0	371		0	1385		0	705	
Reference Time A (s)	0.0	13.5		0.0	98.3		0.0	15.6		0.0	74.5	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)	13.5				98.3				15.6		74.5	
Adj Reference Time (s)	17.5				102.3				19.6		78.5	
Split Option												
Ref Time Combined (s)	0.0	12.7			0.0	19.9			0.0	11.4	0.0	28.1
Ref Time Seperate (s)	1.0	11.7			5.2	11.8			1.5	10.0	3.3	23.2
Reference Time (s)	12.7	12.7			19.9	19.9			11.4	11.4	28.1	28.1
Adj Reference Time (s)	16.7	16.7			23.9	23.9			15.4	15.4	32.1	32.1
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	102.3		78.5									
Split Option (s)	40.6		47.5									
Minimum (s)	40.6		47.5		88.1							
Right Turns	SER		NER									
Adj Reference Time (s)	8.8		8.0									
Cross Thru Ref Time (s)	32.1		16.7									
Oncoming Left Ref Time (s)	32.1		32.1									
Combined (s)	64.7		56.7									
Intersection Summary												
Intersection Capacity Utilization	73.4%				ICU Level of Service				D			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
4: Browning Ave & La Colina Dr

10/31/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	17	97	39	33	120	73	30	25	54	60	29	16
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	153	0	0	153	73	0	109	0	0	105	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.99	0.85	0.95	0.91	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1817	0	0	1880	1615	0	1735	0	0	1804	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			5.4			0.0			0.0		
Adj Reference Time (s)	0.0			9.4			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	687	0		1092	0		1672	0		936	
Reference Time A (s)	0.0	26.7	0.0		16.8	0.0		7.8	0.0		13.5	
Adj Saturation B (vph)	0	0	NA		NA	0		0	0		0	
Reference Time B (s)	9.1	18.1	NA		NA	10.0		15.5	12.0		15.0	
Reference Time (s)	18.1		16.8			7.8			13.5			
Adj Reference Time (s)	22.1		20.8			11.8			17.5			
Split Option												
Ref Time Combined (s)	0.0	10.1	0.0		9.8	0.0		7.5	0.0		7.0	
Ref Time Seperate (s)	1.1	6.4	2.2		7.6	2.0		1.8	4.0		1.9	
Reference Time (s)	10.1	10.1	9.8		9.8	7.5		7.5	7.0		7.0	
Adj Reference Time (s)	14.1	14.1	13.8		13.8	11.5		11.5	11.0		11.0	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	22.1		17.5									
Split Option (s)	27.9		22.5									
Minimum (s)	22.1		17.5		39.6							
Right Turns	NWR											
Adj Reference Time (s)	9.4											
Cross Thru Ref Time (s)	11.5											
Oncoming Left Ref Time (s)	11.1											
Combined (s)	35.1											
Intersection Summary												
Intersection Capacity Utilization	33.0%		ICU Level of Service					A				
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
6: Red Hill Ave & La Colina Dr

10/31/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↕		↕			↕	↕		↕	
Volume (vph)	14	88	38	32	75	59	34	241	24	47	212	11
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	102	38	0	166	0	0	275	24	0	270	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.94	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1887	1615	0	1781	0	0	1888	1615	0	1872	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	2.8			0.0			1.8			0.0		
Adj Reference Time (s)	8.0			0.0			8.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1544		0	454		0	1543		0	516	
Reference Time A (s)	0.0	7.9		0.0	43.9		0.0	21.4		0.0	62.8	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		10.1	19.2		NA	NA		NA	NA	
Reference Time (s)	7.9			19.2			21.4			62.8		
Adj Reference Time (s)	11.9			23.2			25.4			66.8		
Split Option												
Ref Time Combined (s)	0.0	6.5		0.0	11.2		0.0	17.5		0.0	17.3	
Ref Time Seperate (s)	0.9	5.6		2.1	5.1		2.3	15.2		3.1	13.5	
Reference Time (s)	6.5	6.5		11.2	11.2		17.5	17.5		17.3	17.3	
Adj Reference Time (s)	10.5	10.5		15.2	15.2		21.5	21.5		21.3	21.3	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	23.2		66.8									
Split Option (s)	25.7		42.8									
Minimum (s)	23.2		42.8		66.0							
Right Turns	SER		NER									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	21.3		10.5									
Oncoming Left Ref Time (s)	21.3		21.3									
Combined (s)	44.5		39.8									
Intersection Summary												
Intersection Capacity Utilization	55.0%		ICU Level of Service				A					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
4: Browning Ave & La Colina Dr

10/31/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	32	132	10	2	400	128	28	28	6	90	18	41
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	174	0	0	402	128	0	62	0	0	149	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.93	0.85
Saturated Flow (vph)	0	1866	0	0	1900	1615	0	1830	0	0	1767	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			9.5			0.0			0.0		
Adj Reference Time (s)	0.0			13.5			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	493	0		1887	0		1660	0		1226	
Reference Time A (s)	0.0	42.3	0.0		25.6	0.0		4.5	0.0		14.6	
Adj Saturation B (vph)	NA	NA	NA		NA	0		0	0		0	
Reference Time B (s)	NA	NA	NA		NA	9.9		12.1	14.0		18.1	
Reference Time (s)	42.3		25.6			4.5			14.6			
Adj Reference Time (s)	46.3		29.6			8.5			18.6			
Split Option												
Ref Time Combined (s)	0.0	11.2	0.0		25.4	0.0		4.1	0.0		10.1	
Ref Time Seperate (s)	2.1	8.4	0.1		25.3	1.9		1.8	6.0		1.3	
Reference Time (s)	11.2	11.2	25.4		25.4	4.1		4.1	10.1		10.1	
Adj Reference Time (s)	15.2	15.2	29.4		29.4	8.1		8.1	14.1		14.1	
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	46.3		18.6									
Split Option (s)	44.6		22.2									
Minimum (s)	44.6		18.6			63.2						
Right Turns												
Adj Reference Time (s)	13.5											
Cross Thru Ref Time (s)	8.1											
Oncoming Left Ref Time (s)	15.2											
Combined (s)	36.8											
Intersection Summary												
Intersection Capacity Utilization	52.6%			ICU Level of Service			A					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
6: Red Hill Ave & La Colina Dr

10/31/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↕		↕			↕	↕		↕	
Volume (vph)	12	99	57	24	261	134	64	257	38	40	198	7
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	111	57	0	419	0	0	321	38	0	245	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1890	1615	0	1804	0	0	1881	1615	0	1876	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			No			No		
Reference Time (s)	4.2			0.0			2.8			0.0		
Adj Reference Time (s)	8.2			0.0			8.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1211		0	987		0	1310		0	543	
Reference Time A (s)	0.0	11.0		0.0	51.0		0.0	29.4		0.0	54.2	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		9.6	35.9		NA	NA		NA	NA	
Reference Time (s)	11.0			35.9			29.4			54.2		
Adj Reference Time (s)	15.0			39.9			33.4			58.2		
Split Option												
Ref Time Combined (s)	0.0	7.0		0.0	27.9		0.0	20.5		0.0	15.7	
Ref Time Seperate (s)	0.8	6.3		1.6	17.4		4.3	16.2		2.7	12.6	
Reference Time (s)	7.0	7.0		27.9	27.9		20.5	20.5		15.7	15.7	
Adj Reference Time (s)	11.0	11.0		31.9	31.9		24.5	24.5		19.7	19.7	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	39.9		58.2									
Split Option (s)	42.9		44.1									
Minimum (s)	39.9		44.1		84.0							
Right Turns	SER		NER									
Adj Reference Time (s)	8.2		8.0									
Cross Thru Ref Time (s)	19.7		11.0									
Oncoming Left Ref Time (s)	19.9		19.7									
Combined (s)	59.8		38.7									
Intersection Summary												
Intersection Capacity Utilization	70.0%		ICU Level of Service				C					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Appendix E – ICU Spreadsheets and Synchro Reports (Construction)

E-W Street: 17th St

N-S Street: Newport Ave

Lane Capacity: 1700

Dual Lefts Capacity (per lane): 1440

Overlap Reduce

20%

Overlap Reduce

20%

Overlap Reduce

15%

Overlap Reduce

15%

Movement	AM Existing				AM Existing Plus Construction				PM Existing				PM Existing Plus Construction			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	295	1	1.99	0.09	295	1	1.99	0.09	305	1	1.99	0.09	305	1	1.99	0.09
Comb. L-T		1				1				1				1		
EB Thru	1		0.01	0.09	1	0	0.01	0.09	1	0	0.01	0.09	1	0	0.01	0.09
Comb. T-R						0				0				0		
EB Right	538	1	1.00	0.32	546	1	1.00	0.32	370	1	1.00	0.22	370	1	1.00	0.22
Comb. L-T-R						0				0				0		
WB Left	3		0.25	0.01	3	0	0.25	0.01	7	0	0.78	0.01	7	0	0.78	0.01
Comb. L-T						0				0				0		
WB Thru	6		0.50	0.01	6	0	0.50	0.01	1	0	0.11	0.01	1	0	0.11	0.01
Comb. T-R						0				0				0		
WB Right	3		0.25	0.01	3	0	0.25	0.01	1	0	0.11	0.01	1	0	0.11	0.01
Comb. L-T-R		1				1				1				1		
NB Left	390	2	2.00	0.14	394	2	2.00	0.14	540	2	2.00	0.19	550	2	2.00	0.19
Comb. L-T						0				0				0		
NB Thru	604	1	1.99	0.18	604	1	1.99	0.18	1240	1	1.99	0.37	1237	1	1.99	0.37
Comb. T-R		1				1				1				1		
NB Right	4		0.01	0.18	4	0	0.01	0.18	5	0	0.01	0.37	5	0	0.01	0.37
Comb. L-T-R						0				0				0		
SB Left	1	1	1.00	0.00	1	1	1.00	0.00	0	1	1.00	0.00	0	1	1.00	0.00
Comb. L-T						0				0				0		
SB Thru	1196	2	2.00	0.35	1193	2	2.00	0.35	793	2	2.00	0.23	790	2	2.00	0.23
Comb. T-R						0				0				0		
SB Right	381	1	1.00	0.22	381	1	1.00	0.22	262	1	1.00	0.15	262	1	1.00	0.15
Comb. L-T-R						0				0				0		

Critical Volumes	E-W:	0.32	E-W:	0.33	E-W:	0.22	E-W:	0.22
	N-S:	0.49	N-S:	0.49	N-S:	0.42	N-S:	0.42
	Total:	0.81	Total:	0.82	Total:	0.64	Total:	0.65

Lost Time	0.05	0.05	0.05	0.05
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V/C	0.861	0.866	0.694	0.696
Level of Service	D	D	B	B

E-W Street: La Colina Dr

N-S Street: Newport Ave

Lane Capacity: 1700

Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing Plus Construction				PM Existing				PM Existing Plus Construction			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	39		0.44	0.05	39	0	0.44	0.05	6	0	0.60	0.01	6	0	0.60	0.01
Comb. L-T		1				1				1				1		
EB Thru	50		0.56	0.05	50	0	0.56	0.05	4	0	0.40	0.01	4	0	0.40	0.01
Comb. T-R						0				0				0		
EB Right	109	1	1.00	0.06	109	1	1.00	0.06	7	1	1.00	0.00	7	1	1.00	0.00
Comb. L-T-R						0				0				0		
WB Left	75	1	1.00	0.04	79	1	1.00	0.05	66	1	1.00	0.04	78	1	1.00	0.05
Comb. L-T						0				0				0		
WB Thru																
Comb. T-R						0				0				0		
WB Right	202	1	1.00	0.12	205	1	1.00	0.12	201	1	1.00	0.12	208	1	1.00	0.12
Comb. L-T-R						0				0				0		
NB Left																
Comb. L-T						0				0				0		
NB Thru	890	2	2.00	0.26	890	2	2.00	0.26	1661	2	2.00	0.49	1661	2	2.00	0.49
Comb. T-R						0				0				0		
NB Right	62	1	1.00	0.04	73	1	1.00	0.04	87	1	1.00	0.05	89	1	1.00	0.05
Comb. L-T-R						0				0				0		
SB Left	175	1	1.00	0.10	182	1	1.00	0.11	131	1	1.00	0.08	127	1	1.00	0.07
Comb. L-T						0				0				0		
SB Thru	1626	2	2.00	0.48	1626	2	2.00	0.48	1097	2	2.00	0.32	1097	2	2.00	0.32
Comb. T-R						0				0				0		
SB Right																
Comb. L-T-R						0				0				0		

Critical Volumes	E-W:	0.17	E-W:	0.17	E-W:	0.12	E-W:	0.13
	N-S:	0.48	N-S:	0.48	N-S:	0.57	N-S:	0.56
	Total:	0.65	Total:	0.65	Total:	0.69	Total:	0.69

Lost Time	0.05	0.05	0.05	0.05
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V/C	0.699	0.701	0.740	0.741
Level of Service	B	C	C	C

Intersection Capacity Utilization
Browning Ave & La Colina Dr

08/24/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	37	235	49	46	139	52	44	53	99	114	56	25
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	321	0	0	185	52	0	196	0	0	195	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.99	0.85	0.95	0.91	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1846	0	0	1876	1615	0	1736	0	0	1809	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			3.9			0.0			0.0		
Adj Reference Time (s)	0.0			8.0			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	681	0	1026	0	1712	0	808				
Reference Time A (s)	0.0	56.5	0.0	21.6	0.0	13.7	0.0	29.0				
Adj Saturation B (vph)	NA	NA	NA	NA	0	0	NA	NA				
Reference Time B (s)	NA	NA	NA	NA	10.9	21.5	NA	NA				
Reference Time (s)	56.5		21.6		13.7		29.0					
Adj Reference Time (s)	60.5		25.6		17.7		33.0					
Split Option												
Ref Time Combined (s)	0.0	20.9	0.0	11.8	0.0	13.5	0.0	12.9				
Ref Time Seperate (s)	2.5	15.2	3.1	8.8	2.9	3.7	7.6	3.7				
Reference Time (s)	20.9	20.9	11.8	11.8	13.5	13.5	12.9	12.9				
Adj Reference Time (s)	24.9	24.9	15.8	15.8	17.5	17.5	16.9	16.9				
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	60.5		33.0									
Split Option (s)	40.7		34.5									
Minimum (s)	40.7		33.0		73.7							
Right Turns	NWR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	17.5											
Oncoming Left Ref Time (s)	17.9											
Combined (s)	50.4											

Intersection Summary

Intersection Capacity Utilization 61.4% ICU Level of Service B
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
Browning Ave & La Colina Dr



















08/24/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	22	168	13	8	257	130	13	55	15	129	43	39
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	203	0	0	265	130	0	83	0	0	211	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.94	0.85
Saturated Flow (vph)	0	1872	0	0	1897	1615	0	1834	0	0	1791	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			9.7			0.0			0.0		
Adj Reference Time (s)	0.0			13.7			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	719	0		1756	0		1848	0		610	
Reference Time A (s)	0.0	33.9	0.0		18.1	0.0		5.4	0.0		41.5	
Adj Saturation B (vph)	NA	NA	NA		NA	0		0	0		0	
Reference Time B (s)	NA	NA	NA		NA	8.9		13.4	16.6		22.1	
Reference Time (s)	33.9		18.1			5.4			22.1			
Adj Reference Time (s)	37.9		22.1			9.4			26.1			
Split Option												
Ref Time Combined (s)	0.0	13.0	0.0		16.8	0.0		5.4	0.0		14.1	
Ref Time Seperate (s)	1.5	10.7	0.5		16.2	0.9		3.6	8.6		2.9	
Reference Time (s)	13.0	13.0	16.8		16.8	5.4		5.4	14.1		14.1	
Adj Reference Time (s)	17.0	17.0	20.8		20.8	9.4		9.4	18.1		18.1	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	37.9		26.1									
Split Option (s)	37.8		27.6									
Minimum (s)	37.8		26.1		63.9							
Right Turns	NWR											
Adj Reference Time (s)	13.7											
Cross Thru Ref Time (s)	9.4											
Oncoming Left Ref Time (s)	17.0											
Combined (s)	40.1											
Intersection Summary												
Intersection Capacity Utilization	53.3%				ICU Level of Service				A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
Red Hill Ave & La Colina Dr

08/24/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	190	47	54	113	56	43	211	53	74	370	21
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	206	47	0	223	0	0	254	53	0	465	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1893	1615	0	1806	0	0	1884	1615	0	1872	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			No			No		
Reference Time (s)	3.5			0.0			3.9			0.0		
Adj Reference Time (s)	8.0			0.0			8.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1754		0	383		0	1379		0	552	
Reference Time A (s)	0.0	14.1		0.0	69.8		0.0	22.1		0.0	101.1	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		14.1			69.8			22.1			101.1	
Adj Reference Time (s)		18.1			73.8			26.1			105.1	
Split Option												
Ref Time Combined (s)	0.0	13.1		0.0	14.8		0.0	16.2		0.0	29.8	
Ref Time Seperate (s)	1.1	12.0		3.6	7.5		2.9	13.3		4.9	23.6	
Reference Time (s)	13.1	13.1		14.8	14.8		16.2	16.2		29.8	29.8	
Adj Reference Time (s)	17.1	17.1		18.8	18.8		20.2	20.2		33.8	33.8	
Summary	NW SE		NE SW		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	73.8		105.1									
Split Option (s)	35.9		54.0									
Minimum (s)	35.9		54.0		89.9							
Right Turns	SER		NER									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	33.8		17.1									
Oncoming Left Ref Time (s)	33.8		33.8									
Combined (s)	60.6		58.9									
Intersection Summary												
Intersection Capacity Utilization	74.9%				ICU Level of Service				D			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization
Red Hill Ave & La Colina Dr

08/24/2021



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↕		↕			↕	↕		↕	↕
Volume (vph)	1	100	51	19	165	99	75	304	50	58	265	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	101	51	0	283	0	0	379	50	0	336	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1899	1615	0	1794	0	0	1881	1615	0	1873	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			3.8			0.0			3.7			0.0
Adj Reference Time (s)			8.0			0.0			8.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	1826		0	908		0	1340		0	519	
Reference Time A (s)	0.0	6.6		0.0	37.4		0.0	33.9		0.0	77.6	
Adj Saturation B (vph)	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		9.3	26.9		NA	NA		NA	NA	
Reference Time (s)		6.6			26.9			33.9			77.6	
Adj Reference Time (s)		10.6			30.9			37.9			81.6	
Split Option												
Ref Time Combined (s)	0.0	6.4		0.0	18.9		0.0	24.2		0.0	21.5	
Ref Time Seperate (s)	0.1	6.3		1.3	11.0		5.0	19.2		3.9	16.9	
Reference Time (s)	6.4	6.4		18.9	18.9		24.2	24.2		21.5	21.5	
Adj Reference Time (s)	10.4	10.4		22.9	22.9		28.2	28.2		25.5	25.5	
Summary		NW SE		NE SW		Combined						
Protected Option (s)		NA		NA								
Permitted Option (s)		30.9		81.6								
Split Option (s)		33.3		53.7								
Minimum (s)		30.9		53.7		84.6						
Right Turns		SER		NER								
Adj Reference Time (s)		8.0		8.0								
Cross Thru Ref Time (s)		25.5		10.4								
Oncoming Left Ref Time (s)		22.9		25.5								
Combined (s)		56.5		43.9								

Intersection Summary

Intersection Capacity Utilization 70.5% ICU Level of Service C
Reference Times and Phasing Options do not represent an optimized timing plan.

E-W Street: La Colina Dr

N-S Street: Tustin Ranch Rd

Lane Capacity: 1700

Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing Plus Construction				PM Existing				PM Existing Plus Construction			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	242	1	1.00	0.14	241	1	1.00	0.14	127	1	1.00	0.07	120	1	1.00	0.07
Comb. L-T						0				0				0		
EB Thru	10		0.04	0.16	10	0	0.04	0.16	7	0	0.05	0.08	7	0	0.05	0.09
Comb. T-R		1				1				1				1		
EB Right	258		0.96	0.16	266	0	0.96	0.16	122	0	0.95	0.08	145	0	0.95	0.09
Comb. L-T-R						0				0				0		
WB Left	43	1	1.00	0.03	43	1	1.00	0.03	28	1	1.00	0.02	28	1	1.00	0.02
Comb. L-T						0				0				0		
WB Thru	9		0.35	0.02	9	0	0.35	0.02	4	0	0.31	0.01	4	0	0.31	0.01
Comb. T-R		1				1				1				1		
WB Right	17		0.65	0.02	17	0	0.65	0.02	9	0	0.69	0.01	9	0	0.69	0.01
Comb. L-T-R						0				0				0		
NB Left	67	1	1.00	0.04	88	1	1.00	0.05	208	1	1.00	0.12	212	1	1.00	0.12
Comb. L-T						0				0				0		
NB Thru	883	3	3.00	0.17	883	3	3.00	0.17	934	3	3.00	0.18	934	3	3.00	0.18
Comb. T-R						0				0				0		
NB Right	12	1	1.00	0.01	12	1	1.00	0.01	30	1	1.00	0.02	30	1	1.00	0.02
Comb. L-T-R						0				0				0		
SB Left	9	1	1.00	0.01	9	1	1.00	0.01	8	1	1.00	0.00	8	1	1.00	0.00
Comb. L-T						0				0				0		
SB Thru	1358	3	3.00	0.27	1358	3	3.00	0.27	766	3	3.00	0.15	766	3	3.00	0.15
Comb. T-R						0				0				0		
SB Right	168	1	1.00	0.10	162	1	1.00	0.10	131	1	1.00	0.08	123	1	1.00	0.07
Comb. L-T-R						0				0				0		

Critical Volumes	E-W:	0.18	E-W:	0.19	E-W:	0.09	E-W:	0.11
	N-S:	0.31	N-S:	0.32	N-S:	0.27	N-S:	0.27
	Total:	0.49	Total:	0.51	Total:	0.36	Total:	0.38

Lost Time	0.05	0.05	0.05	0.05
-----------	------	------	------	------

V/C	0.539	0.556	0.415	0.431
Level of Service	A	A	A	A

E-W Street: Irvine Blvd
 N-S Street: Tustin Ranch Rd
 Lane Capacity: 1700
 Dual Lefts Capacity (per lane): 1440

Overlap Reduce
 NB SB
 10% 10%

Overlap Reduce
 NB SB
 10% 10%

Overlap Reduce
 NB SB
 5% 10%

Overlap Reduce
 NB SB
 5% 10%

Movement	AM Existing				AM Existing Plus Construction				PM Existing				PM Existing Plus Construction			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
EB Left	232	2	2.00	0.08	232	2	2.00	0.08	279	2	2.00	0.10	279	2	2.00	0.10
Comb. L-T						0				0				0		
EB Thru	800	3	3.00	0.16	800	3	3.00	0.16	978	3	3.00	0.19	978	3	3.00	0.19
Comb. T-R						0				0				0		
EB Right	310	1	1.00	0.18	310	1	1.00	0.18	291	1	1.00	0.17	291	1	1.00	0.17
Comb. L-T-R						0				0				0		
WB Left	240	2	2.00	0.08	240	2	2.00	0.08	187	2	2.00	0.06	187	2	2.00	0.06
Comb. L-T						0				0				0		
WB Thru	953	3	3.00	0.19	953	3	3.00	0.19	1451	3	3.00	0.28	1451	3	3.00	0.28
Comb. T-R						0				0				0		
WB Right	110	1	1.00	0.06	110	1	1.00	0.06	269	1	1.00	0.16	268	1	1.00	0.16
Comb. L-T-R						0				0				0		
NB Left	228	2	2.00	0.08	228	2	2.00	0.08	515	2	2.00	0.18	515	2	2.00	0.18
Comb. L-T						0				0				0		
NB Thru	576	3	3.00	0.11	597	3	3.00	0.12	902	3	3.00	0.18	907	3	3.00	0.18
Comb. T-R						0				0				0		
NB Right	195	1	1.00	0.11	195	1	1.00	0.11	333	1	1.00	0.20	333	1	1.00	0.20
Comb. L-T-R						0				0				0		
SB Left	176	2	2.00	0.06	177	2	2.00	0.06	187	2	2.00	0.06	188	2	2.00	0.07
Comb. L-T						0				0				0		
SB Thru	1038	3	3.00	0.20	1045	3	3.00	0.20	581	3	3.00	0.11	603	3	3.00	0.12
Comb. T-R						0				0				0		
SB Right	346	1	1.00	0.20	346	1	1.00	0.20	298	1	1.00	0.18	298	1	1.00	0.18
Comb. L-T-R						0				0				0		

Critical Volumes	E-W:	0.27	E-W:	0.27	E-W:	0.38	E-W:	0.38
	N-S:	0.28	N-S:	0.28	N-S:	0.35	N-S:	0.35
	Total:	0.55	Total:	0.55	Total:	0.74	Total:	0.74

Lost Time	0.05	0.05	0.05	0.05
-----------	------	------	------	------

V/C	0.600	0.601	0.785	0.785
Level of Service	B	B	C	C



Balancing the Natural and Built Environment

www.Psomas.com

Appendix L

Noise Calculations

Construction Generated Noise			
Building Type	Domestic Housing		Distance (ft)
Construction Noise at 50 Feet (dBA Leq)			50
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	83	83	
Excavation	88	75	
Foundation Construction	81	81	
Building Construction	81	65	
Finishing and Site Cleanup	88	72	
North			
Maximum Construction Noise (dBA Leq)			40
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	85	85	
Excavation (Site Preparation)	90	77	
Foundation Construction	83	83	
Building Construction	83	67	
Paving	90	74	
Average Construction Noise (dBA Leq)			270
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	68	68	
Excavation (Site Preparation)	73	60	
Foundation Construction	66	66	
Building Construction	66	50	
Paving	73	57	
South			
Maximum Construction Noise (dBA Leq)			20
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	91	91	
Excavation (Site Preparation)	96	83	
Foundation Construction	89	89	
Building Construction	89	73	
Paving	96	80	
Average Construction Noise (dBA Leq)			270
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	68	68	
Excavation (Site Preparation)	73	60	
Foundation Construction	66	66	
Building Construction	66	50	
Paving	73	57	
East			
Maximum Construction Noise (dBA Leq)			25
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	89	89	
Excavation (Site Preparation)	94	81	
Foundation Construction	87	87	
Building Construction	87	71	
Paving	94	78	
Average Construction Noise (dBA Leq)			300
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	67	67	
Excavation (Site Preparation)	72	59	
Foundation Construction	65	65	
Building Construction	65	49	
Paving	72	56	
West			
Maximum Construction Noise (dBA Leq)			40
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	85	85	
Excavation (Site Preparation)	90	77	
Foundation Construction	83	83	
Building Construction	83	67	
Paving	90	74	
Average Construction Noise (dBA Leq)			300
Construction Phase	All Applicable Equipment in Use¹	Minimum Required Equipment in Use¹	
Ground Clearing/Demolition	67	67	
Excavation (Site Preparation)	72	59	
Foundation Construction	65	65	
Building Construction	65	49	
Paving	72	56	

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the USEPA, December 31, 1971. Based on analysis for Office Building, Hotel, Hospital, School, and Public Works.

Construction Generated Vibration

North		Closest Distance (feet):		40
	Approximate RMS a	Approximate RMS		
	66	73.000		
Equipment	inch/second	inch/second		
Vibratory roller	0.21	0.104		
Large bulldozer	0.089	0.044		
Small bulldozer	0.003	0.001		
Jackhammer	0.035	0.017		
Loaded trucks	0.076	0.038		
	Criteria	0.300	1700	
South		Closest Distance (feet):		20
	Approximate RMS a	Approximate RMS		
	Velocity at 25 ft,	Velocity Level,		
	inch/second	inch/second		
Equipment				
Vibratory roller	0.21	0.293		
Large bulldozer	0.089	0.124		
Small bulldozer	0.003	0.004		
Jackhammer	0.035	0.049		
Loaded trucks	0.076	0.106		
	Criteria	0.300		
East		Closest Distance (feet):		25
	Approximate RMS a	Approximate RMS		
	Velocity at 25 ft,	Velocity Level,		
	inch/second	inch/second		
Equipment				
Vibratory roller	0.21	0.210		
Large bulldozer	0.089	0.089		
Small bulldozer	0.003	0.003		
Jackhammer	0.035	0.035		
Loaded trucks	0.076	0.076		
	Criteria	0.300		
West		Closest Distance (feet):		40
	Approximate RMS a	Approximate RMS		
	Velocity at 25 ft,	Velocity Level,		
	inch/second	inch/second		
Equipment				
Vibratory roller	0.21	0.104		
Large bulldozer	0.089	0.044		
Small bulldozer	0.003	0.001		
Jackhammer	0.035	0.017		
Loaded trucks	0.076	0.038		
	Criteria	0.300		
Based on distance to nearest structure				
¹ Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet				
Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.				
Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, <i>Transit Noise and Vibration Impact Assessment</i> (2006).				

Pump Noise

Outdoor Sound Pressure Level @ 3 feet

Utilization Factor

Source Receptor Distance (ft)

Noise Level (dBA Leq)

Barrier Attenuation (dBA)

Noise Exposure Level (dBA Leq)

*Based on a Nidec 100 hp pump***Southwest - Residential Uses**

75

100%

55

50

-20

30

Appendix M

Will Serve Letters

Department of Public Works

Douglas S. Stack, P.E.

Director



September 19, 2019

Mr. Peter Zehnder
Ranch Hill Partners, LP
c/o Collective Housing Supply Co.
124 Tustin Avenue, Ste. 200
Newport Beach, CA 92663

SUBJECT: Conditional Will Serve Letter – Tentative Tract No. 18119 - Proposed 37 Unit Condominium Subdivision at 11782 Simon Ranch Road, County of Orange

Dear Mr. Zehnder,

This letter is in response to your inquiry concerning City of Tustin Water Service's (CTWS) ability to serve water to your proposed residential development project located at 11782 Simon Ranch Road in the unincorporated territory of the County of Orange. It is CTWS's understanding that the project will consist of the subdivision of one 5.88 acre parcel into five residential lots for condominium purposes, two common area lots, and three lettered lots for driveway and utility purposes. Construction of thirty-seven residential condominium units is proposed, some detached and some attached as duplex buildings.

Based on the information you have provided, including the Tract No. 18119 Hydraulic Analysis performed by AKM Consulting Engineers, dated July 10, 2019, water service is available from CTWS to your proposed project, subject to the following requirements and Preliminary Conditions of Approval:

1. Proposed water improvements must follow the latest City of Tustin Water Standards and the American Water Works Association (AWWA) guidelines. In case of a conflict, the City of Tustin Water Standards shall prevail.
2. The applicant is responsible for all costs related to the installation, upgrade, alteration, relocation or abandonment of all existing City of Tustin public water facilities affected by the proposed project.
3. Preservation of existing or development of a new looped water system between Simon Ranch Road and Racquet Hill is required. Alignment and size of the proposed water system and layout of any proposed water utility easements are subject to review and approval by City of Tustin Water Service. The minimum easement width required is twenty (20) feet.
4. An individual domestic water service and meter shall be provided for each residential dwelling unit. Plumbing plans and landscape plans shall be submitted to CTWS with accurate fixture unit counts, including irrigation sprinkler heads, for use in determining the required service and meter sizes.

Department of Public Works



5. If common area landscaping is proposed, a separate water service and meter for irrigation will be required. A reduced pressure principal assembly (RPPA) shall be required to prevent cross contamination with the public water system.
6. City of Tustin Water Service, as successor to Tustin Water Works, holder of a 10' wide easement proposed to be abandoned, and as grantee of proposed water utility easements, shall be a signatory on the Final Map.
7. East Orange County Water District (EOCWD) is the City's imported water wholesaler. All applicable connection fees must be paid to EOCWD before City of Tustin Water Service will provide water to your proposed project.
8. The proposed domestic water system plans must conform to all applicable regulations enforced by the Orange County Health Department.

The above listed requirements and Conditions of Approval are preliminary and are subject to revision and addition as the entitlement process progresses. If you should have any questions concerning water service to your proposed project, please contact me at 714.361.4719 or Eric Johnson, Principal Engineer, at 714.573.3320.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Grisso', is written over a horizontal line.

Mike Grisso
Water Services Manager

cc: Douglas S. Stack, Director of Public Works / City Engineer
Eric Johnson, Principal Engineer



Service Commitment Letter #19-01

Originally quoted: 01/09/2019 Revised: N/A
185 N. McPherson Rd. Orange, CA 92869
Phone: (714) 538-5815 ~ Fax: (714) 538-0334

Description: Tract Development
Address: 11782 Simon Ranch Road
City: Unincorporated Orange County
APN: 104-321-01
Phone: (949) 230-5426
Email: pete@collectivehousingsupply.com

Zoning: Residential
of Lots: 37
Acreage: 5.88
Tract Map: 18119

Project Proponent: Ranch Hill Partners
(Address)

Attn: Pete Zehnder

Water Fees (Valid from 01/09/2019 through 01/08/2020)

Project is in the District and is eligible for service.

Water capacity fees will be quoted after the Plan Check process is completed; to the extent applicable.

Sewer Fees (Valid from 01/09/2019 through 01/08/2020)

Project is in the District and is eligible for wholesale service.

Construct sewer facilities per District approved plans. Sewer capacity fees will be quoted after the Plan Check process is completed; to the extent applicable.

Additional Connection Fee Information

Connection to water and sewer facilities must occur within one year of permit purchase date or any subsequent fee increases are applicable.

A water and/or sewer service application must accompany the payment of fees. Payment will be received by Customer Service staff located in the lobby of the District offices.

District Standards allow for a 30-calendar day installation period upon payment for retail water meter connection fees. Generally, retail water meters are installed within 14-21 working days. The District requires five working days notification before intention to install the retail water meter in order to coordinate the most efficient placement and/or connection to facilities.

This Letter does not contain an estimate for any engineering deposits or fees related to plan checking or inspection related deposits other than lateral inspection. Please contact the Operations Manager at (714) 538-5815 with any questions that you may have.

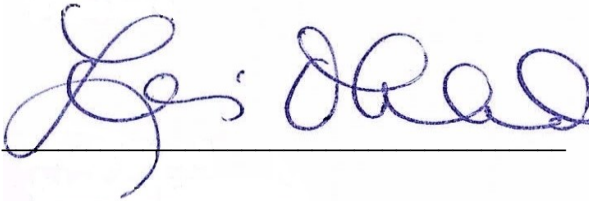
Current water and/or sewer connection fees are subject to change by action of the Board of Directors and fees will be based on the current fee in effect at the time of fee payment. Please note that all applications must include APN numbers.

The developer will grant to the District all water rights including surface and ground water rights over, upon and under all lands within the project.

The District reserves the right at any time to re-evaluate, revise and update the Service Availability Letter. The District considers the conditions to have expired automatically one year from the issuance date of the Letter.

Backflow Requirements

A backflow prevention device must be installed on each purchased commercial domestic and all irrigation meters. The meter will be locked off after installation until the backflow device has been inspected. Please contact the District at (714) 538-5815 to schedule an inspection appointment.

Authorized By:  Date: 01/09/2019



Service Provider Acknowledgement Letter #21-01

Originally quoted: 01/09/2019 Revised: 01/22/2021
185 N. McPherson Rd. Orange, CA 92869
Phone: (714) 538-5815 ~ Fax: (714) 538-0334

Project Information

Description: Tract Development, Ranch Hills Community	Zoning: Exist: A1, Prop: R2-5000
Project Proponent: Ranch Hill Partners, L.P.	# of Lots: TBD
Address: 11782 Simon Ranch Road	Acres: 5.88
City: Santa Ana, CA 92705	Tract Map: 18119
APN: 104-321-01	Zone(s) Affected: WZ, ID1
Phone: (949) 230-5426	
Email: pete@collectivehousingsupply.com	

Ranch Hill Partners, L.P.
2454 Alton Parkway
Irvine, CA 92606
Attn: Peter Zehnder

Water Service Requirements

Project is inside the District for Wholesale Water and may be eligible for service.

All water facilities must be submitted with engineered drawings signed and sealed by a Professional Engineer licensed in the State of California; water facilities must be designed in accordance with District Standard Plans and Specifications and constructed per District approved plans. Any required annexations and/or rezoning must occur before water service is available to the project. A water capacity/fire flow study may be required for any project other than a remodel or the addition of an attached Auxiliary Dwelling Unit (ADU); applicable fees and charges will be quoted after the Plan Check process and required studies are completed. The project may be subject to capacity infrastructure (installation, upgrade, modification, relocation or abandonment) costs in excess of connection fees. The owner will be responsible for all easements/land required to provide service to the project.

Sewer Service Requirements

Project is in the District and may be eligible for service.

All sewer facilities must be submitted with engineered drawings signed and sealed by a Professional Engineer licensed in the State of California; sewer facilities must be designed in accordance with District Standard Plans and Specifications and constructed per District approved plans. Any required annexations and/or rezoning must occur before sewer service is available to the project. A sewer capacity study of the District's portion of the system was completed by the District's consulting engineer for this project. The District's system connects to IRWD's system and available capacity, if any, in IRWD's system has not yet been determined; applicable fees and charges will be quoted after the Plan Check process and required studies are completed. The project may be subject to capacity infrastructure (installation, upgrade, modification, relocation, and/or abandonment) costs in excess of connection fees. The owner will be responsible for all easements/land required to provide service to the project.

Additional Connection Fee Information

In order to obtain any further information with regards to the availability of water and sewer service to this project, a water and/or sewer service application must be accompanied by the payment of plancheck and capacity/fireflow study fees. Payment must be in the form of a check or cashier's check. Retail water meters must be installed pursuant to retail water provider's requirements. Connection to water and sewer facilities must occur within six months of permit issuance date. If water or sewer is not connected within six months of permit issuance date, any increase in permit fees approved by the Board of Directors will be applied.

District Standards allow for a 31-day installation period or water meters upon payment for water meter connection fees. Generally, water meters are installed within 14-21 working days. The District requires fourteen (14) days notification before intention to deliver payment in order to coordinate the most efficient placement and/or connection to facilities.

If water service is being requested, a water meter location stake will be provided for placement on your parcel at time of payment. It is the responsibility of the customer to place the stake on the parcel per the approved plans. The District will not install the meter without stake placement.

This letter does not contain an estimate for any engineering deposits or fees related to plan checking or inspection related deposits, or any other costs or fees – these will be quoted to you following the application or upon completion of the permitting process, as applies, and are subject to the results of the engineering analysis.

Current water and/or sewer connection fees are subject to change without notice by the Board of Directors and fees will be based on the current fee in effect at the time of fee payment. Please note that all applications must include APN numbers and evidence of property ownership. If applicable, the developer will grant to the District all water rights including surface and ground water rights over, upon and under all lands within the project.

The District reserves the right at any time to re-evaluate, revise and update the Service Provider Acknowledgement Letter. The District considers the Letter to have expired automatically one year from the issuance date of the Letter.

Signed  Date: 4/22/2021
Title: General Manager



Irvine Ranch
WATER DISTRICT

February 1, 2021

Mr. Peter Zehnder
Ranch Hills Partners, L.P.
2454 Alton Parkway
Irvine, CA 92606

SUBJECT: IRWD Sewer Capacity for the Ranch Hills Community Project

Mr. Zehnder:

Thank you for forwarding East Orange County Water District's "Service Provider Acknowledgement Letter #21-01" that notes, "...available capacity, if any, in IRWD's system has not yet been determined." This is to advise you that the IRWD would have adequate sewage collection capacity to furnish each and every building lot, without exception, in the tentative tract (Tract Map 18119, APN 104-321-01, 11782 Simon Ranch Road, Santa Ana, 92705) at the proposed sewer connection point near the intersection of Lambert and Cheney at IRWD Manhole MH042W012.

IRWD understands that the retail sewer service will be provided by the East Orange County Water District. IRWD recognizes that the proposed 37 residential dwelling units sewage generation will replace the existing Tustin Racquet Club facilities and sewage generated from those facilities.

If you have any questions or require any additional information, please feel free to call the undersigned.

Sincerely,

Eric Akiyoshi, P.E.
Engineering Manager, Planning and GIS

CC:
David Youngblood
Kevin L. Burton, P.E.
Kelly Lew, P.E.

Appendix N

Guidelines For Evaluating Vehicle Miles Traveled Under CEQA for the County of Orange



LSA

GUIDELINES FOR EVALUATING VEHICLE MILES TRAVELED UNDER CEQA

for the
COUNTY OF ORANGE

SEPTEMBER 17, 2020

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FINAL
GUIDELINES FOR EVALUATING VEHICLE
MILES TRAVELED UNDER CEQA
COUNTY OF ORANGE

Submitted to:

Joanna Chang
Land Use Manager
OC Public Works
601 North Ross Street
Santa Ana, California 92701

Prepared by:

LSA
20 Executive Park, Suite 200
Irvine, California 92614
(949) 553-0666

Project No. OCY1701.19

September 2020

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- A: TECHNICAL ADVISORY ON EVALUATING TRANSPORTATION IMPACTS IN CEQA (OPR, DECEMBER 2018)
- B: PROPOSED MITIGATION STRATEGIES FOR IMPLEMENTATION OF SB 743



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FIGURES AND TABLES

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LIST OF ABBREVIATIONS AND ACRONYMS

ADT	average daily trips
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CO ₂ e	carbon dioxide equivalent
County	County of Orange
EO	Executive Order
FAR	floor-to-area ratio
Guidelines	2020 <i>State CEQA Guidelines</i> , 14 California Code of Regulations, Section 15000, et. seq.
GWP	global warming potential
HOT	high-occupancy toll
HOV	high-occupancy vehicle
HQTA	High-Quality Transit Area
LOS	level of service
L RTP	Long-Range Transportation Plan
mi	mile
MT	metric ton
MPO	Metropolitan Planning Organizations
OCTAM	Orange County Transportation Analysis Model
OPR	Governor's Office of Planning and Research

PRC	Public Resources Code
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RTPA	Regional Transportation Planning Agency
SB	Senate Bill
SCAG	Southern California Association of Government
SOC	Statement of Overriding Considerations
TA	Technical Advisory
TDM	transportation demand management
TPA	Transit Priority Area
TSP	Transit Signal Priority
VMT	vehicle miles traveled



1.0 INTRODUCTION

Senate Bill (SB) 743, signed in 2013, changed the way transportation studies are conducted in California Environmental Quality Act (CEQA) documents. Vehicle miles traveled (VMT) replaces motorist delay and level of service (LOS) as the metric for impact determination. For land development projects, VMT is simply the product of the daily trips generated by a new development and the distance those trips travel to their destinations. For capital projects, impacts are identified as the new VMT attributable to the added capital project, both from the installation of the facility and the induced growth.

This document serves as a guide for application and substantial evidence for the County of Orange's (County) adopted project screenings, significance thresholds, and mitigation strategies, modeled after the Governor's Office of Planning and Research's (OPR) Technical Advisory (TA) for CEQA transportation studies; however, as in previous CEQA practice, the applicant/project proponent will still be required to provide traffic analysis that is specific to the proposed project to be reviewed and approved by the County.¹ These guidelines apply to all projects for which the County is the Lead Agency for certification or adoption of CEQA documents. If the County is the Lead Agency, but the project is located in another jurisdiction, these guidelines would apply. However, if the County is not the Lead Agency, and the project is located in another jurisdiction, the Lead Agency would determine which VMT guidelines should be used for analysis.

In January 2019, the Natural Resources Agency and the OPR codified SB 743 into the Public Resources Code (PRC) and the *State CEQA Guidelines*.

The *State CEQA Guidelines*, included in Title 14 of the California Code of Regulations, Section 15064.3 subdivision (b)—hereafter referred to as the Guidelines—states the following criteria for analyzing transportation impacts:

- 1. Land Use Projects.** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
- 2. Transportation Projects.** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a

¹ The County will review Public Resources Code Section 21166 to determine whether VMT analysis is required for the later-prepared environmental documents, including subsequent and supplemental EIRs and addendums. Absent facts or legal requirements to the contrary, the County will not, as a matter of course, require VMT analysis for later-prepared documents. (See, e.g., *CREED v. San Diego* [2011] 196 Cal. App. 4th 515; *Concerned Dublin Citizens v. City of Dublin* [2013] 214 Cal. App. 4th 1301, 1320.)

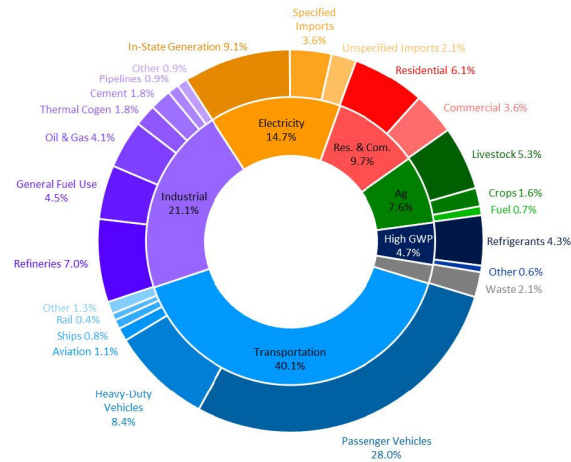
regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

- 3. Qualitative Analysis.** If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead County may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
- 4. Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household, or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

The OPR provides a TA (see Appendix A) as a guidance document to establish thresholds under this new VMT metric. The laws and rules governing the CEQA process are contained in the CEQA statute (PRC Section 21000 and following), the Guidelines (California Code of Regulations, Title 14, Section 15000 and following), published court decisions interpreting CEQA, and locally adopted CEQA procedures. The TA is intended as a reference document; it does not have the weight of law, but is intended by OPR to provide substantial evidence for the thresholds proposed therein. Thus, deviating from the TA is best undertaken with substantial evidence to support the County action.

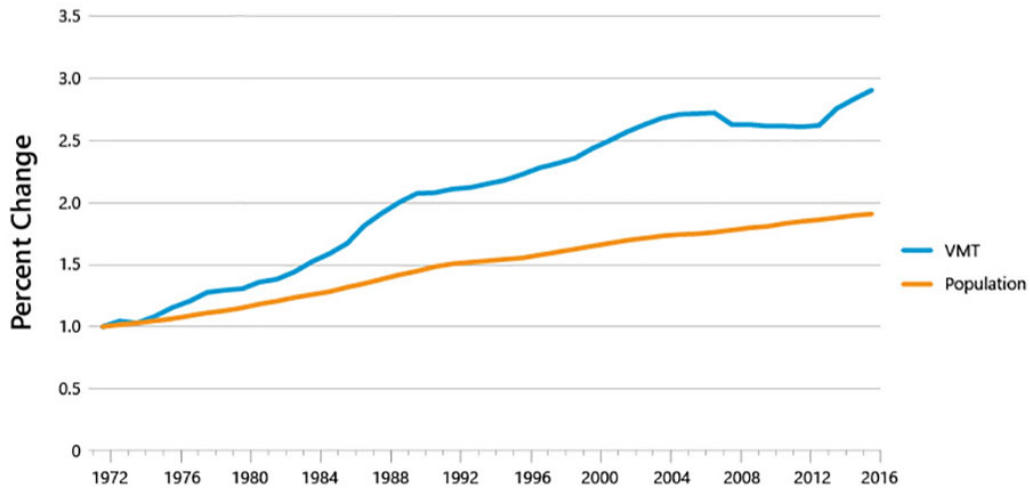
The State of California has committed to reducing greenhouse gas (GHG) emissions and achieving long-term climate change goals. To achieve these climate change goals, the State has determined that overall VMT needs to be reduced. As Figure 1 shows, transportation is the single largest sector contributing to the State's GHG emissions. More than 40 percent of the GHG emissions come from the transportation sector, primarily passenger cars and light-duty trucks. According to the State, removing these vehicle trips and/or reducing the length of existing trips is expected to result in reduced VMT and reduced GHG emissions. As illustrated in Figure 2, over the last 40 years, VMT has grown faster than population growth. According to the OPR and the State, the new Guidelines and the establishment of VMT thresholds for CEQA analyses are linked to GHG reduction strategies and overall statewide climate change goals.





Source: California Greenhouse Gas Emissions for 2000 to 2017 Trends of Emissions and Other Indicators (California Air Resources Board Report)

Figure 1: 2017 GHG Emissions in California by Scoping Plan Sector and Sub-Sector Category



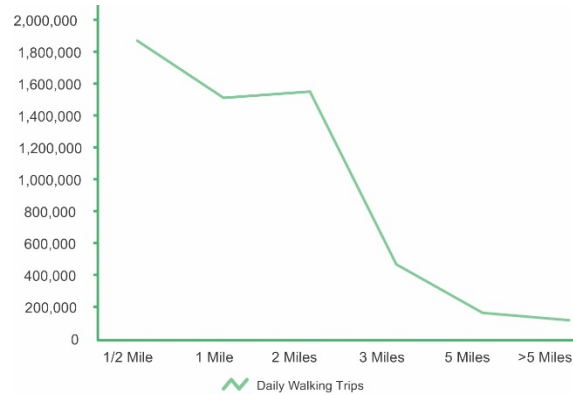
Source: <https://ca50million.ca.gov/transportation/>

Figure 2: California Statewide Population and VMT Trends

The State and the Southern California Association of Governments (SCAG), the metropolitan planning organization for Southern California, have provided guidance that the number of vehicle trips and the length of vehicle trips can be reduced by locating new development near available transit and a mix of other land uses. This is one example of a strategy to reduce project related VMT. SB 743 is intended to promote infill development, encourage multimodal transportation networks, and reduce GHG emissions.



In one example, SCAG’s Draft Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2019) includes data showing that the number of walking trips greatly diminishes for distances longer than 2 miles (Figure 3). If a person’s destination or a transit station are within 2 miles of a person’s home, the person may choose a non-vehicle travel mode.



Sources: SCAG Connect Social: The 2020-2045 RTP/SCS Active Transportation Technical Appendix, Page 30; California Household Travel Survey (2012).

Figure 3: SCAG Region Total Number of Daily Walking Trips by Distance

This document provides a guide for application and substantial evidence for the County’s adopted thresholds of significance, modeled after OPR’s suggestions, for CEQA transportation studies. It is divided into chapters, including:

- Chapter 2 – Definition of Region:** Here, the document describes what the comparative region is for analysis purposes. Each project will be compared to an existing regional average. The geographical area that defines the region is defined and described.
- Chapter 3 – Project Screening:** This chapter provides criteria, and, where applicable, substantial evidence for screening out certain types of projects that, by their nature, or by virtue of other factors, would result in less than significant transportation impacts. This is consistent with the OPR’s acknowledgment that certain projects are either low VMT generators, or by virtue of their location would have a less than significant impact.
- Chapter 4 – Significance Thresholds for Land Development Projects:** In this chapter, the threshold that would define a significant CEQA impact for land use projects is identified. This threshold is linked to a specific travel mode and a set of trip purposes. The actual VMT metric (either an efficiency rate or total VMT) is described.
- Chapter 5 – Significant Thresholds for Transportation Projects:** This chapter describes the method to evaluate significant CEQA impacts associated with transportation projects. Many non-vehicular capital projects are presumed to have a less than significant impact. Capacity-enhancing projects may have significant impacts and will be subject to a detailed analysis that will include measuring induced travel.
- Chapter 6 – Significance Thresholds for Land Plans:** This chapter provides guidance and substantial evidence to support the County’s treatment of land use plans and their CEQA transportation analysis.
- Chapter 7 – Mitigation Strategies:** This chapter provides examples of potential mitigation strategies. It is noted that this discussion does not present an exhaustive list of feasible mitigation measures that may be applied to a project. As in previous CEQA practice, the applicant/project proponent will be required to identify mitigation measures to reduce, avoid, or offset the specific project-related impacts identified in an individual environmental document.



2.0 DEFINITION OF REGION: VEHICLE MILES TRAVELED CONTEXT AND DETERMINING THE BASELINE

The question of context defines the scope of the VMT analysis. The common term for this in previous delay-based LOS analyses is **project study area**. In the delay-based LOS analyses, a project study area is generally determined based on the incremental increase in traffic from the project and its potential to create a significant LOS impact. This generally includes intersections and roadway segments where the project would add a prescribed number of peak-hour trips. Many times, lead agencies stop study area boundaries at their jurisdictional borders.

Based on the evidence and analysis provided below, the “Region” for Orange County is the entire county area.

Region is not defined in the TA. Instead, the OPR offers the following suggestions:

*In cases where the region is substantially larger than the geography over which most workers would be expected to live, it might be appropriate to refer to a smaller geography, such as **county**, that includes the area over which nearly all workers would be expected to live (page 16).*

1. *For residential projects in unincorporated county areas, the local County can compare a residential project’s VMT to (1) the region’s VMT per capita, or (2) the aggregate population weighted VMT per capita of all cities in the region.*

The TA bases recommendations for thresholds for the primary land use types (residential and office) on a comparison to a **regional average**. The County will utilize the region’s VMT per capita approach. The OPR guidance recommends consistency in approach; once a region is established, that region should be used for all subsequent traffic analyses.

Other large or urbanized areas around the State have been surveyed to identify what region has been established for VMT thresholds. In most cases, the county boundary has been identified as the region selected for VMT analysis. In some cases, this county boundary has other names, such as the Council of Governments boundary.

County is a common and reoccurring context for CEQA VMT analyses throughout the State. According to the Orange County Transportation Analysis Model (OCTAM 5.0), of the total trips in and out of Orange County, about 21 percent originate and are destined within the unincorporated county area. Another 67 percent of trips originate or are destined within the municipal jurisdictions (cities) in Orange County. The remaining 12 percent of Orange County trips have a trip end in the other counties of the SCAG region or beyond. Because the majority of the unincorporated county trips are contained within the entirety of Orange County (approximately 88 percent) and many other large urbanized areas are defining their region as their counties, the use of Orange County in its entirety is defined as the region for CEQA land development transportation analyses.

Table A: County of Orange Unincorporated Vehicle Miles Traveled Data (Using OCTAM Base Year 2016)

Table 1 - San Diego Trips

Region	Total Trips	Trips to/from San Diego	Percent San Diego Trips
Unincorporated Orange County	668,689	3,165	0.5%
Total Orange County (including unincorporated Orange)	19,004,260	69,830	0.4%

Table 2 - Percent County of Orange Trips with Orange County as region

Trips within Unincorporated Orange County + Trips between Unincorporated and Incorporated Orange County	525,288
Total Trips within Entire Orange County (Internal - Internal)	8,559,626
Percent County of Orange Trips within Orange County	6.1%

Table 3 - Percent County of Orange Trips with Orange County + 10 mile buffer as region

Trips within Unincorporated Orange County + Trips between Unincorporated and Incorporated Orange County, and 10-mile buffer around Orange County (parts of LA, Riverside, and San Bernadino County)	575,922
Total Trips within Entire Orange County + 10-Mile Buffer around Orange County (Internal - Internal)	14,800,711
Percent County of Orange Trips within Orange County + 10-mile Buffer	3.9%

Table 3a - Percent County of Orange Trips with Orange County + 10 mile buffer as region

Total Trips to/from Entire Orange County (includes unincorporated Orange County + external trips)	9,451,544
Trips within Entire Modeling area (Orange, LA, Ventura, Riverside, and San Bernadino Counties + External Stations)	48,342,620
Percent Orange County Trips In Entire Modeling Area	19.6%

Table 4 - VMT Per Capita

Region	Total Homebased VMT	Total Household Population	VMT/Capita
Unincorporated Orange County	3,477,242	145,121	24.0
Total Orange County (including unincorporated Orange)	56,757,571	3,179,626	17.9
Total Orange County + Part LA, Riverside, and SB Counties (10 miles from county boundary)	116,115,946	6,241,508	18.6

Table 5 - VMT Per Employee

Region	Total Homebased Work VMT	Total Employment	VMT/Employee
Unincorporated Orange County	1,348,364	33,312	40.5
Total Orange County (including unincorporated Orange)	41,174,971	1,710,147	24.1
Total Orange County + Part LA, Riverside, and SB Counties (10 miles from county boundary)	66,768,783	2,766,068	24.1

Source: OCTAM5 Base Year model run (2016)



It should be recognized the use of Orange County as the region defines the comparative (i.e., baseline), or the denominator, in the identification of project-related impact. The numerator is the project's VMT contribution. The project-related/generated VMT profile may go beyond the county boundary and not be truncated by a jurisdictional boundary. For example, a new, large land development proposed near Orange County's eastern boundary may include VMT from as far away as Corona or other communities in Riverside and San Bernardino counties. In that case, it would be the responsibility of the applicant and their traffic study preparer to include the project VMT, regardless of geographical limit, to the satisfaction of the County staff. This project-related VMT profile would be compared against the County regional baseline.

Unlike delay-based LOS analyses, VMT is a regional effect not defined by roadway, intersection, or pathway. The OPR acknowledges this in its TA (page 6), which states,

Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries by failing to count the portion of a trip that falls outside the jurisdiction or by discounting the VMT from a trip that crosses a jurisdictional boundary.

Table A is used as the current 2020 calculations to demonstrate what calculations should be applied. Tables 2, 4, and 5, in Table A identify the relevant VMT baselines for the region. These baselines will be revised as the OCTAM is revised beyond version 5.0. Applicants should use the most up-to-date version of the OCTAM in setting the baseline and analyzing their project.²

² CEQA allows, variances to the baseline may be presented as part of the methodology for review and approval to the County by project applicants pursuant to CEQA Guidelines Section 15064.3(b)(4). Such alternate baselines must be supported by substantial evidence as defined by Section 15384(b) of the CEQA Guidelines.

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3.0 PROJECT SCREENING

The TA acknowledges that certain activities and projects may result in a less than significant impact to transportation and circulation. A variety of projects may be screened out of a complicated VMT analysis due to the presumption described in the TA regarding the occurrence of less than significant impacts.

3.1 Land Development Projects

The TA acknowledges that conditions may exist under which a land development project would have a less than significant impact on transportation and circulation. These may be size, location, proximity to transit, or trip-making potential.

Land development projects that have one or more of the following attributes may be presumed to create a less than significant impact on transportation and circulation.

- **Project in High-Quality Transit Area (HQTA):** The project is within 0.5 mile (mi) of a Transit Priority Area (TPA) or an HQTA, unless the project is inconsistent with the RTP/SCS, has a floor-to-area ratio (FAR) less than 0.75, provides an excessive amount of parking, or reduces the number of affordable residential units. In accordance with SB 743, “Transit priority areas” are defined as “an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program. A Major Transit Stop means: “a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods.” An HQTA or Corridor is a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Figure 4 depicts TPAs within unincorporated Orange County³, including HQTA corridors served by the Orange County Transportation Authority with service intervals of 15 minutes or less and major transit stops along the Metrolink⁴ system. Although the figure shows the San Clemente Pier Metrolink station, it does not qualify as a major transit stop because service is limited to weekends. Projects proposed in these areas would be presumed to have a less than significant transportation impact unless the project is inconsistent with the RTP/SCS, has an FAR less than 0.75, provides an excessive amount of parking, or reduces the number of affordable residential units.

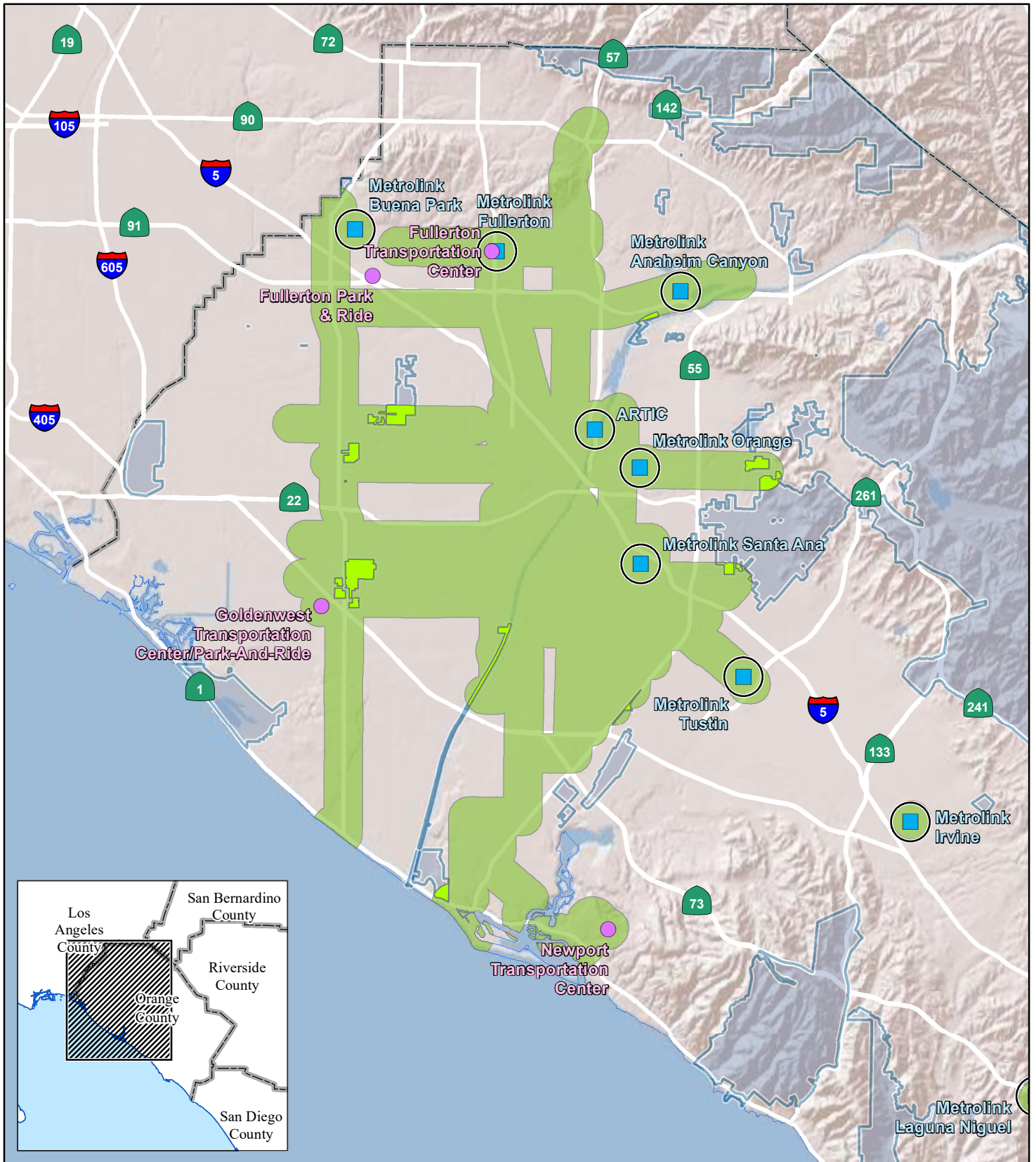
- **Neighborhood Retail Project:** The project involves local-serving retail space of less than 50,000 square feet.
- **Affordable Housing Project:** The project is 100 percent affordable-housing units.

³ Figure 4 may be updated periodically as necessary.

⁴ Amtrak runs along Metrolink’s Orange County route and stops at many Orange County Metrolink stations.

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LSA

LEGEND

- Unincorporated Areas of Orange County
- High Quality Transit Areas
- Unincorporated Areas within High Quality Transit Areas
- Transportation Centers
- Metrolink Station (with half-mile buffer)

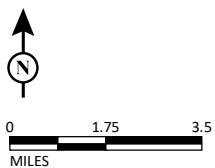
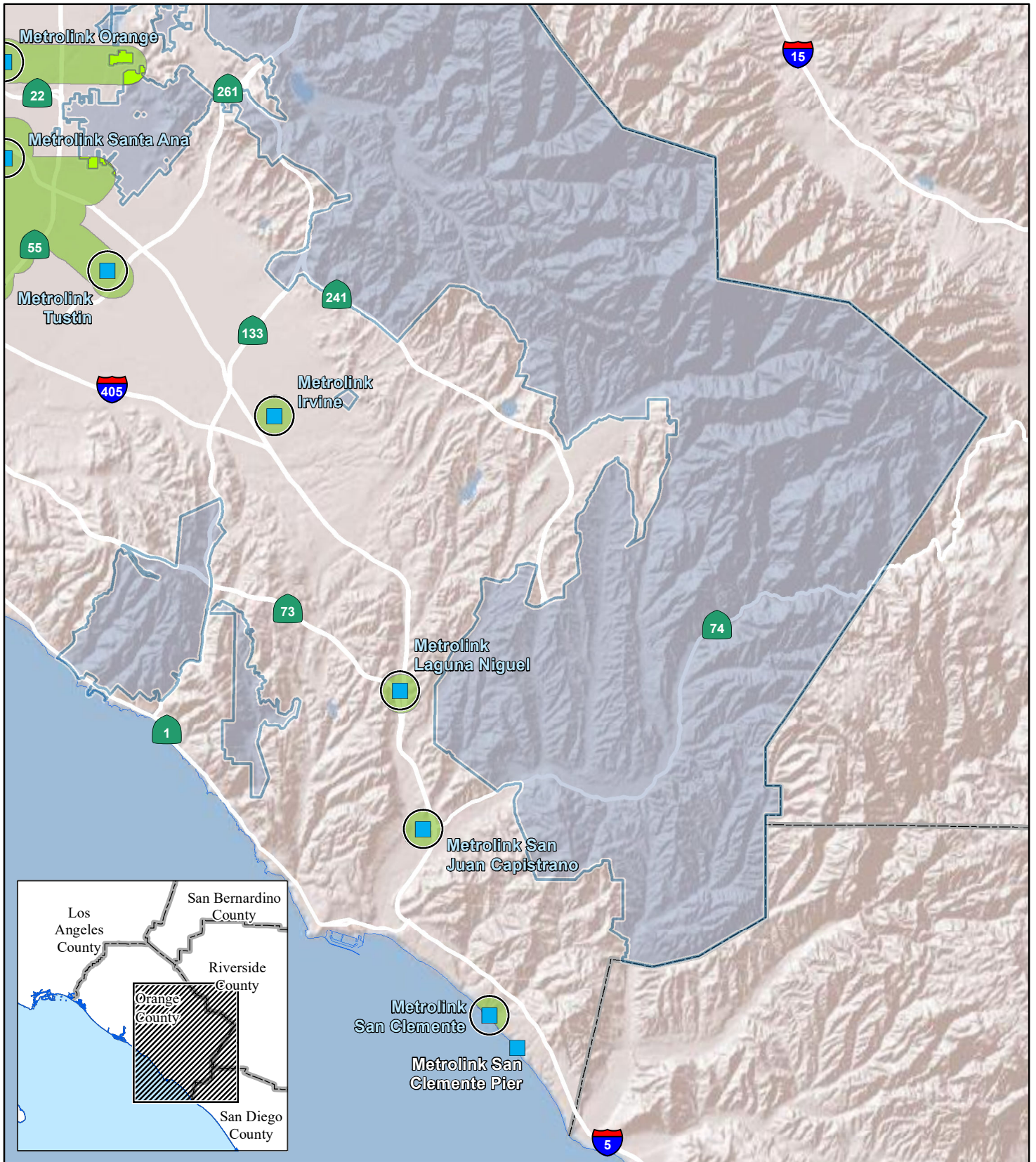


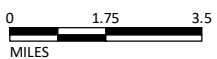
FIGURE 4
Sheet 1 of 2



LSA

LEGEND

- Unincorporated Areas of Orange County
- High Quality Transit Areas
- Unincorporated Areas within High Quality Transit Areas
- Transportation Centers
- Metrolink Station (with half-mile buffer)



SOURCE: OCPW (3/2020), SCAG (6/2019); OCTA (11/2019); Bing (2019)
 I:\OCY1701.19\GIS\MXD\HQTA.mxd (4/1/2020)

FIGURE 4
 Sheet 2 of 2

- **Low VMT Area⁵ Project:** The project is in low VMT areas. The applicant may submit data from the most recent OCTAM version showing the proposed project is within a low VMT area, which may be used, at the discretion of staff, to screen out the project.
- **Small Project:** A project generates 500 or fewer average daily trips (ADT). The TA recommends a volume of 110 ADT as the low volume that would allow the project to be screened out. This recommendation is not based on any analysis of GHG reduction, but was instead based on the potential trip generation of an office project that would already be categorically exempt under CEQA. LSA prepared a deeper analysis and used the California Emissions Estimator Model (CalEEMod, version 2016.3.2) to correlate the effect of changes in project-related ADT to the resulting GHG emissions. This model was selected because it is provided by the California Air Resources Board (CARB) to be used statewide for determining project-level GHG emissions. CalEEMod was used with the built-in default trip lengths and types to show the vehicular GHG emissions from incremental amounts of ADT. Table B shows the resulting annual VMT and GHG emissions from the incremental ADT.

Table B: Representative Vehicle VMT and GHG Emissions from CalEEMod

Average Daily Trips	Annual Vehicle Miles Traveled	GHG Emissions (metric tons CO ₂ e per year)
200	683,430	258
300	1,021,812	386
400	1,386,416	514
500	1,703,020	643
600	2,043,623	771

Source: CalEEMod version 2016.3.2. Example project used: 50 single-family Homes in Orange County.

CalEEMod = California Emissions Estimator Model

CO₂e = carbon dioxide equivalent

GHG = greenhouse gas

A common GHG emissions threshold is 3,000 metric tons (MT) of carbon dioxide equivalent⁶ (CO₂e) per year. Vehicle emissions are typically more than 50 percent of the total project GHG emissions. Thus, a project with 500 ADT would generally have total project emissions that could be less than 1,300 MT CO₂e/year (i.e., 50 percent or 643 MT CO₂e/year coming from vehicle emissions and the other 50 percent coming from other project activities). As this level of GHG

⁵ Orange County's land area may be described in terms of low, medium and high VMT areas based on thresholds described in Chapter 4. These descriptions are Low: less than 85 percent of the regional average; Medium: equal to or more than 85 percent of the regional average **and** less than or equal to 117 percent of regional average; and High: greater than 117 percent of regional average.

⁶ Carbon dioxide equivalent (CO₂e) is a concept developed to provide one metric that includes the effects of numerous GHGs. The global warming potential (GWP) of each GHG characterizes the ability of each GHG to trap heat in the atmosphere relative to another GHG. The GWPs of all GHGs are combined to derive the CO₂e.



emissions would be less than 3,000 MT CO₂e/year, the emissions of GHG from a project up to 500 ADT would typically be less than significant.

The County's current Transportation Implementation Manual establishes screening criteria of 200 ADT. However, based on the analysis in Table B, projects with fewer than 500 ADT are unlikely to result in significant impacts.

Based on this qualitative analysis, the County establishes screening criteria for small projects of up to 500 ADT.

- **Public Facilities:** The development of institutional/government and public service uses that support community health, safety or welfare are also screened from subsequent CEQA VMT analysis. The following includes some examples and is not an exhaustive list of public facilities that are screened from subsequent CEQA VMT analysis: police/sheriff stations, fire stations, community centers, refuse stations, jails, and landfills. These facilities are already part of the community and, as a public service, the VMT is accounted for in the existing regional average. Many of these facilities also generate fewer than 500 ADT and/or use vehicles other than passenger-cars or light duty trucks. These other vehicle fleets are subject to regulation outside of CEQA, such as CARB and the South Coast Air Quality Management District.

3.2 Transportation Projects

The primary attribute to consider with transportation projects is the potential to increase vehicle travel. While the County has discretion to continue to use delay analysis for CEQA disclosure of transportation projects, changes in vehicle travel must also be quantified.

The TA lists a series of projects that would not likely lead to a substantial or measurable increase in vehicle travel and that, therefore, would generally not require an induced travel analysis. The current list of projects, which is not intended to be exhaustive, includes the following examples:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such median barriers and guardrails
- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than 1 mile in length designed to improve roadway safety



- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left-, right-, and U-turn pockets, two-way left-turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets, provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general-purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in the number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians, or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., high-occupancy vehicles [HOVs], high-occupancy toll [HOT] lane traffic, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs, and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of a new transit service
- Conversion of streets from one-way to two-way operation with no net increase in the number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage



- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve nonmotorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

Additionally, transit and active transportation projects generally reduce VMT and are, therefore, presumed to cause a less than significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid-transit projects, and bicycle and pedestrian infrastructure projects.

If the proposed project is consistent with the build out of the Orange County Master Plan of Arterial Highways (MPAH) network, then the project may have a less than significant impact.



4.0 SIGNIFICANCE THRESHOLDS FOR LAND DEVELOPMENT PROJECTS

The TA states that SB 743 and all CEQA VMT transportation analyses refer to automobiles. Here, the term automobile refers to on-road passenger vehicles, specifically cars and light-duty trucks (page. 4). Heavy-duty trucks can be addressed in other CEQA sections and are subject to regulation in a separate collection of rules under CARB jurisdiction. This approach was amplified by Chris Ganson, Chief Planner at OPR in a recent presentation at the Fresno Council of Governments (October 23, 2019) and by Ellen Greenberg, California Department of Transportation (Caltrans) Deputy Director for Sustainability, at the San Joaquin Valley Regional Planning Association meeting (January 9, 2020).

The OPR has identified the subject of the thresholds as the primary trips in the home-based typology: specifically, home-based work trips. This includes residential uses, office uses, and retail uses. The home-based work trip type is the primary tripmaking during the peak hours of commuter traffic in the morning and evening periods.

The focus of analyzing transportation impacts has shifted from congestion to climate change, and the purpose of the CEQA analysis is to disclose and ultimately reduce GHG emissions by reducing the number and length of automobile trips. This change in CEQA analysis does not diminish the County's ability to require an LOS analysis to confirm accessibility to a project site, conformance with General Plan policies, or as a function of their general health, safety, and welfare discretion and authority. As part of the SB 375 land use/transportation integration process and the GHG goal setting, most metropolitan planning organizations and regional transportation planning agencies have agreed to reduce GHG through integrated land use and transportation planning by approximately 15 percent by 2035. Furthermore, in its 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals, the CARB recommends total VMT per capita rates approximately 15 percent below existing conditions.

The TA therefore recommends:

A proposed (residential) project exceeding a level of 15 percent below existing regional average VMT per capita may indicate a significant transportation impact.

A similar threshold would apply to office projects (15 percent below existing regional average VMT per employee).

VMT generated by retail projects would indicate a significant impact for any net increase in total VMT.

While regional planning documents such as the RTP/SCS calculate a single VMT rate by dividing total VMT for the SCAG region by the total service population, it should be noted that the TA identifies a different denominator for the residential and office comparison rates. If regional average VMT per capita and VMT per employee were calculated using the service population (population plus employment), the denominator would be the same, which would be inconsistent with the TA. Furthermore, using service population to calculate regional average rates would complicate future project analyses.



The environmental document for a proposed land use project will identify population for a residential project and employment for an office project. These values should be used in the transportation analysis to calculate the project's VMT per capita or VMT per employee. If a project's VMT per capita (VMT/project population) or VMT per employee (VMT/project employment) is compared to a regional average based on service rate (VMT/[regional population + employment]), the comparison is not equivalent.

According to the Orange County Transportation Authority calculations using OCTAM 5.0, the average VMT/capita in Orange County is 17.9. The average VMT/employee in Orange County is 24.1.

Mixed-use projects should be evaluated for each component of the project independently, or the County may use the predominant land use type for the analysis. Credit for internal trip capture should be accounted for. No discrete land use types other than residential, office, or retail are identified for threshold development in the TA.

The TA suggests that the County may, but is not required to, develop thresholds for any other use. One approach is to review the County General Plan and/or Countywide Long-Range Transportation Plan (LRTP) and identify whether the implementation of the plan would result in a reduction of VMT and GHGs. If it does, the County may conclude the implementation of the plan, including all the other land use types to achieve the regional climate change goals. Therefore, consistency with the plan and no net change in VMT per employee is a rational threshold for the other land use types. This approach would require disclosure of substantial evidence, including the General Plan or LRTP findings, and other supporting traffic and air quality forecasting support.

4.1 Summary

In summary, the County's thresholds of significance for the following land uses are:

- **Residential** – 15 percent below existing regional average VMT per capita ($17.9 \times 0.85 = 15.2$)
- **Office** – 15 percent below existing regional average VMT per employee ($24.1 \times 0.85 = 20.5$)
- **Retail** – no net change in total VMT
- **Mixed Use:** consider each component of the project separately based on the threshold for residential, office, retail, etc. and take credit for internal capture
- **Other Land Uses** – no net change in VMT per employee if consistent with the General Plan or 15 percent below regional average if seeking a General Plan Amendment

Figure 5 demonstrates the potential land development entitlement process to comply with the Guidelines related to VMT and transportation impacts. It provides the path from application filing through determination of impacts. It is presented as the standard process; each development application is considered unique and may create alternative or modified steps through the process. Each step that diverges from this standard process should be accompanied with substantial



evidence demonstrating compliance with other climate change and GHG emission reduction laws and regulations.

4.2 Agency Communication

At the outset of the project development process, the applicant should seek a meeting with County staff to discuss the project description, the transportation study content, and the analysis methodology. Key elements to address include describing the project in sufficient detail to generate trips and identify the potential catchment area (i.e., trip lengths, if no modeling is being undertaken), estimating project VMT, discussing project design features that may reduce the VMT from the project development, and discussing the project location and associated existing regional VMT percentages. As a result of the meeting, the applicant or their consultant shall prepare a transportation analysis scope of work for review and approval by the County.

4.3 Project Screening

Once a development application is filed, project screening is conducted as the initial step. If the project meets any one of the screening criteria for VMT, the project may be presumed to create a less than significant impact in the area of transportation and circulation and no further analysis as to this topical environmental area is necessary. The CEQA document should enumerate the screening criteria and how the project meets or exceeds that threshold. If project screening does not apply, a VMT analysis may be required, in accordance with CEQA. The extent of this analysis may be a simple algebraic demonstration or a more sophisticated traffic modeling exercise.

4.4 Project VMT Analysis

The first step is to identify the project land use type and the appropriate efficiency rate to use. If the project is residential, use the per capita (or residential population) efficiency rate. If the project is commercial office (or a similar trip generator), use the per employee efficiency rate. For retail projects, use the total VMT generated by the project. For mixed use projects, report each land use after generating trips, taking credit for internal trip capture, to arrive at the VMT. As an alternative, the predominant use may be reported for mixed-use projects. For all other uses, use the VMT per employee as the comparative.

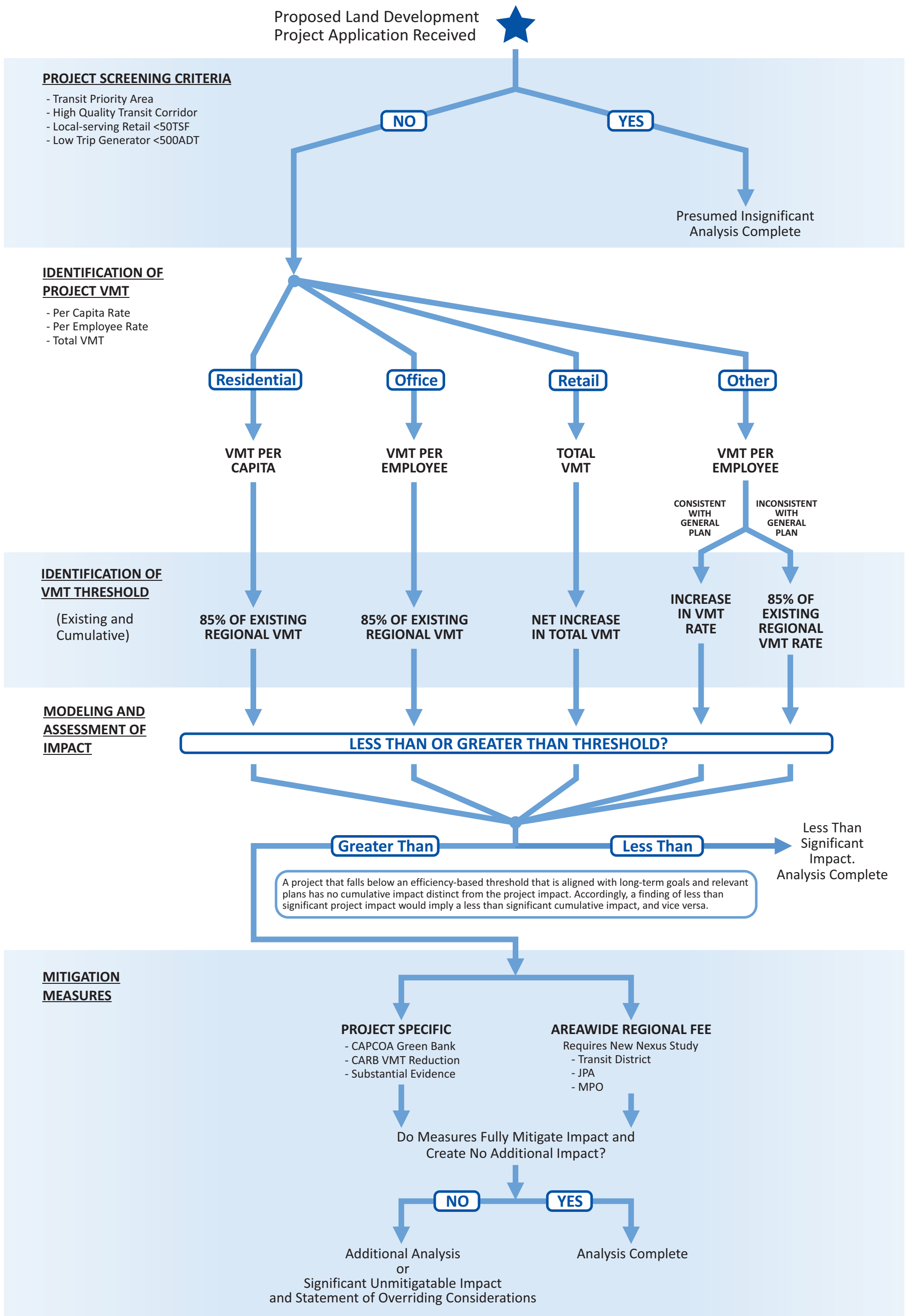
4.4.1 Medium Project VMT Analysis

For medium-sized projects (projects generating greater than 500 ADT but less than 1,000 ADT) or those with one predominant use, the determination of project VMT may be identified manually as the product of the daily trip generation (land use density/intensity multiplied by the County-approved trip generation rates, usually the ITE Trip Generation Manual) and the trip length in miles for that specific land use. Trip lengths can be found in other related air quality tools, such as CalEEMod, or may be derived from OCTAM.



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4.4.2 Large Project VMT Analysis

For large or multi-use projects, use of the OCTAM traffic forecasting tool is required. For purposes of County review, a project generating 1,000 ADT or more should use the OCTAM traffic forecasting tool. At this level of trip generating, the probability of trip fulfillment expands to an area greater than the immediate project location and may include a greater regional attraction. The OCTAM traffic forecasting tool can more accurately define the select links used and the total VMT generated by the project.

Next, the project generated efficiency rate, or total VMT, depending on project type, is compared to the appropriate significance threshold. **This is either 85 percent of the existing regional average per capita or employment (for the County) for residential and office uses, or no net increase in total VMT for retail or other uses that are consistent with the General Plan.** For those projects that require a General Plan Amendment, 85 percent of existing regional average is appropriate, as the project has yet to be evaluated as part of the County's ultimate land development vision.

If the project VMT (expressed as a per capita or per employee rate or total number) is at or less than the significance threshold, the project is presumed to create a less than significant impact. No further analysis is required. If the project is greater than the significance threshold, mitigation measures are required.

4.5 Mitigation Measures

The applicant is required, per CEQA, to identify feasible mitigation to mitigate the impact created by the project, to a level that is less than significant. Appendices A and B list some ideas for potential mitigation strategies. This is not an exhaustive list of feasible mitigation measures that may be applied to the project. As in previous CEQA practice, the applicant/project proponent will be required to identify mitigation measures to reduce, avoid, or offset the specific project-related impacts identified in an individual environmental document. Thus, the applicant should submit other creative, feasible mitigation for their project. The mitigation measures suggested and the related VMT percentage reduction must be reviewed and either approved or rejected by the County.

If the mitigation measures mitigate the project impact to a less than significant level, no further analysis is required. If the project's VMT impact cannot be fully mitigated, the County may: 1) request the project be redesigned, relocated, or realigned to reduce the VMT impact, or 2) prepare a Statement of Overriding Considerations (SOC) for the transportation impacts associated with the project. All feasible mitigation measures must be assigned to and carried out by the project, even if a SOC is prepared.



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5.0 SIGNIFICANCE THRESHOLDS FOR TRANSPORTATION PROJECTS

Section 15064.3.b.(2) of the Guidelines reads in part:

For roadway capacity projects, agencies have the discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements.

The County may continue to use delay and LOS for transportation projects as long as impacts related to “other applicable requirements” are disclosed. This has generally been interpreted as VMT impacts and other State climate change objectives. These other applicable requirements may be found in other parts of an environmental document (i.e., air quality, GHG), or may be provided in greater detail in the transportation section.

For projects on the State highway system, Caltrans will use and will require sponsoring agencies to use VMT as the CEQA metric, and Caltrans will evaluate the VMT “attributable to the project” (Caltrans Draft VMT-Focused Transportation Impact Study Guide, February 28, 2020). Caltrans’ Intergovernmental Review will review environmental documents for capacity-enhancing projects for the County’s analysis of VMT change.

The assessment of a transportation project’s VMT should disclose the VMT without the project and the difference in VMT with the project. According to the TA, any growth in VMT attributable to the transportation project would result in a significant impact.

The primary difference in these two scenarios (without the project and with the project) to OPR is related to induced growth. Current traffic models have limited abilities to forecast induced growth, as their land use or socioeconomic databases are fixed to a horizon date. OPR refers to a limited set of reports that would indicate elasticities. The most recent major study (Duranton & Turner 2011, p. 24) estimates an elasticity of 1.0, meaning that every 1 percent change in lane miles results in a 1 percent increase in VMT.

The TA presents one method to identify the induced growth, as shown below. This method may be used in Orange County to estimate induced growth attributable to new roadway capacity.

To estimate VMT impacts from roadway expansion projects:

1. *Determine the total lane-miles over an area that fully captures travel behavior changes resulting from the project (generally the region, but for projects affecting interregional travel look at all affected regions).*
2. *Determine the percentage change in total lane miles that will result from the project.*
3. *Determine the total existing VMT over that same area.*
4. *Multiply the percentage increase in lane miles by the existing VMT, and then multiply that by the elasticity from the induced travel literature:*

$$[\% \text{ increase in lane miles}] \times [\text{existing VMT}] \times [\text{elasticity}] = [\text{VMT resulting from the project}]$$



It should be pointed out that OPR assigns this induced growth to induced land use.

As an alternative method, Caltrans has identified a computerized tool that estimates VMT generation from transportation projects. It was developed at the University of California, Davis, and is based on elasticities and the relationship of lane mile additions and growth in VMT. It uses Federal Highway Administration definitions of facility type and ascribes VMT increases to each facility. Output includes increases on million vehicle miles per year. Caltrans is investigating its use for all its VMT analyses of capital projects. It is available for use by local agencies and applicants, and the County may recommend utilization of this tool for calculations.

The TA provides other options to identify induced growth- and project-related VMT. These include:

- 1. Employ an expert panel. An expert panel could assess changes to land use development that would likely result from the project. This assessment could then be analyzed by the travel demand model to assess effects on vehicle travel. Induced vehicle travel assessed via this approach should be verified using elasticities found in the academic literature.*
- 2. Adjust model results to align with the empirical research. If the travel demand model analysis is performed without incorporating projected land use changes resulting from the project, the assessed vehicle travel should be adjusted upward to account for those land use changes. The assessed VMT after adjustment should fall within the range found in the academic literature.*
- 3. Employ a land use model, running it iteratively with a travel demand model. A land use model can be used to estimate the land use effects of a roadway capacity increase, and the traffic patterns that result from the land use change can then be fed back into the travel demand model. The land use model and travel demand model can be iterated to produce an accurate result.*

The TA provides additional guidance, below:

Whenever employing a travel demand model to assess induced vehicle travel, any limitation or known lack of sensitivity in the analysis that might cause substantial errors in the VMT estimate (for example, model insensitivity to one of the components of induced VMT described above) should be disclosed and characterized, and a description should be provided on how it could influence the analysis results. A discussion of the potential error or bias should be carried into analyses that rely on the VMT analysis, such as greenhouse gas emissions, air quality, energy, and noise.



The threshold for significance for a capacity-enhancing roadway project or new roadway project is any additional VMT generated by the project either due to the increased roadway use or as a result of induced growth attributable to the project.⁷

⁷ Overall new roadway projects are general capacity-enhancing. However these project may show a short-term VMT reduction due to intervening paths or reduced travel times.

Long-term effects may include induced growth due to more desirable travel opportunities and/or increased land development and new trip generation. The net project effect takes into consideration the changes in the whole system as opposed to what happens on the proposed facility in question.



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6.0 SIGNIFICANCE THRESHOLDS FOR LAND PLANS

In the TA, the OPR provided guidance on the treatment of CEQA traffic analyses for land use plans. The TA reiterates previous direction regarding individual land use assessments:

- Analyze the VMT outcomes over the full area over which the plan may substantively affect travel patterns (the definition of region).
- VMT should be counted in full rather than split between origins and destinations (the full impact of the project VMT).

The TA provides a single sentence as consideration for land use plans. It states, *“A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office or retail land uses would in aggregate exceed the respective thresholds recommended above.”* This recommendation refers to 85 percent of the existing city or regional average, and no net gain for residential, office, and retail land uses.

OPR is recommending a focus on specific trip purposes (i.e., home-based trips for residential projects and work-based trips for office projects). Depending on the modeling platform, at least four other trip types are recognized as contributors to large-scale plan-level analyses. Home-based origins will have interactions with other non-work-based destinations. Therefore, if home-based trips are the focus of a plan-level assessment, a great deal of VMT would not be accounted for in the estimation of total VMT.

To assess a land plan, use of a traffic-forecasting tool is recommended. The total VMT for the plan should be identified for all trip types and all potential VMT contributors within the plan area. Similar traffic model runs should be conducted for the existing base year and the horizon year with No Project.

The SB 375 process and the Regional Targets Advisory Committee GHG goal setting has established a baseline GHG emissions reduction that local Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs) can achieve. These achievements are provided in the integration of land use planning and transportation, not solely through the imposition of regulation on passenger cars and light-duty trucks. The CARB reviews the GHG reduction strategies and has approved the most recent round of GHG emission reductions for MPOs and RTPAs around the State.

Other legislative mandates and State policies speak to GHG reduction targets. A sample of these include:

- Assembly Bill 32 (2006) requires statewide GHG emissions reductions to 1990 levels by 2020 and continued reductions beyond 2020.
- SB 32 (2016) requires at least a 40 percent reduction in GHG emissions from 1990 levels by 2030.



- Executive Order (EO) B-30-15 (2015) sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.
- EO S-3-05 (2005) sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.
- EO B-16-12 (2012) specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.

Guidelines Section 15064.3(b)(4) states (in part) the following:

A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household, or in any other measure.

Therefore, the recommended methodology for conducting VMT assessments for land plans is to compare the existing VMT per capita for the land plan area with the expected horizon year VMT per service population (population and employment). The recommended target is to achieve a lower VMT per service population in the horizon year with the proposed land plan than occurs for the existing condition.



7.0 MITIGATION STRATEGIES

When a significant CEQA impact is identified according to the thresholds described above, the project proponent will be required to identify feasible mitigation measures in order to reduce, avoid, or offset the impact. Although previous vehicle LOS impacts could be mitigated with location-specific vehicle level of service improvements, VMT impacts likely require mitigation of regional impacts through more behavioral changes. Enforcement of mitigation measures will still be subject to the mitigation monitoring requirements of CEQA, as well as the regular police powers of the County. These measures can also be incorporated as a part of plans, policies, regulations, or project designs.

7.1 Definition of Mitigation

Section 15370 of the Guidelines defines mitigations as follows:

“Mitigation” includes:

- a. *Avoiding the impact altogether by not taking a certain action or parts of an action.*
- b. *Minimizing impacts by limiting the degree or magnitude of the action and its implementation.*
- c. *Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.*
- d. *Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.*
- e. *Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.*

Section 15097 of the Guidelines states that “the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects.”

VMT mitigations are not necessarily physical improvements; rather, they are complex in nature and will significantly depend on changes in human behavior.

Section 21099 (b) (4) of the PRC states, “This subdivision [requiring a new transportation metric under CEQA] does not preclude the application of local general plan policies, zoning codes, conditions of approval, thresholds, or any other planning requirements pursuant to the police power or any other authority.” Thus, despite the fact that automobile delay will no longer be considered a significant impact under CEQA, the County can still require projects to meet the LOS standards designated in its zoning code or general plan. Many projects will likely still be required to propose LOS improvements for congestion relief in addition to VMT strategies as CEQA mitigation measures.



7.2 Mitigation Measures and Project Alternatives

7.2.1 Land Development Projects and Community/General Plans

Mitigations and project alternatives for VMT impacts have been suggested by the OPR and are included in the TA. VMT mitigation can be extremely diverse and can be classified under several categories such as land use/location, road pricing, transit improvements, commute trip reduction strategies, and parking pricing/policy. Improvements related to VMT reduction strategies have been quantified in sources such as the California Air Pollution Control Officers Association (CAPCOA) report *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA Green Book) and CARB sources and are generally presented in wide ranges of potential VMT reduction percentages.

Appendix B provides a brief menu of the different potentially applicable VMT mitigation measures and project alternatives stated in the CAPCOA Green Book (only those strategies directly attributed to transportation) and the OPR TA for land development projects. This discussion does not present an exhaustive list of feasible mitigation measures that may be applied to a project. As in previous CEQA practice, the applicant/project proponent will be required to identify mitigation measures to the County to reduce, avoid, or offset the specific project-related impacts identified in an individual environmental document.

As additional mitigation measures are developed to offset VMT impacts in the future for the Guidelines process, linkages between the strategy and the incremental effect and quantified offset must be made. This can be based on other sources' observations and measurements or County experience in these practices. The key to mitigation is to base its efficacy on real and substantial evidence.

7.2.2 Transportation Projects

Although OPR provides detailed guidance on how to assess induced-growth impacts associated with transportation projects, it leaves the subject of mitigation measures vague. Only four strategies are suggested as mitigation measures:

- Tolling new lanes to encourage carpools and fund transit improvements
- Converting existing general-purpose lanes to HOV or HOT lanes
- Implementing or funding off-site travel demand management
- Implementing Intelligent Transportation Systems strategies to improve passenger throughput on existing lanes

No quantified reduction percentage is allocated to these strategies, and LSA could find no substantial evidence that would provide guidance to levels of significance after implementation of these strategies. Review of the four recommended strategies suggests that OPR is directing strategies away from general-purpose mixed-flow lanes on expressways, freeways, and arterial highways. Inasmuch as these are the project descriptions and Purpose and Need, the project intent and the project mitigation may be at odds. The County may be subject to an SOC for the capital project VMT impact.





APPENDIX A

TECHNICAL ADVISORY ON EVALUATING TRANSPORTATION IMPACTS IN CEQA (OPR, DECEMBER 2018)



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TECHNICAL ADVISORY

ON EVALUATING TRANSPORTATION IMPACTS IN CEQA



December 2018

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A. Introduction

This technical advisory is one in a series of advisories provided by the Governor’s Office of Planning and Research (OPR) as a service to professional planners, land use officials, and CEQA practitioners. OPR issues technical assistance on issues that broadly affect the practice of land use planning and the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). (Gov. Code, § 65040, subs. (g), (l), (m).) The purpose of this document is to provide advice and recommendations, which agencies and other entities may use at their discretion. This document does not alter lead agency discretion in preparing environmental documents subject to CEQA. This document should not be construed as legal advice.

[Senate Bill 743](#) (Steinberg, 2013), which was codified in Public Resources Code section 21099, required changes to the guidelines implementing CEQA (CEQA Guidelines) (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.) regarding the analysis of transportation impacts. As one appellate court recently explained: “During the last 10 years, the Legislature has charted a course of long-term sustainability based on denser infill development, reduced reliance on individual vehicles and improved mass transit, all with the goal of reducing greenhouse gas emissions. Section 21099 is part of that strategy” (*Covina Residents for Responsible Development v. City of Covina* (2018) 21 Cal.App.5th 712, 729.) Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” (*Id.*, subd. (b)(1); see generally, adopted CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].) To that end, in developing the criteria, OPR has proposed, and the California Natural Resources Agency (Agency) has certified and adopted, changes to the CEQA Guidelines that identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project’s transportation impacts. With the California Natural Resources Agency’s certification and adoption of the changes to the CEQA Guidelines, automobile delay, as measured by “level of service” and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3).)

This advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Again, OPR provides this Technical Advisory as a resource for the public to use at their discretion. OPR is not enforcing or attempting to enforce any part of the recommendations contained herein. (Gov. Code, § 65035 [“It is not the intent of the Legislature to vest in the Office of Planning and Research any direct operating or regulatory powers over land use, public works, or other state, regional, or local projects or programs.”].)

This December 2018 technical advisory is an update to the advisory it published in April 2018. OPR will continue to monitor implementation of these new provisions and may update or supplement this advisory in response to new information and advancements in modeling and methods.

B. Background

VMT and Greenhouse Gas Emissions Reduction. Senate Bill 32 (Pavley, 2016) requires California to reduce greenhouse gas (GHG) emissions 40 percent below 1990 levels by 2030, and Executive Order B-16-12 provides a target of 80 percent below 1990 emissions levels for the transportation sector by 2050. The transportation sector has three major means of reducing GHG emissions: increasing vehicle efficiency, reducing fuel carbon content, and reducing the amount of vehicle travel. The California Air Resources Board (CARB) has provided a path forward for achieving these emissions reductions from the transportation sector in its 2016 Mobile Source Strategy. CARB determined that it will not be possible to achieve the State's 2030 and post-2030 emissions goals without reducing VMT growth. Further, in its 2018 Progress Report on California's Sustainable Communities and Climate Protection Act, CARB found that despite the State meeting its 2020 climate goals, "emissions from statewide passenger vehicle travel per capita [have been] increasing and going in the wrong direction," and "California cannot meet its [long-term] climate goals without curbing growth in single-occupancy vehicle activity."¹ CARB also found that "[w]ith emissions from the transportation sector continuing to rise despite increases in fuel efficiency and decreases in the carbon content of fuel, California will not achieve the necessary greenhouse gas emissions reductions to meet mandates for 2030 and beyond without significant changes to how communities and transportation systems are planned, funded, and built."²

Thus, to achieve the State's long-term climate goals, California needs to reduce per capita VMT. This can occur under CEQA through VMT mitigation. Half of California's GHG emissions come from the transportation sector³, therefore, reducing VMT is an effective climate strategy, which can also result in co-benefits.⁴ Furthermore, without early VMT mitigation, the state may follow a path that meets GHG targets in the early years, but finds itself poorly positioned to meet more stringent targets later. For example, in absence of VMT analysis and mitigation in CEQA, lead agencies might rely upon verifiable offsets for GHG mitigation, ignoring the longer-term climate change impacts resulting from land use development and infrastructure investment decisions. As stated in CARB's 2017 Scoping Plan:

"California's future climate strategy will require increased focus on integrated land use planning to support livable, transit-connected communities, and conservation of agricultural and other lands. Accommodating population and economic growth through travel- and energy-efficient land use provides GHG-efficient growth, reducing GHGs from both transportation and building energy use. GHGs can be further reduced at the project level through implementing energy-efficient construction and travel demand management approaches."⁵ (*Id.* at p. 102.)

¹ California Air Resources Board (Nov. 2018) *2018 Progress Report on California's Sustainable Communities and Climate Protection Act*, pp. 4, 5, available at https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf.

² *Id.*, p. 28.

³ See <https://ca50million.ca.gov/transportation/>

⁴ Fang et al. (2017) *Cutting Greenhouse Gas Emissions Is Only the Beginning: A Literature Review of the Co-Benefits of Reducing Vehicle Miles Traveled*.

⁵ California Air Resources Board (Nov. 2017) *California's 2017 Climate Change Scoping Plan*, p. 102, available at https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

In light of this, the 2017 Scoping Plan describes and quantifies VMT reductions needed to achieve our long-term GHG emissions reduction goals, and specifically points to the need for statewide deployment of the VMT metric in CEQA:

“Employing VMT as the metric of transportation impact statewide will help to ensure GHG reductions planned under SB 375 will be achieved through on-the-ground development, and will also play an important role in creating the additional GHG reductions needed beyond SB 375 across the State. Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting sustainable community strategies developed under SB 375.”⁶

VMT and Other Impacts to Health and Environment. VMT mitigation also creates substantial benefits (sometimes characterized as “co-benefits” to GHG reduction) in both in the near-term and the long-term. Beyond GHG emissions, increases in VMT also impact human health and the natural environment. Human health is impacted as increases in vehicle travel lead to more vehicle crashes, poorer air quality, increases in chronic diseases associated with reduced physical activity, and worse mental health. Increases in vehicle travel also negatively affect other road users, including pedestrians, cyclists, other motorists, and many transit users. The natural environment is impacted as higher VMT leads to more collisions with wildlife and fragments habitat. Additionally, development that leads to more vehicle travel also tends to consume more energy, water, and open space (including farmland and sensitive habitat). This increase in impermeable surfaces raises the flood risk and pollutant transport into waterways.⁷

VMT and Economic Growth. While it was previously believed that VMT growth was a necessary component of economic growth, data from the past two decades shows that economic growth is possible without a concomitant increase in VMT. (Figure 1.) Recent research shows that requiring development projects to mitigate LOS may actually reduce accessibility to destinations and impede economic growth.^{8,9}

⁶ *Id.* at p. 76.

⁷ Fang et al. (2017) *Cutting Greenhouse Gas Emissions Is Only the Beginning: A Literature Review of the Co-Benefits of Reducing Vehicle Miles Traveled*, available at https://ncst.ucdavis.edu/wp-content/uploads/2017/03/NCST-VMT-Co-Benefits-White-Paper_Fang_March-2017.pdf.

⁸ Haynes et al. (Sept. 2015) *Congested Development: A Study of Traffic Delays, Access, and Economic Activity in Metropolitan Los Angeles*, available at http://www.its.ucla.edu/wp-content/uploads/sites/6/2015/11/Haynes_Congested-Development_1-Oct-2015_final.pdf.

⁹ Osman et al. (Mar. 2016) *Not So Fast: A Study of Traffic Delays, Access, and Economic Activity in the San Francisco Bay Area*, available at http://www.its.ucla.edu/wp-content/uploads/sites/6/2016/08/Taylor-Not-so-Fast-04-01-2016_final.pdf.

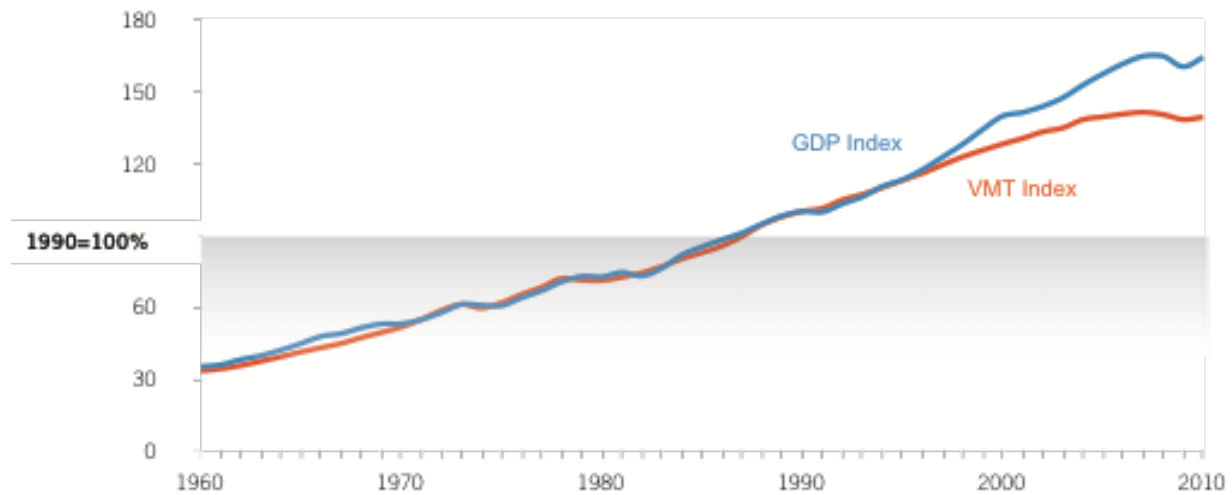


Figure 1. Kooshian and Winkelman (2011) *VMT and Gross Domestic Product (GDP), 1960-2010*.

C. Technical Considerations in Assessing Vehicle Miles Traveled

Many practitioners are familiar with accounting for VMT in connection with long-range planning, or as part of the CEQA analysis of a project’s greenhouse gas emissions or energy impacts. This document provides technical information on how to assess VMT as part of a transportation impacts analysis under CEQA. Appendix 1 provides a description of which VMT to count and options on how to count it. Appendix 2 provides information on induced travel resulting from roadway capacity projects, including the mechanisms giving rise to induced travel, the research quantifying it, and information on additional approaches for assessing it.

1. Recommendations Regarding Methodology

Proposed Section 15064.3 explains that a “lead agency may use models to estimate a project’s vehicle miles traveled . . .” CEQA generally defers to lead agencies on the choice of methodology to analyze impacts. (*Santa Monica Baykeeper v. City of Malibu* (2011) 193 Cal.App.4th 1538, 1546; see *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 409 [“the issue is not whether the studies are irrefutable or whether they could have been better” ... rather, the “relevant issue is only whether the studies are sufficiently credible to be considered” as part of the lead agency’s overall evaluation].) This section provides suggestions to lead agencies regarding methodologies to analyze VMT associated with a project.

Vehicle Types. Proposed Section 15064.3, subdivision (a), states, “For the purposes of this section, ‘vehicle miles traveled’ refers to the amount and distance of automobile travel attributable to a project.” Here, the term “automobile” refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). For an apples-to-apples

comparison, vehicle types considered should be consistent across project assessment, significance thresholds, and mitigation.

Residential and Office Projects. Tour- and trip-based approaches¹⁰ offer the best methods for assessing VMT from residential/office projects and for comparing those assessments to VMT thresholds. These approaches also offer the most straightforward methods for assessing VMT reductions from mitigation measures for residential/office projects. When available, tour-based assessment is ideal because it captures travel behavior more comprehensively. But where tour-based tools or data are not available for all components of an analysis, a trip-based assessment of VMT serves as a reasonable proxy.

Models and methodologies used to calculate thresholds, estimate project VMT, and estimate VMT reduction due to mitigation should be comparable. For example:

- A tour-based assessment of project VMT should be compared to a tour-based threshold, or a trip-based assessment to a trip-based VMT threshold.
- Where a travel demand model is used to determine thresholds, the same model should also be used to provide trip lengths as part of assessing project VMT.
- Where only trip-based estimates of VMT reduction from mitigation are available, a trip-based threshold should be used, and project VMT should be assessed in a trip-based manner.

When a trip-based method is used to analyze a residential project, the focus can be on home-based trips. Similarly, when a trip-based method is used to analyze an office project, the focus can be on home-based work trips.

When tour-based models are used to analyze an office project, either employee work tour VMT or VMT from all employee tours may be attributed to the project. This is because workplace location influences overall travel. For consistency, the significance threshold should be based on the same metric: either employee work tour VMT or VMT from all employee tours.

For office projects that feature a customer component, such as a government office that serves the public, a lead agency can analyze the customer VMT component of the project using the methodology for retail development (see below).

Retail Projects. Generally, lead agencies should analyze the effects of a retail project by assessing the change in total VMT¹¹ because retail projects typically re-route travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns.

¹⁰ See Appendix 1, *Considerations About Which VMT to Count*, for a description of these approaches.

¹¹ See Appendix 1, *Considerations About Which VMT to Count*, “Assessing Change in Total VMT” section, for a description of this approach.

Considerations for All Projects. Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries, for example, by failing to count the portion of a trip that falls outside the jurisdiction or by discounting the VMT from a trip that crosses a jurisdictional boundary. CEQA requires environmental analyses to reflect a “good faith effort at full disclosure.” (CEQA Guidelines, § 15151.) Thus, where methodologies exist that can estimate the full extent of vehicle travel from a project, the lead agency should apply them to do so. Where those VMT effects will grow over time, analyses should consider both a project’s short-term and long-term effects on VMT.

Combining land uses for VMT analysis is not recommended. Different land uses generate different amounts of VMT, so the outcome of such an analysis could depend more on the mix of uses than on their travel efficiency. As a result, it could be difficult or impossible for a lead agency to connect a significance threshold with an environmental policy objective (such as a target set by law), inhibiting the CEQA imperative of identifying a project’s significant impacts and providing mitigation where feasible. Combining land uses for a VMT analysis could streamline certain mixes of uses in a manner disconnected from policy objectives or environmental outcomes. Instead, OPR recommends analyzing each use separately, or simply focusing analysis on the dominant use, and comparing each result to the appropriate threshold. Recommendations for methods of analysis and thresholds are provided below. In the analysis of each use, a mixed-use project should take credit for internal capture.

Any project that includes in its geographic bounds a portion of an existing or planned Transit Priority Area (i.e., the project is within a ½ mile of an existing or planned major transit stop or an existing stop along a high quality transit corridor) may employ VMT as its primary metric of transportation impact for the entire project. (See Pub. Resources Code, § 21099, subs. (a)(7), (b)(1).)

Cumulative Impacts. A project’s cumulative impacts are based on an assessment of whether the “incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” (Pub. Resources Code, § 21083, subd. (b)(2); see CEQA Guidelines, § 15064, subd. (h)(1).) When using an absolute VMT metric, i.e., total VMT (as recommended below for retail and transportation projects), analyzing the combined impacts for a cumulative impacts analysis may be appropriate. However, metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa. This is similar to the analysis typically conducted for greenhouse gas emissions, air quality impacts, and impacts that utilize plan compliance as a threshold of significance. (See *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204, 219, 223; CEQA Guidelines, § 15064, subd. (h)(3).)

D. General Principles to Guide Consideration of VMT

SB 743 directs OPR to establish specific “criteria for determining the significance of transportation impacts of projects[.]” (Pub. Resources Code, § 21099, subd. (b)(1).) In establishing this criterion, OPR was guided by the general principles contained within CEQA, the CEQA Guidelines, and applicable case law.

To assist in the determination of significance, many lead agencies rely on “thresholds of significance.” The CEQA Guidelines define a “threshold of significance” to mean “an identifiable **quantitative, qualitative¹² or performance level** of a particular environmental effect, non-compliance with which means the effect will **normally** be determined to be significant by the agency and compliance with which means the effect **normally** will be determined to be less than significant.” (CEQA Guidelines, § 15064.7, subd. (a) (emphasis added).) Lead agencies have discretion to develop and adopt their own, or rely on thresholds recommended by other agencies, “provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.” (*Id.* at subd. (c); *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068.) Substantial evidence means “enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached.” (*Id.* at § 15384 (emphasis added); *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1109.)

Additionally, the analysis leading to the determination of significance need not be perfect. The CEQA Guidelines describe the standard for adequacy of environmental analyses:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to **make a decision which intelligently takes account of environmental consequences**. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is **reasonably feasible**. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The **courts have looked not for perfection** but for **adequacy, completeness**, and a **good faith effort** at full disclosure.

(CEQA Guidelines, § 15151 (emphasis added).)

These general principles guide OPR’s recommendations regarding thresholds of significance for VMT set forth below.

¹² Generally, qualitative analyses should only be conducted when methods do not exist for undertaking a quantitative analysis.

E. Recommendations Regarding Significance Thresholds

As noted above, lead agencies have the discretion to set or apply their own thresholds of significance. (*Center for Biological Diversity v. California Dept. of Fish & Wildlife* (2015) 62 Cal.4th 204, 218-223 [lead agency had discretion to use compliance with AB 32's emissions goals as a significance threshold]; *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th at p. 1068.) However, Section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses. It further directed OPR to prepare and develop criteria for determining significance. (Pub. Resources Code, § 21099, subd. (b)(1).) This section provides OPR's suggested thresholds, as well as considerations for lead agencies that choose to adopt their own thresholds.

The VMT metric can support the three statutory goals: "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (Pub. Resources Code, § 21099, subd. (b)(1), emphasis added.) However, in order for it to promote and support all three, lead agencies should select a significance threshold that aligns with state law on all three. State law concerning the development of multimodal transportation networks and diversity of land uses requires planning for and prioritizing increases in complete streets and infill development, but does not mandate a particular depth of implementation that could translate into a particular threshold of significance. Meanwhile, the State has clear quantitative targets for GHG emissions reduction set forth in law and based on scientific consensus, and the depth of VMT reduction needed to achieve those targets has been quantified. Tying VMT thresholds to GHG reduction also supports the two other statutory goals. Therefore, to ensure adequate analysis of transportation impacts, OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so.

Various legislative mandates and state policies establish quantitative greenhouse gas emissions reduction targets. For example:

- Assembly Bill 32 (2006) requires statewide GHG emissions reductions to 1990 levels by 2020 and continued reductions beyond 2020.
- Senate Bill 32 (2016) requires at least a 40 percent reduction in GHG emissions from 1990 levels by 2030.
- Pursuant to Senate Bill 375 (2008), the California Air Resources Board GHG emissions reduction targets for metropolitan planning organizations (MPOs) to achieve based on land use patterns and transportation systems specified in Regional Transportation Plans and Sustainable Community Strategies (RTP/SCS). Current targets for the State's largest MPOs call for a 19 percent reduction in GHG emissions from cars and light trucks from 2005 emissions levels by 2035.
- Executive Order B-30-15 (2015) sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.

- Executive Order S-3-05 (2005) sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.
- Executive Order B-16-12 (2012) specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.
- Executive Order B-55-18 (2018) established an additional statewide goal of achieving carbon neutrality as soon as possible, but no later than 2045, and maintaining net negative emissions thereafter. It states, “The California Air Resources Board shall work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal.”
- Senate Bill 391 requires the California Transportation Plan to support 80 percent reduction in GHGs below 1990 levels by 2050.
- The California Air Resources Board Mobile Source Strategy (2016) describes California’s strategy for containing air pollutant emissions from vehicles, and quantifies VMT growth compatible with achieving state targets.
- The California Air Resources Board’s 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California’s 2030 Greenhouse Gas Target describes California’s strategy for containing GHG emissions from vehicles, and quantifies VMT growth compatible with achieving state targets.

Considering these various targets, the California Supreme Court observed:

Meeting our statewide reduction goals does not preclude all new development. Rather, the Scoping Plan ... assumes continued growth and depends on increased efficiency and conservation in land use and transportation from all Californians.

(Center for Biological Diversity v. California Dept. of Fish & Wildlife, supra, 62 Cal.4th at p. 220.) Indeed, the Court noted that when a lead agency uses consistency with climate goals as a way to determine significance, particularly for long-term projects, the lead agency must consider the project’s effect on meeting long-term reduction goals. *(Ibid.)* And more recently, the Supreme Court stated that “CEQA requires public agencies . . . to ensure that such analysis stay in step with evolving scientific knowledge and state regulatory schemes.” *(Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 504.)

Meeting the targets described above will require substantial reductions in existing VMT per capita to curb GHG emissions and other pollutants. But targets for overall GHG emissions reduction do not translate directly into VMT thresholds for individual projects for many reasons, including:

- Some, but not all, of the emissions reductions needed to achieve those targets could be accomplished by other measures, including increased vehicle efficiency and decreased fuel carbon content. The CARB’s *First Update to the Climate Change Scoping Plan* explains:

“Achieving California’s long-term criteria pollutant and GHG emissions goals will require four strategies to be employed: (1) improve vehicle efficiency and develop zero emission technologies, (2) reduce the carbon content of fuels and provide market support to get these lower-carbon fuels into the marketplace, (3) **plan and build communities to reduce vehicular GHG emissions and provide more transportation options, and (4) improve the efficiency and throughput of existing transportation systems.**”¹³ CARB’s *2018 Progress Report on California’s Sustainable Communities and Climate Protection Act* states on page 28 that “California cannot meet its climate goals without curbing growth in single-occupancy vehicle activity.” In other words, vehicle efficiency and better fuels are necessary, but insufficient, to address the GHG emissions from the transportation system. Land use patterns and transportation options also will need to change to support reductions in vehicle travel/VMT.

- New land use projects alone will not sufficiently reduce per-capita VMT to achieve those targets, nor are they expected to be the sole source of VMT reduction.
- Interactions between land use projects, and also between land use and transportation projects, existing and future, together affect VMT.
- Because location within the region is the most important determinant of VMT, in some cases, streamlining CEQA review of projects in travel efficient locations may be the most effective means of reducing VMT.
- When assessing climate impacts of some types of land use projects, use of an efficiency metric (e.g., per capita, per employee) may provide a better measure of impact than an absolute numeric threshold. (*Center for Biological Diversity, supra.*)

Public Resources Code section 21099 directs OPR to propose criteria for determining the significance of transportation impacts. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in selecting a significance threshold that may be appropriate for their particular projects. While OPR’s Technical Advisory is not binding on public agencies, CEQA allows lead agencies to “consider thresholds of significance . . . recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence.” (CEQA Guidelines, § 15064.7, subd. (c).) Based on OPR’s extensive review of the applicable research, and in light of an assessment by the California Air Resources Board quantifying the need for VMT reduction in order to meet the State’s long-term climate goals, **OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold.**

Fifteen percent reductions in VMT are achievable at the project level in a variety of place types.¹⁴

Moreover, a fifteen percent reduction is consistent with SB 743’s direction to OPR to select a threshold that will help the State achieve its climate goals. As described above, section 21099 states that the

¹³ California Air Resources Board (May 2014) *First Update to the Climate Change Scoping Plan*, p. 46 (emphasis added).

¹⁴ CAPCOA (2010) *Quantifying Greenhouse Gas Mitigation Measures*, p. 55, available at <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.

criteria for determining significance must “promote the reduction in greenhouse gas emissions.” In its document *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*¹⁵, CARB assesses VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update assumptions that achieve climate state climate goals.

CARB finds per capita vehicle travel would need to be kept below what today’s policies and plans would achieve.

CARB’s assessment is based on data in the 2017 Scoping Plan Update and 2016 Mobile Source Strategy. In those documents, CARB previously examined the relationship between VMT and the state’s GHG emissions reduction targets. The Scoping Plan finds:

“While the State can do more to accelerate and incentivize these local decisions, local actions that reduce VMT are also necessary to meet transportation sector-specific goals and achieve the 2030 target under SB 32. Through developing the Scoping Plan, CARB staff is more convinced than ever that, in addition to achieving GHG reductions from cleaner fuels and vehicles, California must also reduce VMT. Stronger SB 375 GHG reduction targets will enable the State to make significant progress toward needed reductions, but alone will not provide the VMT growth reductions needed; there is a gap between what SB 375 can provide and what is needed to meet the State’s 2030 and 2050 goals.”¹⁶

Note that, at present, consistency with RTP/SCSs does not necessarily lead to a less-than-significant VMT impact.¹⁷ As the Final 2017 Scoping Plan Update states,

VMT reductions are necessary to achieve the 2030 target and must be part of any strategy evaluated in this Plan. Stronger SB 375 GHG reduction targets will enable the State to make significant progress toward this goal, but alone will not provide all of the VMT growth reductions that will be needed. There is a gap between what SB 375 can provide and what is needed to meet the State’s 2030 and 2050 goals.”¹⁸

¹⁵ California Air Resources Board (Jan. 2019) *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, available at <https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate>.

¹⁶ California Air Resources Board (Nov. 2017) *California’s 2017 Climate Change Scoping Plan*, p. 101.

¹⁷ California Air Resources Board (Feb. 2018) *Updated Final Staff Report: Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets*, Figure 3, p. 35, available at https://www.arb.ca.gov/cc/sb375/sb375_target_update_final_staff_report_feb2018.pdf.

¹⁸ California Air Resources Board (Nov. 2017) *California’s 2017 Climate Change Scoping Plan*, p. 75.

Also, in order to capture the full effects of induced travel resulting from roadway capacity projects, an RTP/SCS would need to include an assessment of land use effects of those projects, and the effects of those land uses on VMT. (See section titled “*Estimating VMT Impacts from Transportation Projects*” below.) RTP/SCSs typically model VMT using a collaboratively-developed land use “vision” for the region’s land use, rather than studying the effects on land use of the proposed transportation investments.

In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State’s emissions goals.

1. Screening Thresholds for Land Use Projects

Many agencies use “screening thresholds” to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. (See e.g., CEQA Guidelines, §§ 15063(c)(3)(C), 15128, and Appendix G.) As explained below, this technical advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing.

Screening Threshold for Small Projects

Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day¹⁹ generally may be assumed to cause a less-than-significant transportation impact.

Map-Based Screening for Residential and Office Projects

Residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with VMT data, for example from a travel survey or a travel demand model, can illustrate areas that are

¹⁹ CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

currently below threshold VMT (see recommendations below). Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.

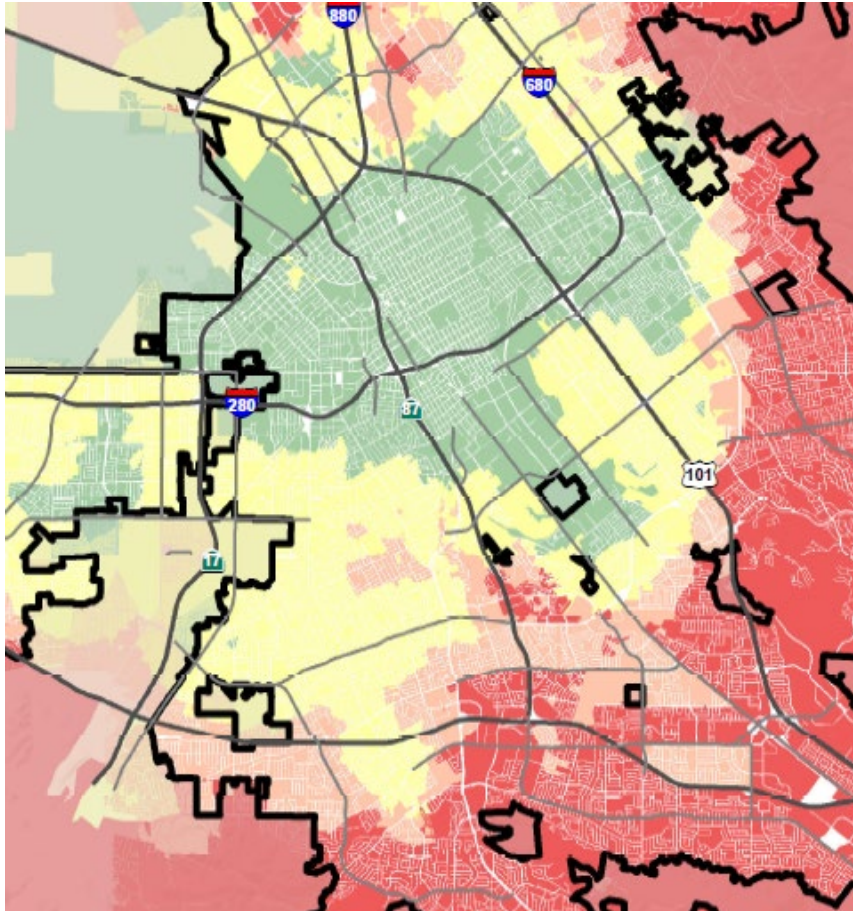


Figure 2. Example map of household VMT that could be used to delineate areas eligible to receive streamlining for VMT analysis. (Source: City of San José, Department of Transportation, draft output of City Transportation Model.)

Presumption of Less Than Significant Impact Near Transit Stations

Proposed CEQA Guideline Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop²⁰ or an existing stop

²⁰ Pub. Resources Code, § 21064.3 (“‘Major transit stop’ means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.”).

along a high quality transit corridor²¹ will have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units

A project or plan near transit which replaces affordable residential units²² with a smaller number of moderate- or high-income residential units may increase overall VMT because the increase in VMT of displaced residents could overwhelm the improvements in travel efficiency enjoyed by new residents.²³

If any of these exceptions to the presumption might apply, the lead agency should conduct a detailed VMT analysis to determine whether the project would exceed VMT thresholds (see below).

Presumption of Less Than Significant Impact for Affordable Residential Development

Adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT.^{24,25} Further, "... low-wage workers in particular would be more likely to choose a residential location close to their workplace, if one is available."²⁶ In areas where existing jobs-housing match is closer to optimal, low income housing nevertheless generates less VMT than market-

²¹ Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

²² Including naturally-occurring affordable residential units.

²³ Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement*, Chapter 4, pp. 159-160, available at <https://www.arb.ca.gov/research/apr/past/13-310.pdf>.

²⁴ Karner and Benner (2016) *The convergence of social equity and environmental sustainability: Jobs-housing fit and commute distance* ("[P]olicies that advance a more equitable distribution of jobs and housing by linking the affordability of locally available housing with local wage levels are likely to be associated with reduced commuting distances").

²⁵ Karner and Benner (2015) *Low-wage jobs-housing fit: identifying locations of affordable housing shortages*.

²⁶ Karner and Benner (2015) *Low-wage jobs-housing fit: identifying locations of affordable housing shortages*.

rate housing.^{27,28} Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations. Lead agencies may develop their own presumption of less than significant impact for residential projects (or residential portions of mixed use projects) containing a particular amount of affordable housing, based on local circumstances and evidence. Furthermore, a project which includes any affordable residential units may factor the effect of the affordability on VMT into the assessment of VMT generated by those units.

2. Recommended Numeric Thresholds for Residential, Office, and Retail Projects

Recommended threshold for residential projects: A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the SCS for that city, and should be consistent with the SCS.

Residential development that would generate vehicle travel that is 15 or more percent below the existing residential VMT per capita, measured against the region or city, may indicate a less-than-significant transportation impact. In MPO areas, development measured against city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the SCS for that city because greater-than-planned amounts of development in areas above the region-based threshold would undermine the VMT containment needed to achieve regional targets under SB 375.

For residential projects in unincorporated county areas, the local agency can compare a residential project's VMT to (1) the region's VMT per capita, or (2) the aggregate population-weighted VMT per capita of all cities in the region. In MPO areas, development in unincorporated areas measured against aggregate city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the SCS for that city because greater-than-planned amounts of development in areas above the regional threshold would undermine achievement of regional targets under SB 375.

²⁷ Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement*, available at <https://www.arb.ca.gov/research/apr/past/13-310.pdf>.

²⁸ CAPCOA (2010) *Quantifying Greenhouse Gas Mitigation Measures*, pp. 176-178, available at <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.

These thresholds can be applied to either household (i.e., tour-based) VMT or home-based (i.e., trip-based) VMT assessments.²⁹ It is critical, however, that the agency be consistent in its VMT measurement approach throughout the analysis to maintain an “apples-to-apples” comparison. For example, if the agency uses a home-based VMT for the threshold, it should also be use home-based VMT for calculating project VMT and VMT reduction due to mitigation measures.

Recommended threshold for office projects: A proposed project exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact.

Office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact. In cases where the region is substantially larger than the geography over which most workers would be expected to live, it might be appropriate to refer to a smaller geography, such as the county, that includes the area over which nearly all workers would be expected to live.

Office VMT screening maps can be developed using tour-based data, considering either total employee VMT or employee work tour VMT. Similarly, tour-based analysis of office project VMT could consider either total employee VMT or employee work tour VMT. Where tour-based information is unavailable for threshold determination, project assessment, or assessment of mitigation, home-based work trip VMT should be used throughout all steps of the analysis to maintain an “apples-to-apples” comparison.

Recommended threshold for retail projects: A net increase in total VMT may indicate a significant transportation impact.

Because new retail development typically redistributes shopping trips rather than creating new trips,³⁰ estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project’s transportation impacts.

By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact. Regional-serving retail development, on the other hand, which can lead to substitution of longer trips for shorter ones, may tend to have a significant impact. Where such development decreases VMT, lead agencies should consider the impact to be less-than-significant.

Many cities and counties define local-serving and regional-serving retail in their zoning codes. Lead agencies may refer to those local definitions when available, but should also consider any project-

²⁹ See Appendix 1 for a description of these approaches.

³⁰ Lovejoy, et al. (2013) *Measuring the impacts of local land-use policies on vehicle miles of travel: The case of the first big-box store in Davis, California*, *The Journal of Transport and Land Use*.

specific information, such as market studies or economic impacts analyses that might bear on customers' travel behavior. Because lead agencies will best understand their own communities and the likely travel behaviors of future project users, they are likely in the best position to decide when a project will likely be local-serving. Generally, however, retail development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT.

Mixed-Use Projects

Lead agencies can evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential and retail). Alternatively, a lead agency may consider only the project's dominant use. In the analysis of each use, a project should take credit for internal capture. Combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.

Other Project Types

Of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types. In developing thresholds for other project types, or thresholds different from those recommended here, lead agencies should consider the purposes described in section 21099 of the Public Resources Code and regulations in the CEQA Guidelines on the development of thresholds of significance (e.g., CEQA Guidelines, § 15064.7).

Strategies and projects that decrease local VMT but increase total VMT should be avoided. Agencies should consider whether their actions encourage development in a less travel-efficient location by limiting development in travel-efficient locations.

Redevelopment Projects

Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.

As described above, a project or plan near transit which replaces affordable³¹ residential units with a smaller number of moderate- or high-income residential units may increase overall VMT, because

³¹ Including naturally-occurring affordable residential units.

displaced residents' VMT may increase.³² A lead agency should analyze VMT for such a project even if it otherwise would have been presumed less than significant. The assessment should incorporate an estimate of the aggregate VMT increase experienced by displaced residents. That additional VMT should be included in the numerator of the VMT per capita assessed for the project.

If a residential or office project leads to a net increase in VMT, then the project's VMT per capita (residential) or per employee (office) should be compared to thresholds recommended above. Per capita and per employee VMT are efficiency metrics, and, as such, apply only to the existing project without regard to the VMT generated by the previously existing land use.

If the project leads to a net increase in provision of locally-serving retail, transportation impacts from the retail portion of the development should be presumed to be less than significant. If the project consists of regionally-serving retail, and increases overall VMT compared to with existing uses, then the project would lead to a significant transportation impact.

RTP/SCS Consistency (All Land Use Projects)

Section 15125, subdivision (d), of the CEQA Guidelines provides that lead agencies should analyze impacts resulting from inconsistencies with regional plans, including regional transportation plans. For this reason, if a project is inconsistent with the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), the lead agency should evaluate whether that inconsistency indicates a significant impact on transportation. For example, a development may be inconsistent with an RTP/SCS if the development is outside the footprint of development or within an area specified as open space as shown in the SCS.

3. Recommendations Regarding Land Use Plans

As with projects, agencies should analyze VMT outcomes of land use plans across the full area over which the plan may substantively affect travel patterns, including beyond the boundary of the plan or jurisdiction's geography. And as with projects, VMT should be counted in full rather than split between origin and destination. (Emissions inventories have sometimes split cross-boundary trips in order to sum to a regional total, but CEQA requires accounting for the full impact without truncation or discounting). Analysis of specific plans may employ the same thresholds described above for projects. A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office, or retail land uses would in aggregate exceed the respective thresholds recommended above. Where the lead agency tiers from a general plan EIR pursuant to CEQA Guidelines sections 15152 and 15166, the lead agency generally focuses on the environmental impacts that are specific to the later project and were not analyzed as significant impacts in the prior EIR. (Pub. Resources Code, § 21068.5; Guidelines, § 15152, subd. (a).) Thus, in analyzing the later project, the lead agency

³² Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement*, Chapter 4, pp. 159-160, available at <https://www.arb.ca.gov/research/apr/past/13-310.pdf>.

would focus on the VMT impacts that were not adequately addressed in the prior EIR. In the tiered document, the lead agency should continue to apply the thresholds recommended above.

Thresholds for plans in non-MPO areas may be determined on a case-by-case basis.

4. Other Considerations

Rural Projects Outside of MPOs

In rural areas of non-MPO counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis. Note, however, that clustered small towns and small town main streets may have substantial VMT benefits compared to isolated rural development, similar to the transit oriented development described above.

Impacts to Transit

Because criteria for determining the significance of transportation impacts must promote “the development of multimodal transportation networks” pursuant to Public Resources Code section 21099, subd. (b)(1), lead agencies should consider project impacts to transit systems and bicycle and pedestrian networks. For example, a project that blocks access to a transit stop or blocks a transit route itself may interfere with transit functions. Lead agencies should consult with transit agencies as early as possible in the development process, particularly for projects that are located within one half mile of transit stops.

When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact. An infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network.

Increased demand throughout a region may, however, cause a cumulative impact by requiring new or additional transit infrastructure. Such impacts may be adequately addressed through a fee program that fairly allocates the cost of improvements not just to projects that happen to locate near transit, but rather across a region to all projects that impose burdens on the entire transportation system, since transit can broadly improve the function of the transportation system.

F. Considering the Effects of Transportation Projects on Vehicle Travel

Many transportation projects change travel patterns. A transportation project which leads to additional vehicle travel on the roadway network, commonly referred to as “induced vehicle travel,” would need to quantify the amount of additional vehicle travel in order to assess air quality impacts, greenhouse gas emissions impacts, energy impacts, and noise impacts. Transportation projects also are required to

examine induced growth impacts under CEQA. (See generally, Pub. Resources Code, §§ 21065 [defining “project” under CEQA as an activity as causing either a direct or reasonably foreseeable indirect physical change], 21065.3 [defining “project-specific effect” to mean all direct or indirect environmental effects], 21100, subd. (b) [required contents of an EIR].) For any project that increases vehicle travel, explicit assessment and quantitative reporting of the amount of additional vehicle travel should not be omitted from the document; such information may be useful and necessary for a full understanding of a project’s environmental impacts. (See Pub. Resources Code, §§ 21000, 21001, 21001.1, 21002, 21002.1 [discussing the policies of CEQA].) A lead agency that uses the VMT metric to assess the transportation impacts of a transportation project may simply report that change in VMT as the impact. When the lead agency uses another metric to analyze the transportation impacts of a roadway project, changes in amount of vehicle travel added to the roadway network should still be analyzed and reported.³³

While CEQA does not require perfection, it is important to make a reasonably accurate estimate of transportation projects’ effects on vehicle travel in order to make reasonably accurate estimates of GHG emissions, air quality emissions, energy impacts, and noise impacts. (See, e.g., *California Clean Energy Com. v. City of Woodland* (2014) 225 Cal.App.4th 173, 210 [EIR failed to consider project’s transportation energy impacts]; *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 266.) Appendix 2 describes in detail the causes of induced vehicle travel, the robust empirical evidence of induced vehicle travel, and how models and research can be used in conjunction to quantitatively assess induced vehicle travel with reasonable accuracy.

If a project would likely lead to a measurable and substantial increase in vehicle travel, the lead agency should conduct an analysis assessing the amount of vehicle travel the project will induce. Project types that would likely lead to a measurable and substantial increase in vehicle travel generally include:

- Addition of through lanes on existing or new highways, including general purpose lanes, HOV lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges

Projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis, include:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such as median barriers and guardrails

³³ See, e.g., California Department of Transportation (2006) *Guidance for Preparers of Growth-related, Indirect Impact Analyses*, available at [http://www.dot.ca.gov/ser/Growth-related IndirectImpactAnalysis/GRI_guidance06May_files/gri_guidance.pdf](http://www.dot.ca.gov/ser/Growth-related%20IndirectImpactAnalysis/GRI_guidance06May_files/gri_guidance.pdf).

- Roadway shoulder enhancements to provide “breakdown space,” dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

1. Recommended Significance Threshold for Transportation Projects

As noted in Section 15064.3 of the CEQA Guidelines, lead agencies for roadway capacity projects have discretion, consistent with CEQA and planning requirements, to choose which metric to use to evaluate transportation impacts. This section recommends considerations for evaluating impacts using vehicle miles traveled. Lead agencies have discretion to choose a threshold of significance for transportation projects as they do for other types of projects. As explained above, Public Resources Code section 21099, subdivision (b)(1), provides that criteria for determining the significance of transportation impacts must promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. (*Id.*; see generally, adopted CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].) With those goals in mind, OPR prepared and the Agency adopted an appropriate transportation metric.

Whether adopting a threshold of significance, or evaluating transportation impacts on a case-by-case basis, a lead agency should ensure that the analysis addresses:

- Direct, indirect and cumulative effects of the transportation project (CEQA Guidelines, § 15064, subds. (d), (h))
- Near-term and long-term effects of the transportation project (CEQA Guidelines, §§ 15063, subd. (a)(1), 15126.2, subd. (a))
- The transportation project's consistency with state greenhouse gas reduction goals (Pub. Resources Code, § 21099)³⁴
- The impact of the transportation project on the development of multimodal transportation networks (Pub. Resources Code, § 21099)
- The impact of the transportation project on the development of a diversity of land uses (Pub. Resources Code, § 21099)

The CARB Scoping Plan and the CARB Mobile Source Strategy delineate VMT levels required to achieve legally mandated GHG emissions reduction targets. A lead agency should develop a project-level threshold based on those VMT levels, and may apply the following approach:

1. Propose a fair-share allocation of those budgets to their jurisdiction (e.g., by population);

³⁴ The California Air Resources Board has ascertained the limits of VMT growth compatible with California containing greenhouse gas emissions to levels research shows would allow for climate stabilization. (See [The 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target](#) (p. 78, p. 101); [Mobile Source Strategy](#) (p. 37).) CARB's [Updated Final Staff Report on Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets](#) illustrates that the current Regional Transportation Plans and Sustainable Communities Strategies will fall short of achieving the necessary on-road transportation-related GHG emissions reductions called for in the 2017 Scoping Plan (Figure 3, p. 35). Accordingly, OPR recommends not basing GHG emissions or transportation impact analysis for a transportation project solely on consistency with an RTP/SCS.

2. Determine the amount of VMT growth likely to result from background population growth, and subtract that from their “budget”;
3. Allocate their jurisdiction’s share between their various VMT-increasing transportation projects, using whatever criteria the lead agency prefers.

2. Estimating VMT Impacts from Transportation Projects

CEQA requires analysis of a project’s potential growth-inducing impacts. (Pub. Resources Code, § 21100, subd. (b)(5); CEQA Guidelines, § 15126.2, subd. (d).) Many agencies are familiar with the analysis of growth inducing impacts associated with water, sewer, and other infrastructure. This technical advisory addresses growth that may be expected from roadway expansion projects.

Because a roadway expansion project can induce substantial VMT, incorporating quantitative estimates of induced VMT is critical to calculating both transportation and other impacts of these projects. Induced travel also has the potential to reduce or eliminate congestion relief benefits. An accurate estimate of induced travel is needed to accurately weigh costs and benefits of a highway capacity expansion project.

The effect of a transportation project on vehicle travel should be estimated using the “change in total VMT” method described in *Appendix 1*. This means that an assessment of total VMT without the project and an assessment with the project should be made; the difference between the two is the amount of VMT attributable to the project. The assessment should cover the full area in which driving patterns are expected to change. As with other types of projects, the VMT estimation should not be truncated at a modeling or jurisdictional boundary for convenience of analysis when travel behavior is substantially affected beyond that boundary.

Transit and Active Transportation Projects

Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals contained in SB 743 by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development.

Roadway Projects

Reducing roadway capacity (for example, by removing or repurposing motor vehicle travel lanes) will generally reduce VMT and therefore is presumed to cause a less-than-significant impact on transportation. Generally, no transportation analysis is needed for such projects.

Building new roadways, adding roadway capacity in congested areas, or adding roadway capacity to areas where congestion is expected in the future, typically induces additional vehicle travel. For the types of projects previously indicated as likely to lead to additional vehicle travel, an estimate should be made of the change in vehicle travel resulting from the project.

For projects that increase roadway capacity, lead agencies can evaluate induced travel quantitatively by applying the results of existing studies that examine the magnitude of the increase of VMT resulting from a given increase in lane miles. These studies estimate the percent change in VMT for every percent change in miles to the roadway system (i.e., “elasticity”).³⁵ Given that lead agencies have discretion in choosing their methodology, and the studies on induced travel reveal a range of elasticities, lead agencies may appropriately apply professional judgment in studying the transportation effects of a particular project. The most recent major study, estimates an elasticity of 1.0, meaning that every percent change in lane miles results in a one percent increase in VMT.³⁶

To estimate VMT impacts from roadway expansion projects:

1. Determine the total lane-miles over an area that fully captures travel behavior changes resulting from the project (generally the region, but for projects affecting interregional travel look at all affected regions).
2. Determine the percent change in total lane miles that will result from the project.
3. Determine the total existing VMT over that same area.
4. Multiply the percent increase in lane miles by the existing VMT, and then multiply that by the elasticity from the induced travel literature:

$$[\% \text{ increase in lane miles}] \times [\text{existing VMT}] \times [\text{elasticity}] = [\text{VMT resulting from the project}]$$

A National Center for Sustainable Transportation tool can be used to apply this method:

<https://ncst.ucdavis.edu/research/tools>

This method would not be suitable for rural (non-MPO) locations in the state which are neither congested nor projected to become congested. It also may not be suitable for a new road that provides new connectivity across a barrier (e.g., a bridge across a river) if it would be expected to substantially

³⁵ See U.C. Davis, Institute for Transportation Studies (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*; Boarnet and Handy (Sept. 2014) *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions*, California Air Resources Board Policy Brief, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf.

³⁶ See Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at <http://www.nber.org/papers/w15376>.

shorten existing trips. If it is likely to be substantial, the trips-shortening effect should be examined explicitly.

The effects of roadway capacity on vehicle travel can also be applied at a programmatic level. For example, in a regional planning process the lead agency can use that program-level analysis to streamline later project-level analysis. (See CEQA Guidelines, § 15168.) A program-level analysis of VMT should include effects of the program on land use patterns, and the VMT that results from those land use effects. In order for a program-level document to adequately analyze potential induced demand from a project or program of roadway capacity expansion, lead agencies cannot assume a fixed land use pattern (i.e., a land use pattern that does not vary in response to the provision of roadway capacity). A proper analysis should account for land use investment and development pattern changes that react in a reasonable manner to changes in accessibility created by transportation infrastructure investments (whether at the project or program level).

Mitigation and Alternatives

Induced VMT has the potential to reduce or eliminate congestion relief benefits, increase VMT, and increase other environmental impacts that result from vehicle travel.³⁷ If those effects are significant, the lead agency will need to consider mitigation or alternatives. In the context of increased travel that is induced by capacity increases, appropriate mitigation and alternatives that a lead agency might consider include the following:

- Tolling new lanes to encourage carpools and fund transit improvements
- Converting existing general purpose lanes to HOV or HOT lanes
- Implementing or funding off-site travel demand management
- Implementing Intelligent Transportation Systems (ITS) strategies to improve passenger throughput on existing lanes

Tolling and other management strategies can have the additional benefit of preventing congestion and maintaining free-flow conditions, conferring substantial benefits to road users as discussed above.

G. Analyzing Other Impacts Related to Transportation

While requiring a change in the methodology of assessing transportation impacts, Public Resources Code section 21099 notes that this change “does not relieve a public agency of the requirement to analyze a project’s potentially significant transportation impacts related to air quality, noise, safety, or any other impact associated with transportation.” OPR expects that lead agencies will continue to

³⁷ See National Center for Sustainable Transportation (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*, available at http://www.dot.ca.gov/newtech/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf; see Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at <http://www.nber.org/papers/w15376>.

address mobile source emissions in the air quality and noise sections of an environmental document and the corresponding studies that support the analysis in those sections. Lead agencies should continue to address environmental impacts of a proposed project pursuant to CEQA's requirements, using a format that is appropriate for their particular project.

Because safety concerns result from many different factors, they are best addressed at a programmatic level (i.e., in a general plan or regional transportation plan) in cooperation with local governments, metropolitan planning organizations, and, where the state highway system is involved, the California Department of Transportation. In most cases, such an analysis would not be appropriate on a project-by-project basis. Increases in traffic volumes at a particular location resulting from a project typically cannot be estimated with sufficient accuracy or precision to provide useful information for an analysis of safety concerns. Moreover, an array of factors affect travel demand (e.g., strength of the local economy, price of gasoline), causing substantial additional uncertainty. Appendix B of OPR's [General Plan Guidelines](#) summarizes research which could be used to guide a programmatic analysis under CEQA. Lead agencies should note that automobile congestion or delay does not constitute a significant environmental impact (Pub. Resources Code, §21099(b)(2)), and safety should not be used as a proxy for road capacity.

H. VMT Mitigation and Alternatives

When a lead agency identifies a significant impact, it must identify feasible mitigation measures that could avoid or substantially reduce that impact. (Pub. Resources Code, § 21002.1, subd. (a).) Additionally, CEQA requires that an environmental impact report identify feasible alternatives that could avoid or substantially reduce a project's significant environmental impacts.

Indeed, the California Court of Appeal recently held that a long-term regional transportation plan was deficient for failing to discuss an alternative which could significantly reduce total vehicle miles traveled. In *Cleveland National Forest Foundation v. San Diego Association of Governments, et al.* (2017) 17 Cal.App.5th 413, the court found that omission "inexplicable" given the lead agency's "acknowledgment in its Climate Action Strategy that the state's efforts to reduce greenhouse gas emissions from on-road transportation will not succeed if the amount of driving, or vehicle miles traveled, is not significantly reduced." (*Cleveland National Forest Foundation, supra*, 17 Cal.App.5th at p. 436.) Additionally, the court noted that the project alternatives focused primarily on congestion relief even though "the [regional] transportation plan is a long-term and congestion relief is not necessarily an effective long-term strategy." (*Id.* at p. 437.) The court concluded its discussion of the alternatives analysis by stating: "Given the acknowledged long-term drawbacks of congestion relief alternatives, there is not substantial evidence to support the EIR's exclusion of an alternative focused primarily on significantly reducing vehicle trips." (*Ibid.*)

Several examples of potential mitigation measures and alternatives to reduce VMT are described below. However, the selection of particular mitigation measures and alternatives are left to the discretion of

the lead agency, and mitigation measures may vary, depending on the proposed project and significant impacts, if any. Further, OPR expects that agencies will continue to innovate and find new ways to reduce vehicular travel.

Potential measures to reduce vehicle miles traveled include, but are not limited to:

- Improve or increase access to transit.
- Increase access to common goods and services, such as groceries, schools, and daycare.
- Incorporate affordable housing into the project.
- Incorporate neighborhood electric vehicle network.
- Orient the project toward transit, bicycle and pedestrian facilities.
- Improve pedestrian or bicycle networks, or transit service.
- Provide traffic calming.
- Provide bicycle parking.
- Limit or eliminate parking supply.
- Unbundle parking costs.
- Provide parking cash-out programs.
- Implement roadway pricing.
- Implement or provide access to a commute reduction program.
- Provide car-sharing, bike sharing, and ride-sharing programs.
- Provide transit passes.
- Shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services.
- Providing telework options.
- Providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle.
- Providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms.
- Providing employee transportation coordinators at employment sites.
- Providing a guaranteed ride home service to users of non-auto modes.

Notably, because VMT is largely a regional impact, regional VMT-reduction programs may be an appropriate form of mitigation. In lieu fees have been found to be valid mitigation where there is both a commitment to pay fees and evidence that mitigation will actually occur. (*Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 140-141; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727–728.) Fee programs are particularly useful to address cumulative impacts. (CEQA Guidelines, § 15130, subd. (a)(3) [a “project’s incremental contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact”].) The mitigation program must undergo CEQA evaluation, either on the program as a whole, or the in-lieu fees or other mitigation must be evaluated

on a project-specific basis. (*California Native Plant Society v. County of El Dorado* (2009) 170 Cal.App.4th 1026.) That CEQA evaluation could be part of a larger program, such as a regional transportation plan, analyzed in a Program EIR. (CEQA Guidelines, § 15168.)

Examples of project alternatives that may reduce vehicle miles traveled include, but are not limited to:

- Locate the project in an area of the region that already exhibits low VMT.
- Locate the project near transit.
- Increase project density.
- Increase the mix of uses within the project or within the project's surroundings.
- Increase connectivity and/or intersection density on the project site.
- Deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes.

Appendix 1. Considerations About Which VMT to Count

Consistent with the obligation to make a good faith effort to disclose the environmental consequences of a project, lead agencies have discretion to choose the most appropriate methodology to evaluate project impacts.³⁸ A lead agency can evaluate a project's effect on VMT in numerous ways. The purpose of this document is to provide technical considerations in determining which methodology may be most useful for various project types.

Background on Estimating Vehicle Miles Traveled

Before discussing specific methodological recommendations, this section provides a brief overview of modeling and counting VMT, including some key terminology.

Here is an illustrative example of some methods of estimating vehicle miles traveled. Consider the following hypothetical travel day (all by automobile):

1. Residence to Coffee Shop
2. Coffee Shop to Work
3. Work to Sandwich Shop
4. Sandwich Shop to Work
5. Work to Residence
6. Residence to Store
7. Store to Residence

Trip-based assessment of a project's effect on travel behavior counts VMT from individual trips to and from the project. It is the most basic, and traditionally the most common, method of counting VMT. A trip-based VMT assessment of the residence in the above example would consider segments 1, 5, 6 and 7. For residential projects, the sum of home-based trips is called *home-based* VMT.

A *tour-based* assessment counts the entire home-back-to-home tour that includes the project. A tour-based VMT assessment of the residence in the above example would consider segments 1, 2, 3, 4, and 5 in one tour, and 6 and 7 in a second tour. A tour-based assessment of the workplace would include segments 1, 2, 3, 4, and 5. Together, all tours comprise *household* VMT.

³⁸ The California Supreme Court has explained that when an agency has prepared an environmental impact report:

[T]he issue is not whether the [lead agency's] studies are irrefutable or whether they could have been better. The relevant issue is only whether the studies are sufficiently credible to be considered as part of the total evidence that supports the [lead agency's] finding[.]

(*Laurel Heights Improvement Assn. v. Regents of the University of California* (1988) 47 Cal.3d 376, 409; see also *Eureka Citizens for Responsible Gov't v. City of Eureka* (2007) 147 Cal.App.4th 357, 372.)

Both trip- and tour-based assessments can be used as measures of transportation efficiency, using denominators such as per capita, per employee, or per person-trip.

Trip- and Tour-based Assessment of VMT

As illustrated above, a tour-based assessment of VMT is a more complete characterization of a project's effect on VMT. In many cases, a project affects travel behavior beyond the first destination. The location and characteristics of the home and workplace will often be the main drivers of VMT. For example, a residential or office development located near high quality transit will likely lead to some commute trips utilizing transit, affecting mode choice on the rest of the tour.

Characteristics of an office project can also affect an employee's VMT beyond the work tour. For example, a workplace located at the urban periphery, far from transit, can require an employee to own a car, which in turn affects the entirety of an employee's travel behavior and VMT. For this reason, when estimating the effect of an office development on VMT, it may be appropriate to consider total employee VMT if data and tools, such as tour-based models, are available. This is consistent with CEQA's requirement to evaluate both direct and *indirect* effects of a project. (See CEQA Guidelines, § 15064, subd. (d)(2).)

Assessing Change in Total VMT

A third method, estimating the *change in total VMT* with and without the project, can evaluate whether a project is likely to divert existing trips, and what the effect of those diversions will be on total VMT. This method answers the question, "What is the net effect of the project on area VMT?" As an illustration, assessing the total change in VMT for a grocery store built in a food desert that diverts trips from more distant stores could reveal a net VMT reduction. The analysis should address the full area over which the project affects travel behavior, even if the effect on travel behavior crosses political boundaries.

Using Models to Estimate VMT

Travel demand models, sketch models, spreadsheet models, research, and data can all be used to calculate and estimate VMT (see Appendix F of the [preliminary discussion draft](#)). To the extent possible, lead agencies should choose models that have sensitivity to features of the project that affect VMT. Those tools and resources can also assist in establishing thresholds of significance and estimating VMT reduction attributable to mitigation measures and project alternatives. When using models and tools for those various purposes, agencies should use comparable data and methods, in order to set up an "apples-to-apples" comparison between thresholds, VMT estimates, and VMT mitigation estimates.

Models can work together. For example, agencies can use travel demand models or survey data to estimate existing trip lengths and input those into sketch models such as CalEEMod to achieve more

accurate results. Whenever possible, agencies should input localized trip lengths into a sketch model to tailor the analysis to the project location. However, in doing so, agencies should be careful to avoid double counting if the sketch model includes other inputs or toggles that are proxies for trip length (e.g., distance to city center). Generally, if an agency changes any sketch model defaults, it should record and report those changes for transparency of analysis. Again, trip length data should come from the same source as data used to calculate thresholds to be sure of an “apples-to-apples” comparison.

Additional background information regarding travel demand models is available in the California Transportation Commission’s [“2010 Regional Transportation Plan Guidelines,”](#) beginning at page 35.

Appendix 2. Induced Travel: Mechanisms, Research, and Additional Assessment Approaches

Induced travel occurs where roadway capacity is expanded in an area of present or projected future congestion. The effect typically manifests over several years. Lower travel times make the modified facility more attractive to travelers, resulting in the following trip-making changes:

- **Longer trips.** The ability to travel a long distance in a shorter time increases the attractiveness of destinations that are farther away, increasing trip length and vehicle travel.
- **Changes in mode choice.** When transportation investments are devoted to reducing automobile travel time, travelers tend to shift toward automobile use from other modes, which increases vehicle travel.
- **Route changes.** Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.
- **Newly generated trips.** Increasing travel speeds can induce additional trips, which increases vehicle travel. For example, an individual who previously telecommuted or purchased goods on the internet might choose to accomplish those tasks via automobile trips as a result of increased speeds.
- **Land Use Changes.** Faster travel times along a corridor lead to land development farther along that corridor; that new development generates and attracts longer trips, which increases vehicle travel. Over several years, this induced growth component of induced vehicle travel can be substantial, making it critical to include in analyses.

Each of these effects has implications for the total amount of vehicle travel. These effects operate over different time scales. For example, changes in mode choice might occur immediately, while land use changes typically take a few years or longer. CEQA requires lead agencies to analyze both short-term and long-term effects.

Evidence of Induced Vehicle Travel. A large number of peer reviewed studies³⁹ have demonstrated a causal link between highway capacity increases and VMT increases. Many provide quantitative estimates of the magnitude of the induced VMT phenomenon. Collectively, they provide high quality evidence of the existence and magnitude of the induced travel effect.

³⁹ See, e.g., Boarnet and Handy (Sept. 2014) Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions, California Air Resources Board Policy Brief, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf; National Center for Sustainable Transportation (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*, available at http://www.dot.ca.gov/research/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf.

Most of these studies express the amount of induced vehicle travel as an “elasticity,” which is a multiplier that describes the additional vehicle travel resulting from an additional lane mile of roadway capacity added. For example, an elasticity of 0.6 would signify an 0.6 percent increase in vehicle travel for every 1.0 percent increase in lane miles. Many of these studies distinguish “short run elasticity” (increase in vehicle travel in the first few years) from “long run elasticity” (increase in vehicle travel beyond the first few years). Long run elasticity is larger than short run elasticity, because as time passes, more of the components of induced vehicle travel materialize. Generally, short run elasticity can be thought of as excluding the effects of land use change, while long run elasticity includes them. Most studies find a long run elasticity between 0.6 and just over 1.0,⁴⁰ meaning that every increase in lanes miles of one percent leads to an increase in vehicle travel of 0.6 to 1.0 percent. The most recent major study finds the elasticity of vehicle travel by lanes miles added to be 1.03; in other words, each percent increase in lane miles results in a 1.03 percent increase in vehicle travel.⁴¹ (An elasticity greater than 1.0 can occur because new lanes induce vehicle travel that spills beyond the project location.) In CEQA analysis, the long-run elasticity should be used, as it captures the full effect of the project rather than just the early-stage effect.

Quantifying Induced Vehicle Travel Using Models. Lead agencies can generally achieve the most accurate assessment of induced vehicle travel resulting from roadway capacity increasing projects by applying elasticities from the academic literature, because those estimates include vehicle travel resulting from induced land use. If a lead agency chooses to use a travel demand model, additional analysis would be needed to account for induced land use. This section describes some approaches to undertaking that additional analysis.

Proper use of a travel demand model can capture the following components of induced VMT:

- Trip length (generally increases VMT)
- Mode shift (generally shifts from other modes toward automobile use, increasing VMT)
- Route changes (can act to increase or decrease VMT)
- Newly generated trips (generally increases VMT)
 - Note that not all travel demand models have sensitivity to this factor, so an off-model estimate may be necessary if this effect could be substantial.

However, estimating long-run induced VMT also requires an estimate of the project’s effects on land use. This component of the analysis is important because it has the potential to be a large component of

⁴⁰ See Boarnet and Handy (Sept. 2014) [Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions](https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf), California Air Resources Board Policy Brief, p. 2, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf.

⁴¹ Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at <http://www.nber.org/papers/w15376>.

the overall induced travel effect. Options for estimating and incorporating the VMT effects that are caused by the subsequent land use changes include:

1. *Employ an expert panel.* An expert panel could assess changes to land use development that would likely result from the project. This assessment could then be analyzed by the travel demand model to assess effects on vehicle travel. Induced vehicle travel assessed via this approach should be verified using elasticities found in the academic literature.
2. *Adjust model results to align with the empirical research.* If the travel demand model analysis is performed without incorporating projected land use changes resulting from the project, the assessed vehicle travel should be adjusted upward to account for those land use changes. The assessed VMT after adjustment should fall within the range found in the academic literature.
3. *Employ a land use model, running it iteratively with a travel demand model.* A land use model can be used to estimate the land use effects of a roadway capacity increase, and the traffic patterns that result from the land use change can then be fed back into the travel demand model. The land use model and travel demand model can be iterated to produce an accurate result.

A project which provides new connectivity across a barrier, such as a new bridge across a river, may provide a shortened path between existing origins and destinations, thereby shortening existing trips. In rare cases, this trip-shortening effect might be substantial enough to reduce the amount of vehicle travel resulting from the project below the range found in the elasticities in the academic literature, or even lead a net reduction in vehicle travel overall. In such cases, the trip-shortening effect could be examined explicitly.

Whenever employing a travel demand model to assess induced vehicle travel, any limitation or known lack of sensitivity in the analysis that might cause substantial errors in the VMT estimate (for example, model insensitivity to one of the components of induced VMT described above) should be disclosed and characterized, and a description should be provided on how it could influence the analysis results. A discussion of the potential error or bias should be carried into analyses that rely on the VMT analysis, such as greenhouse gas emissions, air quality, energy, and noise.



APPENDIX B

PROPOSED MITIGATION STRATEGIES FOR IMPLEMENTATION OF SB 743



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Proposed Mitigation Strategies for Implementation of SB 743

Categories	Mitigation Strategies	Proposed Language
<p>Tier 1 -</p> <p>On-Site Improvements</p>	<ol style="list-style-type: none"> 1. Pedestrian Network Improvements 2. Incorporate Bike Lane Street Design 3. Provide Traffic Calming Measures 4. Increase density 5. Provide enhanced bicycle and/or pedestrian facilities 6. Mixed-Use Overlay 7. Incorporate affordable housing 8. Bike parking for non-residential projects or multi-unit residential projects 	<ol style="list-style-type: none"> 1. Pedestrian Network Improvements shall be incorporated into a project site plan that provide pedestrian walkway access from a building entrance/exit to other buildings on the project site and a sidewalk that leads off-site.¹ 2. Projects that include dedicated rights-of-way, non-dedicated roadways, or both, shall be designed at an appropriate width to accommodate, at a minimum, a painted on-street Bike Lane. ² 3. Traffic Calming Measures (TCMs) shall be incorporated into a project site plan, where applicable. ³ 4. A density bonus will be allowed in conformance with Orange County Zoning Code. ⁴ 5. Projects with existing bicycle and pedestrian facilities shall double the capacity of bicycle facilities (e.g., bicycle racks) and shall expand pedestrian walkway access such that all onsite buildings are interconnected and off-street connectivity is provided. 6. A density bonus shall be allowed if a project includes both residential and employment land uses. 7. A density bonus shall be allowed if a project includes affordable housing per the Zoning Code. 8. Bicycle parking shall be provided in a secure, enclosed location and be identified on a site plan. The bike parking shall be provided based on duration for non-residential developments. ⁵

Proposed Mitigation Strategies for Implementation of SB 743

Categories	Mitigation Strategies	Proposed Language
<p>Tier 2 -</p> <p>Financial Incentives</p>	<p>9. Project contributions to infrastructure improvement projects</p> <p>10. School pool program</p> <p>11. Subsidize vanpool for housing developments</p> <p>12. Provide car-sharing, bike-sharing or ride-sharing programs</p> <p>13. Provide subsidized transit passes</p>	<p>9. Should a program be adopted in the future, this will be an option for Applicants. ⁶</p> <p>10. Each residential project would provide new homebuyers with a flyer describing the time and cost savings of carpooling. ⁷</p> <p>11. Each residential project would provide new homebuyers or resale homebuyers with vouchers for each applicable commercial vanpool service for the period of time they own the home. ⁸</p> <p>12. Each residential project would provide new homebuyers or resale homebuyers with flyers detailing the car-sharing, bike-sharing, or ride-sharing programs, documenting the time and cost savings of each. Non-residential projects would provide each employee with this flyer and post the flyer in a lunch room or break room location. ⁸</p> <p>13. Each residential project would provide new homebuyers or resale homebuyers with transit subsidies for the period of time they own the home. Non-residential projects would provide each employee with access to transit subsidies. ⁸</p>

Notes:

1. The Pedestrian Network Improvements should provide intra-project connectivity and connectivity off-site.
2. A Class II bike lane represents a minimum standard. Class I off-street bike paths or Class IV bike boulevards could also be included and may result in greater usage and a greater reduction in VMTs.
3. TCMs are going to vary significantly among project types (residential v. commercial, etc.) and the size of the project envelope, and the types of TCMs that could be included. Project applicants should ensure measures are appropriate for the proposed project.
4. The density bonus in the Zoning Code applies to residential. However, appropriate measures may be applied to a non-residential project at the discretion of the County where VMT reduction may result.
5. In accordance with the 2019 California Green Building Standards Code for non-residential developments, short-term bicycle parking will require 5% of motorized vehicle parking spaces with a minimum of one two-bike rack. Long-term bicycle parking will require 5% of tenant-occupant vehicular parking spaces with a minimum of one bike parking facility.
6. The particular type of infrastructure project should be determined, as some would be more applicable than others. Also, the fee increment would have to be calculated.
7. Actual metrics on how much time and money would be saved should be provided that are specific to the project area.
8. Coordination would be the responsibility of the project applicant.

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The logo features the letters 'LSA' in a large, bold, white sans-serif font. Below it, the website address 'www.lsa.net' is written in a smaller, white sans-serif font. The text is centered within a dark blue trapezoidal shape that tapers to the right. The background of the entire page is white, with a decorative border of a light gray geometric pattern consisting of interconnected hexagons and lines, resembling a molecular or crystalline structure. This pattern is most prominent around the blue logo area and extends horizontally across the middle of the page.

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