APPENDIX A: Project Scoping

Notice of Preparation

Scoping Comments

- State of California, Department of Transportation
- State of California, Native American Heritage Commission
- South Coast Air Quality Management District
- Pierrette K. Maule

Notice of Preparation of an Environmental Impact Report

Date: March 17, 2016

To: Agencies, Organizations, and Interested Parties

Subject: Notice of Preparation of an Environmental Impact Report for the Redmont Pump Station and Tank Project

This Notice of Preparation (NOP) has been prepared to notify agencies and interested parties that the Los Angeles Department of Water and Power (LADWP), as the Lead Agency, is beginning preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) for the proposed Redmont Pump Station and Tank Project (proposed Project).

The LADWP is soliciting input from interested persons and agencies as to the scope and content of the the EIR. In accordance with CEQA, the LADWP requests that agencies review the Project description provided in this NOP and provide comments on environmental issues related to the statutory responsibilities of the agency. The EIR will be used by the LADWP when considering approval of the proposed Project and by other Responsible and Trustee Agencies to support their discretionary actions related to the Project.

Project Location

The proposed site for the new Redmont Pump Station and Tank Project is located at 10501 Redmont Avenue, the site of the existing Redmont Pump Station and Reservoir. This site is at the intersection of North Tujunga Canyon Boulevard and Summitrose Street in the City of Los Angeles, CA (see Figure 1).

Redmont Pump Station and Reservoir Site Boundary

Figure 1

Project Location

Project Overview

The existing Redmont Pump Station was constructed in 1955 and serves the communities of Sunland and Tujunga in the City of Los Angeles; it is owned and operated by the LADWP. The existing Redmont Reservoir, located at the same facility, was built in 1920, and acquired by the LADWP in 1951. The existing reservoir is an excavated and concrete lined facility with a built up roof supported by redwood timber roof framing and 3/4 –inch thick redwood planking which houses 435,000 gallons of water. The pump station receives water from the existing Redmont located within the same property boundaries of the station, and pumps water to the Highway Highland and Apperson Tanks. The Highway Highland Tank is located approximately two miles southeast of the station, and the Apperson Tank is located approximately one mile east of the station.

The existing Redmont Pump Station site is approximately 19,196 square feet in size and includes the pump station itself, the existing Redmont Reservoir, and on-site parking for an estimated two to three vehicles. The "footprint" of the existing pump station is approximately 625 square feet in size, and is approximately 20 feet high. Enclosed within the station, there are three electric water pumps having a maximum operating rate of 5,000 gallons per minute (gpm) combined, and one 425 horsepower emergency backup diesel engine powered pump with an estimated flow rate of 3,300 gpm. On average two pumps are operated simultaneously, and three pumps are typically operated during peak water demand periods. Four water pipelines connect to the existing station; each pipeline is 20 inches in diameter and has a maximum operating pressure of 160 pounds per square inch gauge (psig). One pipeline supplies water to the pump station from the existing Redmont Reservoir, one pipeline supplies water from Foothill Pump Station, and the remaining pipelines transport water to the Highway Highland and Apperson Tanks.

During the summer months when water demands are high, the water elevation of the Redmont Reservoir drops and the existing pump station does not function efficiently. Due to reduced efficiencies under these circumstances it requires excessive system manipulation to distribute water to the communities of Sunland and Tujunga. Additionally, due to the age of the existing pump station (59 years), it routinely requires an inordinate level of maintenance. An inspection in 1992 found that the reservoir liner and roof were in an insufficient condition. Although repairs were made, the inspection recommended that the reservoir be replaced entirely to ensure safety and reliability.

To correct the operational weaknesses and vulnerabilities of the existing Redmont Pump Station, the LADWP proposes to replace it. The partially buried reservoir will be replaced with a 468,000 gallon steel bolt-in tank, and the existing Redmont Pump Station will be replaced with a dual pressure zone pump station consisting of six electric motor drive pumps and one emergency internal combustion engine driven pump.

Project Objectives

The objective of the proposed Project is to replace the LADWP's aging water storage and pump facilities that have had maintenance and operational issues. The Redmont Tank would be replaced with a 468,000-gallon steel tank, and the existing Redmont Pump Station would be replaced with a dual pressure zone pump station. The proposed replacement would improve the water system reliability in the Sunland-Tujunga community and would reduce the facility's operations and maintenance cost. The new dual zone pump station would also support water delivery to a future 1960-foot tank and meet the fire demand requirements placed on the 1960-system by the proposed Canyon Hills Development project (i.e., Tract 61672).

Project Components

Under the proposed Project, the LADWP would:

- Construct and operate a new water pump station to replace the existing Redmont Pump Station using a dual pressure zone pumping system.
- Construct and operate a 468,000 gallon tank to replace the existing Redmont Reservoir.
- Install and maintain water connection pipelines on-site.

Potential Environmental Impacts

In accordance with Section 15126 of the CEQA Guidelines, the EIR will assess the physical changes to the environment that would likely result from construction and operation of the Redmont Pump Station and Tank Project, including direct, indirect, and cumulative impacts, as well as growth-inducing effects. In accordance with CEQA Guidelines Section 15063 (a), the LADWP has determined that an EIR will clearly be required to satisfy environmental review for the Redmont Pump Station and Tank Project, and therefore no Initial Study is required. The EIR will analyze all environmental resources required by CEQA, and will identify mitigation measures if necessary to reduce potentially significant impacts of the proposed Project. The EIR also will discuss alternatives to the proposed Project, including the no project alternative [CEQA Guidelines Section 15126.6 (e)]. The alternatives discussion in the EIR will evaluate alternatives considered as a means for lessening or avoiding any potentially significant environmental impacts of the proposed Project.

The environmental effects to be analyzed in detail in the EIR will include, but are not limited to, the following:

Air Quality

The proposed Project area is located in the South Coast Air Basin (SCAB). The primary agencies responsible for regulations to improve air quality in the SCAB are the U.S. Environmental Protection Agency (USEPA), the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). The EIR will analyze consistency with federal and State ambient air quality standards. Construction of the proposed Project has the potential to result in maximum daily on-site emissions that would exceed the SCAQMD Localized Significance Thresholds (LSTs) for PM10 and PM2.5. No operational impacts to air quality are anticipated. The EIR will estimate construction-related emissions and propose mitigation as needed to reduce potentially significant effects.

Noise

The EIR will analyze consistency with local noise ordinances. Potential noise and vibration from the Project would consist of two types: short-term generation from construction activities, and long-term (continuous and periodic) from operation and maintenance of the Project. Construction of the proposed Project has the potential to create a substantial temporary increase in ambient noise levels in the Project vicinity above levels existing without the Project. Maximum noise levels would likely not be continuous throughout the entire workday, but instead periodic and short-term. No operational impacts relating to noise are anticipated. The EIR will estimate construction-related noise, and evaluate the impact of the proposed Project as it relates to noise in the vicinity of the Project area.

Transportation and Traffic

Construction of the proposed Project has the potential to result in temporary, but significant impacts to traffic at certain intersections within the Project area. Temporary lane or road closures may be needed during specific construction phases (e.g., grading, concrete pours, demolition) in order to allow for proper site access and to ensure public safety. The frequency and length of the closures is anticipated to be minimal. On-street parking impacts are anticipated only when staging or access to the proposed project site occurs on Redmont Avenue, as that is the only street segment near the site with on-street parking. No operational impacts to transportation and traffic are anticipated. The EIR will evaluate the impact of the proposed Project on traffic and circulation in the vicinity of the proposed Project site and on local and regional roadways, and will propose mitigation as needed to reduce potentially significant effects.

The environmental effects to other resources included in Appendices F and G of the CEQA Guidelines will be considered in the EIR. The level of detail of the analysis will be commensurate with the significance of impacts as determined for each resource.

Public Review Period

The LADWP invites your comments on the scope and content of the EIR relevant to your agency's statutory responsibilities in connection with the proposed Project. Responsible and Trustee Agencies may need to use the EIR when considering permits or other discretionary approvals your agency may issue for the proposed Project. This NOP is being circulated for 30 days pursuant to CEQA guidelines.

Your comments must be received by 5:00 p.m. on April 16, 2016. Please indicate a contact name and return address in your comments, and submit your comments to:

Ms. Stephanie Eatinger
Environmental Planning and Assessment
Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Please check the LADWP project website page, http://www.ladwp.com/envnotices, for copies of this NOP.If you require additional information regarding this notice, please contact Ms. Stephanie Eatinger at (213) 367-0968 or Stephanie.Eatinger@ladwp.com.

Sincerely,

Charles C. Holloway

Charles C. Holloway
Manager of Environmental Planning and Assessment

DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF TRANSPORTATION PLANNING
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Serious Drought.
Serious drought.
Help save water!

April 6, 2016

Ms. Stephanie Eatinger
Los Angeles Dept. of Water and Power
111 North Hope Street, Rm. 1044
Los Angeles, CA 90012

Re: Redmont Pump Station
SCH# 2016031052
IGR# 160345 -NOP

Dear Ms. Eatinger:

The California Department of Transportation (Caltrans) has reviewed the Notice of Preparation (NOP) prepared for the proposed replacement of the LADWP's existing Redmont Pump Station located at 10501 Redmont Avenue. The purpose of the project is to correct the operational weaknesses and vulnerabilities of the existing Station. The partially buried reservoir will be replaced with a 468,000 gallon steel bolt-in- tank, and the existing pump station will be replaced with a dual pressure zone pump station.

Caltrans does not expect project approval to result into a direct impact to any State transportation facility. However, if some of the proposed work takes place within the State's Right of Way, an encroachment permit will be required and environmental concerns must be adequately addressed.

For specific details on Caltrans Encroachment Permits procedure, please refer to Caltrans Encroachment Permits Manual. The latest edition of the Manual is available on the web site: http://www.dot.ca.gov/hq/traffops/developerserv/permits

Storm water run-off is a sensitive issue for Los Angeles County. Please be mindful that projects should be designed to discharge clean run-off water. Discharge of storm water run-off is not permitted onto State Highway facilities without a storm water management plan.

In addition, please be reminded that transportation of heavy construction equipment, material, or other special equipment which requires the use of oversized-transport vehicles on State highways, will require a Caltrans transportation permit. Caltrans recommends that large size truck trips be limited to off-peak commute hours.

If you have any questions regarding these comments, please contact project coordinator Rick Holland, at (213) 897-4230 and refer to IGR/CEQA No. 160345RH.

Sincerely,

Dianna Watson

DIANNA WATSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
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Edmund G. Brown Jr., Governor

March 22, 2016

Stephanie Eatinger
Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

sent via e-mail:
Stephanie.Eatinger@ladwp.com
Number of pages: 4

RE: SCH# 2016031052 Redmont Pump Station and Tank Project, City of Los Angeles, Los Angeles County, California

Dear Ms. Eatinger:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an 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 Section 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, § 15064 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 with the area of project 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 or a notice of negative declaration or 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.**

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 sections 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 section 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 section 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 section 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 section 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 nonfederally 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 sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 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 section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

This process should be documented in the Cultural Resources section of your environmental document.

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 section 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 sections 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 been 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, section 15064.5(f) (CEQA Guidelines section 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 section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5,

subdivisions (d) and (e) (CEQA Guidelines section 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.

Please contact me if you need any additional information at gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

cc: State Clearinghouse

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Air Quality Management District
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(909) 396-2000 • www.aqmd.gov

April 15, 2016

Ms. Stephanie Eatinger
Environmental Planning and Assessment
Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Notice of Preparation of an Environmental Impact Report (EIR) for the
Redmont Pump Station and Tank Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft EIR. Please send the SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis
The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). SCAQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the 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 mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), 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, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. 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.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies.
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact Sam Wang, Air Quality Specialist by email at swang1@aqmd.gov or by phone at (909) 396-2649.

Sincerely,

Jillian Wong

Jillian Wong, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

LAC160318-06
Control Number

From:	Pierrette K. Maule
To:	Eatinger, Stephanie
Cc:	Pierrette K. Maule
Subject:	Redmont Pump Station and Tank Project March 2016 Notice
Date:	Monday, March 28, 2016 8:52:48 AM
Attachments:	image002.png pump station march 2016.pdf
Importance:	High

Dear Ms. Eatinger:

We own and occupy the single family residence at 10508 Redmont Ave, which is directly across the street from the Redmont Pump Station. Our family has resided at Redmont for 26 years.

In connection with the notice of preparation of environmental impact report dated March 17, 2016 (copy attached), we have the following questions and concerns mostly regarding noise and appearance:

1. Please provide the projected time frame of commencement of construction and completion of entire project.

2. Please advise if the tank will remain below the ground and/or whether or not the station or the tank will increase in height.

   Is consideration being given whether or not the pump station's appearance will blend in with the surrounding community?

   It is very important to us is whether or not the trees and shrubs surrounding the perimeter of the tank, which obscure the tank and the fence, remain and are not cut down. Would you please respond what plans are being made in this regard?

3. Will the report of the noise level from the operation of the pump station in the long term be sent to the community residents?

Thank you in advance for assisting us. We wait to hear from you.

L&K
Lamb and Kawakami LLP

Pierrette K Maule
Paralegal
333 S. Grand Avenue, Suite 4200
Los Angeles, CA 90071
Direct Dial: (213) 630-5545
Facsimile: (213) 630-5555
Website: www.lamb-kawakami.com
Click here to send files larger than 50 MB

"Simplicity is beauty; I like things neat, organized, perfect, fast, and finished."

Adding value through experience and common sense

APPENDIX B: Protected Tree Report

Protected Tree Report:
Tree Survey, Encroachment, Protection and Mitigation

LADWP Redmont Station
10501 N. Redmont Avenue
Tujunga, CA 91042

Service Request # 1-22118591

Prepared For: LADWP
c/o Stephanie Eatinger
Tel: (213) 367-0968
Email: Stephanie.Eatinger@ladwp.com

Prepared By: Michael Crane
Arbor Care, Inc.
P.O. Box 51122
Pasadena, CA 91115
Tel: (626) 737-4007
Fax: (626) 737-4007
Email: info@arborcareinc.net

July 2015

Table of Contents

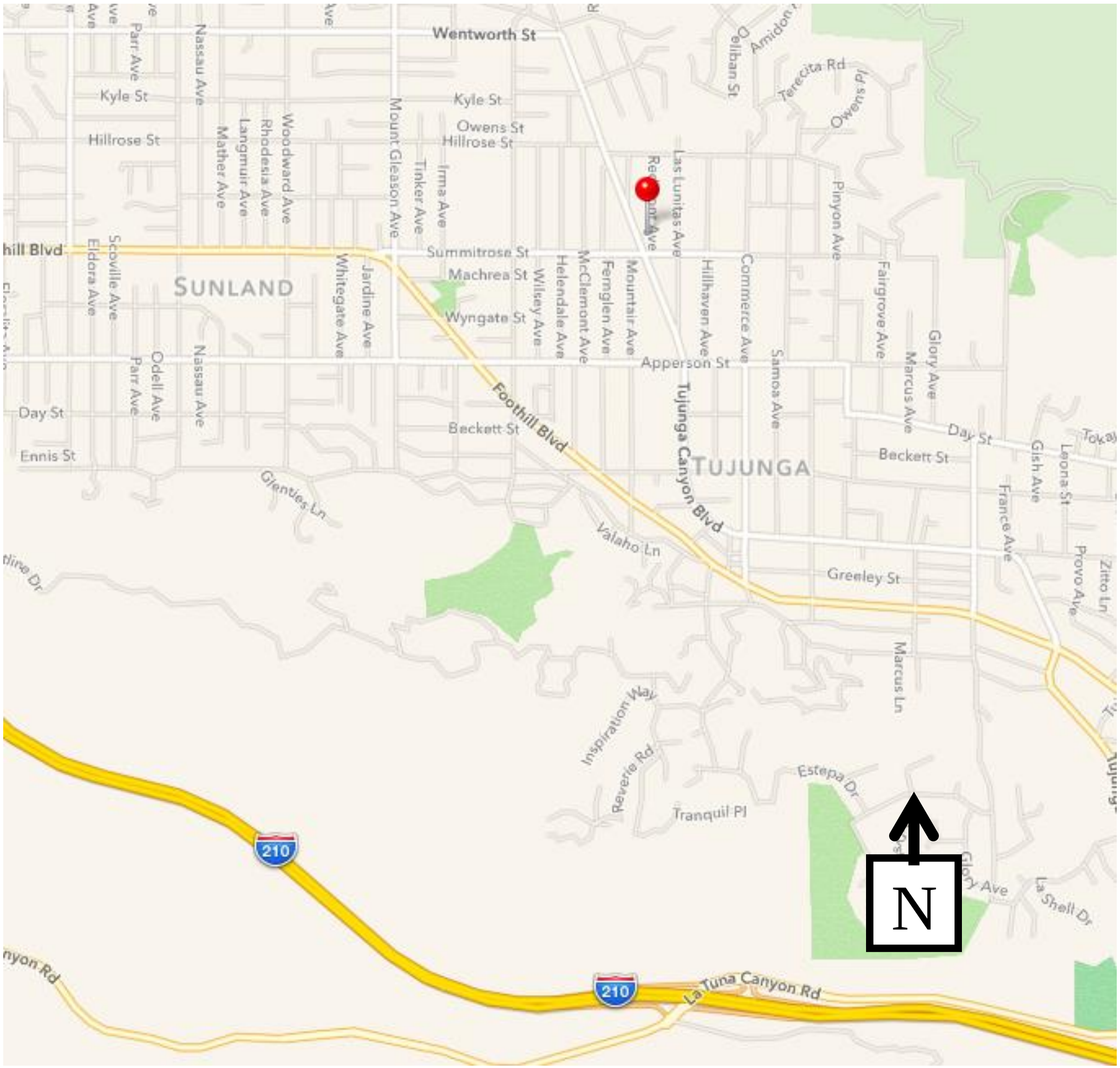
SUMMARY OF DATA

Total number of healthy Protected Trees on property including street trees located in the adjacent public right-of-way area	2
Total number of off-site Protected Trees with canopies (driplines) encroaching onto the property	0
Total number of diseased/hazardous Protected Trees on site proposed for removal	0
Total number of healthy Protected Trees to be preserved	0
Total number of healthy Protected Trees to be removed	2
Total number of Protected Trees that will be preserved, which will be impacted by construction within dripline (encroached)	0
Total number of Protected Trees with no dripline encroachments	0
Total number of proposed mitigation trees	8

BACKGROUND & PURPOSE

I was retained by the Project Engineer, Ms. Stephanie Eatinger, of Los Angeles Department of Water and Power (LADWP). to be the consulting arborist for the planned renovation of the Redmont Pump Station located at 10501 Redmont Ave., Tujunga. There are Protected Trees located on the property. The proposed construction will impact these trees and this report will serve to both notify the City of Los Angeles Bureau of Street Services, Urban Forestry Division of the extent of the potential impacts. As part of my preparation for this report I made a site visit to the property on June 18, 2015. I met with Ms. Eatinger at that time to view and discuss the proposed construction plans as they relate to the encroachments on the Protected Trees.

PROJECT LOCATION, DESCRIPTION & TREE ORDINANCE



The property is located north of Foothill Blvd. Thomas Brothers Map Page 503, Grid – J3. Above map courtesy of Apple Maps.

The property consists of a water pumping and storage facility owned and operated by LADWP. The facility is in need of repair. Part of the project will be to build a new underground water storage tank, which will require excavation to the perimeter of the property.

The landscape consists of a row of various trees and shrubs along the perimeter. Most of the trees on the property, including the Protected Trees appear to be in fair health and structural conditions. The existing trees and shrubs will be removed to accommodate the required excavation for the installation of the pump station's new underground infrastructure. A new perimeter planting will be installed.

This aerial view (courtesy of Apple Maps) has been illustrated to show the approximate boundary lines (orange). The locations of the Protected Trees are numbered in yellow.

Protected Tree Definitions

City of Los Angeles Protected Trees

SEC. 46.01. DEFINITION. (Amended by Ord. No. 177,404, Eff. 4/23/06.)
"PROTECTED TREE" means any of the following Southern California native tree species which measures four inches or more in cumulative diameter, four and one half feet above the ground level at the base of the tree:

(a) Oak tree including Valley Oak (*Quercus lobata*) and California Live Oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the Scrub Oak (*Quercus dumosa*).

(b) Southern California Black Walnut (*Juglans californica var. californica*).

(c) Western Sycamore (*Platanus racemosa*).

(d) California Bay (*Umbellularia californica*).

This definition shall not include any tree grown or held for sale by a licensed nursery, or trees planted or grown as a part of a tree planting program.

FIELD OBSERVATIONS & DESIGN ANALYSIS

Refer to Site Plan located in pocket at back of this report, Tree Characteristics and Health Matrix on page 6, Construction Impacts Matrix on page 7 and Photos in Appendix A, page 9.

Analysis regarding rootzone impacts are based on the type of impact, e.g, soil compaction, grading, and excavation; as well as the distance from the trunk that the impacts will occur. It is commonly accepted among professional arborists that a distance equal to three times a trunks diameter contains the structural roots responsible for keeping the tree upright. This critical rootzone area is defined as the root plate. Beyond the root plate the roots typically taper off into smaller, less significant sizes. These smaller roots are usually two inches in diameter or smaller and make up the rootmass responsible for water and nutrient uptake. Although roots of these sizes can be cut without significantly impacting health and stability it is advised that no more than 30 percent of the rootmass within the dripline is severed. The bulk of the rootmass is located within the top three feet of soil and root growth slows or halts when soil bulk density exceeds 1.60 g/cm^3 for most soils. More information regarding rootzone impacts is provided in the Excavation and Root Pruning section of the Construction Impact Guidelines, Appendix B.

Tree #1 – 32" Coast Live Oak: This multi-trunked specimen, with two primary leaders, is located at the northwest corner of the property. It appears to be a naturally-occurring specimen and not one that was planted as part of a landscape design or tree planting program. Required overexcavation for the installation of the new underground water storage tank will encroach into the area where the tree is located. It will be removed.

Tree #2 – 4" coast live oak: This young tree is located on the west perimeter side of the property. It appears to be a naturally-occurring specimen and not one that was planted as part of a landscape design or tree planting program. Required overexcavation for the installation of the new underground water storage tank will encroach into the area where the tree is located. The tree will be removed. Although a tree this size can be relatively easily boxed and relocated, this tree is located within a couple feet of a very large pine tree, and would it be difficult to dig a sufficient rootball among the large adjacent roots of the pine.

This chart includes all Protected Trees that are either located or encroaching on the property. It provides physical data collected from field observations. The trees have been surveyed and numbers correspond to the Site Plan included in this report. Tree numbers with an "os" indicate that the specimen is located off-site and a portion of the canopy extends over the subject property.

TREE CHARACTERISTICS & HEALTH MATRIX

CHARACTERISTICS													HEALTH											
		SIZE			FORM		CROWN CLASS			AGE CLASS			FOLIAGE DENSITY			SHOOT GROWTH			WOUND DEFENSE			VIGOR CLASS		
TREE NUMBER	SPECIES	TRUNK DIAMETER (INCHES)	APPROXIMATE HEIGHT (FEET)	AVERAGE SPREAD (FEET)	SYMMETRIC	ASYMMETRIC	DOMINANT	CO-DOMINANT	SUPPRESED	YOUNG	MATURE	OVERMATURE	NORMAL	SPARSE	DISEASE / INSECT	AVERAGE	POOR	TWIG DIEBACK	NORMAL	POOR	WOOD DECAY	GOOD	POOR	DISEASED/HAZARDOUS
1	Quercus agrifolia	32*	40	40		X		X			X		X			X			X		X	X		
2	Quercus agrifolia	4	10	10	X			X		X			X			X			X			X		

* Multi-trunked specimen

This section includes all Protected Trees that are either located or encroaching on the property. It provides data collected from the analysis of construction plans. The tree has been surveyed and numbers correspond to the Site Plan included in this report. Tree numbers with an “os” indicate that the specimen is located off-site and a portion of the canopy extends over the subject property.

CONSTRUCTION IMPACTS MATRIX

	TREE SPECIES	SIZE & CONDITION		ROOTZONE IMPACTS								REQUIRED PRUNING OF LIVE CROWN				
TREE NUMBER	Protected Trees: • Any California native oak species (*Quercus*) • *Juglans califonica* So. Cal. Black Walnut • *Umbellularia californica* California Bay • *Platanus racemosa* Western Sycamore • Any tree located in the public right-of-way	TRUNK DIAMETER (DBH)	CONDITION	Sides of tree where excavation (six inches or deeper) will occur	Sides where excavation impacts are buffered by existing infrastructure	**Excavation will remain a distance of at least 10 X DBH from trunk**	**Excavation will remain a distance of at least 5 X DBH from trunk**	**Excavation will remain a distance of at least 3 X DBH from the trunk**	**Removal or Relocation**	Additional light grading less than 6" deep to occur within dripline	Estimated % of total root mass to be removed or severed	**No Pruning Required**	**Pruning not to exceed 10%**	**Pruning not to exceed 30%**	Number of cuts larger than 3" in diameter required	Diameter of cuts for branch removals
1	Quercus agrifolia	32	Fair	All	-					-	-				-	-
2	Quercus agrifolia	4	Fair	All	-					-	-				-	-

FINDINGS

The required excavation for the replacement of the underground water storage tank will severely encroach and impact the two Protected Trees. Both will be removed and replaced.

RECOMMENDATIONS

Because of the narrow planting space along the perimeter of the property, and the concern of damage to the underground tank by encroaching roots of large trees, the site is not appropriate for planting large-maturing trees such as California native oaks, sycamores or California Bay. Southern California walnut is an appropriate size tree to plant, but it is structurally unreliable, and has a relatively short lifespan, so is not a good choice for planting in an area like this where cars pass and park. Therefore, no Protected species trees are planned to be planted on the property. Mitigation trees will be purchased by LADWP and delivered to Urban Forestry for planting in public areas elsewhere in the city.

MITIGATION

Standard mitigation is 4:1 for Protected Trees. The recommended mitigation is therefore eight nursery grown 24" box, coast live oak (Quercus agrifolia) trees. Trees shall be delivered to a designated Urban Forestry Tree Nursery. Urban Forestry shall determine the actual mitigation and location of delivery for trees. A permit fee will apply as well.

APPENDIX A – Photos

ABOVE: Looking south on Topanga Canyon Blvd. Tree #1 is located at the northwest corner of the property and is codominant with a nearby Aleppo pine tree.
BELOW: Looking northwest from inside the facility at Tree #1.

ABOVE: Tree #2 is a young shrubby-looking specimen located under a large Aleppo pine on the west perimeter side of the property. RIGHT: It is just large enough to qualify as a Protected Tree, at a fraction over four inches in diameter.

AUTHOR'S CURRENT CREDENTIALS

ISA QUALIFICATIONS

International Society of Arboriculture™
Tree Risk Assessment Qualification

Michael J Crane

Having successfully completed the requirements established by the Certification Board of the International Society of Arboriculture,™ the above named is hereby recognized as holding the ISA Tree Risk Assessment Qualification.

Chair, Certification Board
International Society of Arboriculture

Jim Skiera, Executive Director
International Society of Arboriculture

December 31, 2015
Expiration Date

The American Society of Consulting Arborists

in recognition of fulfillment of the requirements for Registered Consulting Arborist status

confers upon

Michael Crane, RCA #440

Registered Membership
January 18, 2006

President

ASCA
AMERICAN SOCIETY of CONSULTING ARBORISTS

Executive Director

DEPARTMENT OF PESTICIDE REGULATION
LICENSING/CERTIFICATION PROGRAM

AGRICULTURAL PEST CONTROL ADVISER LICENSE

DATE OF ISSUE
01/01/2013

VALID THROUGH
12/31/2014

PCA 75893

ABCDEFG

MICHAEL J CRANE
PO BOX 51122
PASADENA CA 91115

International Society of Arboriculture
Board-Certified Master Arborist

Michael J. Crane

Having successfully completed the requirements set by the Arborist Certification Board of the International Society of Arboriculture, the above named is hereby recognized as an ISA Board-Certified Master Arborist

Jim Skiera, Executive Director
International Society of Arboriculture

WE-6643B	Nov 9, 2006	Dec 31, 2012
Certification Number	Certified Since	Expiration Date

CERTIFICATION OF PERFORMANCE

I, Michael Crane, certify that:

- I have personally inspected the tree(s) and the property referred to in this report and have stated my findings accurately.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party not upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture. I have been involved in the field of Horticulture in a full-time capacity for a period of more than 15 years.

Signed: ____________________________

Registered Consulting Arborist #440; American Society of Consulting Arborist
Board Certified Master Arborist #WE 6643B; International Society of Arboriculture
Licensed California Agricultural Pest Control Adviser #AA08269

July 14, 2015
Date: ________________________________

APPENDIX C: Emissions Calculations

Redmont Pump Station Construction

Emission Calculation Assumptions

General Assumptions

1) Work occurs 5 days a week, 7 am to 3:30 pm, excepting major holidays (average 22/23 days/month).
2) The construction subphase schedule was provided by LADWP.

Onroad Equipment Emission Calculations Assumptions

1) CARB EMFAC model emission factors from EMFAC2014 for the South Coast Air Basin were derived for three vehicles classes they list (passenger, delivery, and heavy-heavy duty truck)
2) Heavy haul trip estimates are based on LADWP estimates of bulk materials and finished goods trips by construction subphase with trips added for miscellaneous needs.
3) Trip distances assume finished goods are driven from the Port of LA/LB and buck goods come from the Sunland area of the SF Valley.

Offroad Equipment Emission Calculation Assumptions

1) Off-road vehicle emissions factors are fleet average values for the years of construction based on the output of the latest CARB OFFROAD model.
2) Gasoline equipment emission factors are estimated based on the rate in g/hp-hr provided in the Gasoline Equipment Emission Factor Rates table for EPA/ARB compliant four-cycle engines.

Fugitive Dust Emission Calculations Assumptions

1) Fugitive dust emissions are estimated using USEPA AP-42 and the SCAQMD CEQA Handbook.
2) Unpaved distances are minimal for this project and only include access/egress from the site or construction laydown/parking area. Water truck also has minimal but greater daily unpaved road travel assumed.
3) Total area available for wind erosion is assumed to be 0.2 acres for 18 months.

Greenhouse Gas Emission Calculations Assumptions

1) GHG emissions are estimated based on guideline and emission factors provided by The Climate Registry General Reporting Protocol
2) For diesel-fueled equipment, fuel consumption rate of 0.38 lbs/bhp-hr and density of 6.8 lbs/gallon are used.
3) For gasoline-fueled equipment, fuel consumption rate of 0.47 lbs/bhp-hr and density of 6.0 lbs/gallon are used.

Localized Significance Threshold (LST) Evaluation

1) The site is in SCAQMD defined Source Receptor Area (SRA) 8, and the site is less than an acre with directly adjacent residences, so the SCAQMD LST tables for a 1 acre site with a distance to receptor of 25 meters were used in the LST analysis.
2) For the LST analysis all off-road equipment emissionsm water truck emissions, and related fugitive dust emissions are assumed to be on-site.

Redmont Pump Station Construction Schedule/Equipment/Trip Assumptions

Number	Subphase Name	Start	End	Days	Overlaps
1A	Reservoir Demo	8/9/2017	8/24/2017	12	none
1B	Grading and Excavation	8/25/2017	9/7/2017	10	none
1C	Prepare Subgrade	9/8/2017	9/14/2017	5	none
1D	Install undr Elect Conduit	9/15/2017	10/12/2017	20	1E
1E	Install undr mech piping	9/15/2017	10/12/2017	20	1D
1F	Form and Pour PS Foundation	10/13/2017	10/26/2017	10	none
1G	Form and Pour IS and Elec Pad	10/27/2017	11/9/2017	10	1H
1H	Building Form and Pour	10/27/2017	1/18/2018	60	none
1I	Roof System	1/19/2018	2/15/2018	20	none
1J	Piping and Pump Installation	2/16/2018	3/15/2018	20	1K, 1L, 1N
1K	Piping to Tank	2/16/2018	3/1/2018	10	1J, 1L, 1N
1L	Elect and Mech Equip.	2/16/2018	3/29/2018	30	1J, 1K, 1M, 1N, 1O
1M	Surge Tank System	3/16/2018	4/12/2018	20	1L, 1N, 1O
1N	Install IS/Switchgear/MCC/UPS	2/16/2018	4/12/2018	40	1J, 1K, 1L, 1M, 1O
1O	Install Elec Wiring	3/16/2018	4/12/2018	20	1L, 1M, 1N
1P	Testing and Commissioning	4/13/2018	7/4/2018	59	none
			Total	236	

Number	Subphase Name	Start	End	Days	Overlaps
2A	Demo Fuel Storage Tank	7/5/2018	7/25/2018	15	2B
2B	Demo Exist PS Building	7/5/2018	7/25/2018	15	2A
2C	Grading and Excavation	7/26/2018	8/8/2018	10	none
2D	Prepare Subgrade	8/9/2018	8/15/2018	5	none
2E	Form and Pour Tank Foundation	8/16/2018	9/5/2018	15	none
2F	Erect and Weld Tank	9/6/2018	12/26/2018	80	none
2G	Install Electrical and Comm Conduit	12/27/2018	1/16/2019	15	2J
2H	Clean and Paint Interior	1/17/2019	1/30/2019	10	none
2I	Install Mech Equip.	1/31/2019	2/20/2019	15	2K
2J	Install Piping Connections	12/27/2018	1/16/2019	15	2G
2K	Install Electric Equip.	1/31/2019	2/27/2019	20	2I
2L	Testing and Commissioning	2/28/2019	5/13/2019	53	none
2M	Final Civil (grading, paving, landscape)	5/14/2019	8/5/2019	60	none
				283	

Pre-Construction Phase

Number	Subphase Name	Start	End	Days	Overlaps
i	Decommissioning Tank	6/19/2017	6/27/2017	7	none
ii	Mobilization	6/28/2017	8/8/2017	30	none

Redmont Pump Station Construction

Construction - Mitigated Emissions Summary

Maximum Daily Emissions (lbs/day)

2017 - Phase 1B

	VOC	CO	NOx	SOx	PM10	PM2.5
Onroad Vehicles	0.29	1.88	4.55	0.01	0.13	0.07
Offroad Equipment	1.42	9.23	18.04	0.02	0.83	0.77
Fugitive Dust	---	---	---	---	12.53	4.00
Total	1.71	11.11	22.59	0.03	13.50	4.84
SCAQMD Significance Thresholds	75	550	100	150	150	55
Exceeds Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

Maximum Daily Emissions (lbs/day)

2018 - Phases 2J through 2O (or Phase 2C for PM10/PM2.5 and Phase 1P for VOC)

	VOC	CO	NOx	SOx	PM10	PM2.5
Onroad Vehicles	0.12	6.60	7.69	0.03	0.03	0.02
Offroad Equipment	0.04	20.66	22.46	0.03	0.94	0.87
Painting	4.41	---	---	---	---	---
Fugitive Dust	---	---	---	---	9.55	3.30
Total	4.57	27.27	30.14	0.06	10.53	4.19
SCAQMD Significance Thresholds	75	550	100	150	150	55
Exceeds Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

Maximum Daily Emissions (lbs/day)

2019 - Phase 2M (or Phase 2H for VOC)

	VOC	CO	NOx	SOx	PM10	PM2.5
Onroad Vehicles	0.06	1.18	1.02	0.01	0.05	0.02
Offroad Equipment	0.00	10.71	15.98	0.02	0.75	0.69
Painting	8.14	---	---	---	---	---
Fugitive Dust	---	---	---	---	8.19	3.22
Total	8.21	11.89	17.01	0.02	8.99	3.94
SCAQMD Significance Thresholds	75	550	100	150	150	55
Exceeds Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

Total Emissions (tons)

	VOC	CO	NOx	SOx	PM10	PM2.5
Onroad Vehicles	0.05	0.42	0.17	0.00	0.01	0.01
Offroad Equipment	0.09	0.85	0.98	0.00	0.05	0.04
Painting	0.04	---	---	---	---	---
Fugitive Dust	---	---	---	---	0.96	0.16
Total	0.19	1.27	1.16	0.00	1.03	0.21

Total GHG Emissions (Tons)

	CO2	N2O	CH4	CO2e
Onroad Vehicles	140.04	0.00	0.00	140.52
Offroad Equipment	127.14	0.01	0.00	128.30
Total	267.19	0.01	0.00	268.82
Amortized Emissions (30 Year Project Life)				8.96
SCAQMD Significance Thresholds				10,000
Exceeds Thresholds?				*No*

Maximum Daily LST Emissions (lbs/day)

2017 - Phase 1B

	CO	NOx	PM10	PM2.5
Onroad Vehicles	0.02	0.14	0.00	0.00
Offroad Equipment	9.23	18.04	0.83	0.77
Fugitive Dust	---	---	9.32	3.22
Total	9.25	18.18	10.16	3.99
SCAQMD Significance Thresholds	535	69	4	3
Exceeds Thresholds?	*No*	*No*	*Yes*	*Yes*

Maximum Daily LST Emissions (lbs/day)

2018 - Phases 2J through 2O (or Phase 2C for PM10/PM2.5)

	CO	NOx	PM10	PM2.5
Onroad Vehicles	0.02	0.14	0.00	0.00
Offroad Equipment	20.66	22.46	0.94	0.87
Fugitive Dust	---	---	9.00	3.17
Total	20.69	22.60	9.94	4.04
SCAQMD Significance Thresholds	535	69	4	3
Exceeds Thresholds?	*No*	*No*	*Yes*	*Yes*

Maximum Daily LST Emissions (lbs/day)

2019 - Phase 2M

	CO	NOx	PM10	PM2.5
Onroad Vehicles	0.02	0.13	0.00	0.00
Offroad Equipment	10.71	15.98	0.75	0.69
Fugitive Dust	---	---	7.08	2.95
Total	10.73	16.11	7.84	3.64
SCAQMD Significance Thresholds	535	69	4	3
Exceeds Thresholds?	*No*	*No*	*Yes*	*Yes*

Redmont Pump Station Construction

Onroad Equipment Use (Phase 1)

							Total		Unpaved		Paved	
#	Subphase Name	Vehicle Type	Total VMT/Trip	Unpaved VMT/Trip	Trips/Day	Total Trips	VMT/Day	Total VMT	VMT/Day	Total VMT	VMT/Day	Total VMT
i	Decommissioning Tank	Passenger	30	0.03	6	42	180	1,260	0	1	180	1,259
		Delivery	30	0.03	1	7	30	210	0	0	30	210
		Heavy Truck	0	0	0	0	0	0	0	0	0	0
ii	Mobilization	Passenger	30	0.03	6	90	180	2,700	0	3	180	2,697
		Delivery	30	0.03	0	0	0	0	0	0	0	0
		Heavy Truck	30	0.03	2	12	60	360	0	0	60	360
1A	Reservoir Demo	Passenger	30	0.03	6	72	180	2,160	0	2	180	2,158
		Delivery	30	0.03	1	12	30	360	0	0	30	360
		Heavy Truck	15	0.03	6	49	90	735	0	1	90	734
1B	Grading and Excavation	Passenger	30	0.03	6	60	180	1,800	0	2	180	1,798
		Delivery	30	0.03	1	10	30	300	0	0	30	300
		Heavy Truck	15	0.03	20	134	300	2,010	1	4	299	2,006
1C	Prepare Subgrade	Passenger	30	0.03	8	40	240	1,200	0	1	240	1,199
		Delivery	30	0.03	1	5	30	150	0	0	30	150
		Heavy Truck	15	0.03	5	35	75	525	0	1	75	524
1D	Install undr Elect Conduit	Passenger	30	0.03	6	120	180	3,600	0	4	180	3,596
		Delivery	30	0.03	1	20	30	600	0	1	30	599
		Heavy Truck	0	0	0	0	0	0	0	0	0	0
1E	Install undr mech piping	Passenger	30	0.03	8	160	240	4,800	0	5	240	4,795
		Delivery	30	0.03	1	5	30	150	0	0	30	150
		Heavy Truck	90	0.01	1	1	90	90	0	0	90	90
1F	Form and Pour PS Foundation	Passenger	30	0.03	8	80	240	2,400	0	2	240	2,398
		Delivery	30	0.03	1	10	30	300	0	0	30	300
		Heavy Truck	15	0.03	10	35	150	525	0	1	150	524
1G	Form and Pour IS and Elec Pad	Passenger	30	0.03	6	60	180	1,800	0	2	180	1,798
		Delivery	30	0.03	1	3	30	90	0	0	30	90
		Heavy Truck	15	0.03	3	6	45	90	0	0	45	90
1H	Building Form and Pour	Passenger	30	0.03	10	600	300	18,000	0	18	300	17,982
		Delivery	30	0.03	1	60	30	1,800	0	2	30	1,798
		Heavy Truck	15	0.03	10	50	150	750	0	2	150	749
1I	Roof System	Passenger	30	0.03	5	100	150	3,000	0	3	150	2,997
		Delivery	30	0.03	1	10	30	300	0	0	30	300
		Heavy Truck	90	0.01	1	5	90	450	0	0	90	450
1J	Piping and Pump Installation	Passenger	30	0.03	10	200	300	6,000	0	6	300	5,994
		Delivery	30	0.03	2	40	60	1,200	0	1	60	1,199
		Heavy Truck	90	0.01	1	10	90	900	0	0	90	900
1K	Piping to Tank	Passenger	30	0.03	8	80	240	2,400	0	2	240	2,398
		Delivery	30	0.03	1	5	30	150	0	0	30	150
		Heavy Truck	90	0.01	1	1	90	90	0	0	90	90
1L	Elect and Mech Equip.	Passenger	30	0.03	8	240	240	7,200	0	7	240	7,193
		Delivery	30	0.03	1	30	30	900	0	1	30	899
		Heavy Truck	90	0.01	1	5	90	450	0	0	90	450
1M	Surge Tank System	Passenger	30	0.03	6	120	180	3,600	0	4	180	3,596
		Delivery	30	0.03	1	15	30	450	0	0	30	450
		Heavy Truck	90	0.01	1	5	90	450	0	0	90	450
1N	Install IS/Switchgear/MCC/UPS	Passenger	30	0.03	7	280	210	8,400	0	8	210	8,392
		Delivery	30	0.03	1	40	30	1,200	0	1	30	1,199
		Heavy Truck	90	0.01	1	3	90	270	0	0	90	270
1O	Install Elec Wiring	Passenger	30	0.03	6	120	180	3,600	0	4	180	3,596
		Delivery	30	0.03	1	20	30	600	0	1	30	599
		Heavy Truck	90	0.01	1	2	90	180	0	0	90	180
1P	Testing and Commissioning	Passenger	30	0.03	8	472	240	14,160	0	14	240	14,146
		Delivery	30	0.03	1	59	30	1,770	0	2	30	1,768
		Heavy Truck	0	0	0	0	0	0	0	0	0	0
	Daily Needs	Passenger	30	0.1	2	472	60	14,160	0	47	60	14,113
		Delivery	30	0.1	1	236	30	7,080	0	24	30	7,056
		Heavy Truck	10	2	1	236	10	2,360	2	472	8	1,888

Redmont Pump Station Construction

Onroad Equipment Use (Phase 2)

							Total		Unpaved		Paved	
		Onroad Equipm	Total VMT/Trip	Unpaved VMT/Trip	Trips/Day	Total Trips	VMT/Day	Total VMT	VMT/Day	Total VMT	VMT/Day	Total VMT
2A	Demo Fuel Storage Tank	Passenger	30	0.1	6	90	180	2,700	1	9	179	2,691
		Delivery	30	0.03	1	15	30	450	0	0	30	450
		Heavy Truck	90	0.01	2	10	180	900	0	0	180	900
2B	Demo Exist PS Building	Passenger	30	0.03	8	120	240	3,600	0	4	240	3,596
		Delivery	0	0	0	0	0	0	0	0	0	0
		Heavy Truck	15	0.01	5	45	75	675	0	0	75	675
2C	Grading and Excavation	Passenger	30	0.03	5	50	150	1,500	0	2	150	1,499
		Delivery	0	0	0	0	0	0	0	0	0	0
		Heavy Truck	15	0.03	1	4	15	60	0	0	15	60
2D	Prepare Subgrade	Passenger	30	0.03	4	20	120	600	0	1	120	599
		Delivery	30	0.03	1	5	30	150	0	0	30	150
		Heavy Truck	0	0	0	0	0	0	0	0	0	0
2E	Form and Pour Tank Foundation	Passenger	30	0.03	8	120	240	3,600	0	4	240	3,596
		Delivery	30	0.03	1	15	30	450	0	0	30	450
		Heavy Truck	15	0.01	6	13	90	195	0	0	90	195
2F	Erect and Weld Tank	Passenger	30	0.03	7	560	210	16,800	0	17	210	16,783
		Delivery	30	0.03	2	160	60	4,800	0	5	60	4,795
		Heavy Truck	90	0.01	1	5	90	450	0	0	90	450
2G	Install Electrical and Comm Conduit	Passenger	30	0.03	6	90	180	2,700	0	3	180	2,697
		Delivery	30	0.03	1	15	30	450	0	0	30	450
		Heavy Truck	0	0	0	0	0	0	0	0	0	0
2H	Clean and Paint Interior	Passenger	30	0.03	4	40	120	1,200	0	1	120	1,199
		Delivery	30	0.03	1	10	30	300	0	0	30	300
		Heavy Truck	0	0	0	0	0	0	0	0	0	0
2I	Install Mech Equip.	Passenger	30	0.03	7	105	210	3,150	0	3	210	3,147
		Delivery	30	0.03	1	15	30	450	0	0	30	450
		Heavy Truck	90	0.01	1	5	90	450	0	0	90	450
2J	Install Piping Connections	Passenger	30	0.03	7	105	210	3,150	0	3	210	3,147
		Delivery	0	0	0	0	0	0	0	0	0	0
		Heavy Truck	90	0.01	1	2	90	180	0	0	90	180
2K	Install Electric Equip.	Passenger	30	0.03	6	120	180	3,600	0	4	180	3,596
		Delivery	30	0.03	1	20	30	600	0	1	30	599
		Heavy Truck	90	0.01	1	1	90	90	0	0	90	90
2L	Testing and Commissioning	Passenger	30	0.03	7	350	210	10,500	0	11	210	10,490
		Delivery	30	0.03	1	50	30	1,500	0	2	30	1,499
		Heavy Truck	0	0	0	0	0	0	0	0	0	0
2M	Final Civil (grading, paving, landscape)	Passenger	30	0.03	6	300	180	9,000	0	9	180	8,991
		Delivery	30	0.03	1	50	30	1,500	0	2	30	1,499
		Heavy Truck	15	0.01	4	30	60	450	0	0	60	450
	Daily Needs	Passenger	30	0.1	2	566	60	16,980	0	57	60	16,923
		Delivery	30	0.1	1	283	30	8,490	0	28	30	8,462
		Heavy Truck	10	1	1	283	10	2,830	1	283	9	2,547

Redmont Pump Station Construction

Offroad Equipment Use (Phase 1)

		Offroad Equipment	HP	Model	Quantity	Hr/day	Days
i	Decommissioning Tank	None					
ii	Mobilization	Gradall Forklift	130	544D	1	2	15
		Wood Chipper	85	BC1200XL	1	4	2
		Chainsaw	4	Stihl	2	4	2
1A	Reservoir Demo	Excavator w/Hoe Ram	153	320E	1	8	8
		Gradall Forklift	130	544D	1	4	8
		Backhoe/Loader	105	430E	1	8	8
1B	Grading and Excavation	Dozer	238	D7	1	8	6
		Skip Loader	73	210LE	1	6	6
		Roller	49	CB34B	1	6	6
		Loader	148	926M	1	6	8
1C	Prepare Subgrade	Excavator	153	320E	1	6	2
		Backhoe/Loader	105	430E	1	4	4
1D	Install undr Elect Conduit	Gradall Forklift	130	544D	1	2	15
		Generator	20	--	1	4	15
		Backhoe/Loader	105	430E	1	4	15
1E	Install undr mech piping	Gradall Forklift	130	544D	1	2	15
		Generator	20	--	1	4	15
		Trench Compactor	21	RTK82 SC3	1	4	15
		Backhoe/Loader	105	430E	1	4	15
1F	Form and Pour PS Foundation	Concrete Trowel Mach.	44	MSP450A	1	4	4
1G	Form and Pour IS and Elec Pad	Concrete Trowel Mach.	44	MSP450A	1	4	4
1H	Building Form and Pour	Crane	173	RT600	1	4	15
		Generator	20	--	2	6	30
		Manlift	49	JLG 400S	2	6	30
1I	Roof System	Crane	173	RT600	1	4	10
		Gradall Forklift	130	544D	1	4	15
		Manlift	49	JLG 400S	2	6	20
1J	Piping and Pump Installation	Crane	173	RT600	1	4	10
		Backhoe/Loader	105	430E	1	6	15
		Gradall Forklift	130	544D	1	6	10
1K	Piping to Tank	Gradall Forklift	130	544D	1	4	5
		Welder	20	--	2	6	10
1L	Elect and Mech Equip.	Crane	173	RT600	1	4	25
		Gradall Forklift	130	544D	1	4	15
1M	Surge Tank System	Crane	173	RT600	1	4	10
		Gradall Forklift	130	544D	1	4	15
		Welder	20	--	3	6	15
1N	Install IS/Switchgear/MCC/UPS	Gradall Forklift	130	544D	1	4	20
		Generator/Welder	20	--	1	6	40
1O	Install Elec Wiring	None					
1P	Testing and Commissioning	Manlift	49	JLG 400S	2	4	15

Redmont Pump Station Construction

Offroad Equipment Use (Phase 2)

		Offroad Equipment	HP	Model	Quantity	Hr/day	Days
2A	Demo Fuel Storage Tank	Excavator	153	320E	1	6	10
		Backhoe/Loader	105	430E	1	4	10
		Generator	20	--	1	8	15
2B	Demo Exist PS Building	Excavator w/Hoe Ram	153	320E	1	8	12
		Gradall Forklift	130	544D	1	4	12
		Backhoe/Loader	105	430E	1	6	15
2C	Grading and Excavation	Excavator	153	320E	1	8	8
		Dozer	238	D7	1	8	6
		Skip Loader	73	210LE	1	8	6
		Roller	49	CB34B	1	8	4
		Loader	148	926M	1	6	10
2D	Prepare Subgrade	Excavator	153	320E	1	6	2
		Excavator/Drill	153	320E	1	8	4
		Backhoe/Loader	105	430E	1	4	5
2E	Form and Pour Tank Foundation	Concrete Trowel Mach.	44	MSP450A	1	4	4
2F	Erect and Weld Tank	Crane	173	RT600	1	4	40
		Generator/Welder	20	--	4	6	75
		Gradall Forklift	130	544D	1	4	40
		Manlift	49	JLG 400S	4	6	60
2G	Install Electrical and Comm Conduit	Gradall Forklift	130	544D	1	4	5
2H	Clean and Paint Interior	Compressor	NA	Electric	--	--	--
2I	Install Mech Equip.	Crane	173	RT600	1	4	10
		Gradall Forklift	130	544D	1	4	10
2J	Install Piping Connections	Crane	173	RT600	1	4	5
		Gradall Forklift	130	544D	1	4	5
		Welder	20	--	1	8	12
2K	Install Electric Equip.	Crane	173	RT600	1	4	10
		Gradall Forklift	130	544D	1	4	10
2L	Testing and Commissioning	Manlift	49	JLG 400S	1	4	15
2M	Final Civil (grading, paving, landscape)	Dozer	238	D7	1	8	10
		Skip Loader	73	210LE	1	6	10
		Roller	49	CB34B	1	6	10
		Paver	46	AP255E	1	8	5
		Gradall Forklift	130	544D	1	4	15
		Trencher	25	RT30	1	6	5

Redmont Pump Station Construction

On-road Vehicle Emissions Calculations

Assumptions

1) Emissions factors developed from EMFAC2014 web version for the three vehicle classes.
2) Emissions for each phase based on the emission factor year when the phase started including "Daily Needs".

Onroad Emission Factors - 2017 (pounds/mile)

	VOC	CO	NOx	SOx	PM10	PM2.5
Passenger Vehicle	0.00045	0.00365	0.00032	0.00001	0.00010	0.00004
Delivery Vehicle	0.00073	0.00608	0.00215	0.00001	0.00017	0.00009
Heavy Duty Truck	0.00044	0.00206	0.01400	0.00004	0.00030	0.00016

Onroad Emission Factors - 2018 (pounds/mile)

	VOC	CO	NOx	SOx	PM10	PM2.5
Passenger Vehicle	0.00041	0.00325	0.00028	0.00001	0.00010	0.00004
Delivery Vehicle	0.00069	0.00559	0.00198	0.00001	0.00017	0.00008
Heavy Duty Truck	0.00038	0.00192	0.01276	0.00004	0.00027	0.00013

Onroad Emission Factors - 2019 (pounds/mile)

	VOC	CO	NOx	SOx	PM10	PM2.5
Passenger Vehicle	0.00037	0.00293	0.00025	0.00001	0.00010	0.00004
Delivery Vehicle	0.00064	0.00507	0.00181	0.00001	0.00017	0.00008
Heavy Duty Truck	0.00036	0.00192	0.01199	0.00004	0.00027	0.00013

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
i	Decommissioning Tank	Passenger	180	0.082	0.657	0.058	0.001	0.019	0.008	1,260	0.57	4.60	0.40	0.01	0.13	0.06
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	210	0.15	1.28	0.45	0.00	0.04	0.02
		Heavy Truck	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
			Total	0.104	0.840	0.122	0.002	0.024	0.011	Total	0.72	5.88	0.85	0.01	0.17	0.07

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
ii	Mobilization	Passenger	180	0.082	0.657	0.058	0.001	0.019	0.008	2,700	1.23	9.86	0.86	0.02	0.28	0.12
		Delivery	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
		Heavy Truck	60	0.026	0.123	0.840	0.002	0.018	0.010	360	0.16	0.74	5.04	0.01	0.11	0.06
			Total	0.108	0.781	0.898	0.004	0.037	0.018	Total	1.38	10.60	5.90	0.03	0.39	0.18

Redmont Pump Station Construction

On-road Vehicle Emissions Calculations

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1A	Reservoir Demo	Passenger	180	0.082	0.657	0.058	0.001	0.019	0.008	2,160	0.98	7.89	0.69	0.02	0.23	0.10
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	360	0.26	2.19	0.77	0.01	0.06	0.03
		Heavy Truck	90	0.040	0.185	1.260	0.003	0.027	0.015	735	0.32	1.51	10.29	0.03	0.22	0.12
			Total	0.143	1.025	1.382	0.005	0.051	0.025	Total	1.56	11.59	11.75	0.05	0.51	0.25

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1B	Grading and Excavation	Passenger	180	0.082	0.657	0.058	0.001	0.019	0.008	1,800	0.82	6.57	0.58	0.01	0.19	0.08
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	300	0.22	1.82	0.65	0.00	0.05	0.03
		Heavy Truck	300	0.132	0.617	4.200	0.011	0.090	0.049	2,010	0.88	4.14	28.14	0.07	0.61	0.33
			Total	0.235	1.457	4.322	0.013	0.114	0.059	Total	1.92	12.53	29.36	0.09	0.85	0.43

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1C	Prepare Subgrade	Passenger	240	0.109	0.877	0.077	0.002	0.025	0.011	1,200	0.54	4.38	0.38	0.01	0.13	0.05
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	150	0.11	0.91	0.32	0.00	0.03	0.01
		Heavy Truck	75	0.033	0.154	1.050	0.003	0.023	0.012	525	0.23	1.08	7.35	0.02	0.16	0.09
			Total	0.164	1.213	1.191	0.005	0.053	0.026	Total	0.88	6.38	8.06	0.03	0.31	0.15

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1D	Install undr Elect Conduit	Passenger	180	0.082	0.657	0.058	0.001	0.019	0.008	3,600	1.63	13.15	1.15	0.03	0.38	0.16
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	600	0.44	3.65	1.29	0.01	0.10	0.05
		Heavy Truck	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
			Total	0.104	0.840	0.122	0.002	0.024	0.011	Total	2.07	16.80	2.44	0.04	0.48	0.21

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1E	Install undr mech piping	Passenger	240	0.109	0.877	0.077	0.002	0.025	0.011	4,800	2.18	17.53	1.53	0.04	0.50	0.21
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	150	0.11	0.91	0.32	0.00	0.03	0.01
		Heavy Truck	90	0.040	0.185	1.260	0.003	0.027	0.015	90	0.04	0.19	1.26	0.00	0.03	0.01
			Total	0.170	1.244	1.401	0.006	0.057	0.028	Total	2.33	18.63	3.12	0.04	0.55	0.24

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1F	Form and Pour PS Foundation	Passenger	240	0.109	0.877	0.077	0.002	0.025	0.011	2,400	1.09	8.77	0.77	0.02	0.25	0.11
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	300	0.22	1.82	0.65	0.00	0.05	0.03
		Heavy Truck	150	0.066	0.309	2.100	0.006	0.045	0.024	525	0.23	1.08	7.35	0.02	0.16	0.09
			Total	0.197	1.368	2.241	0.008	0.075	0.038	Total	1.54	11.67	8.76	0.04	0.46	0.22

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On-road Vehicle Emissions Calculations

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1G	Form and Pour IS and Elec Pad	Passenger	180	0.082	0.657	0.058	0.001	0.019	0.008	1,800	0.82	6.57	0.58	0.01	0.19	0.08
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	90	0.07	0.55	0.19	0.00	0.02	0.01
		Heavy Truck	45	0.020	0.093	0.630	0.002	0.014	0.007	90	0.04	0.19	1.26	0.00	0.03	0.01
			Total	0.123	0.933	0.752	0.004	0.037	0.018	Total	0.92	7.31	2.03	0.02	0.23	0.10

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1H	Building Form and Pour	Passenger	300	0.136	1.096	0.096	0.002	0.031	0.013	18,000	8.17	65.75	5.76	0.14	1.88	0.80
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	1,800	1.31	10.95	3.87	0.03	0.31	0.16
		Heavy Truck	150	0.066	0.309	2.100	0.006	0.045	0.024	750	0.33	1.54	10.50	0.03	0.23	0.12
			Total	0.224	1.587	2.260	0.008	0.082	0.040	Total	9.81	78.24	20.13	0.20	2.41	1.08

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1I	Roof System	Passenger	150	0.061	0.488	0.042	0.001	0.016	0.007	3,000	1.23	9.75	0.84	0.02	0.31	0.13
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	300	0.21	1.68	0.60	0.00	0.05	0.03
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	450	0.17	0.87	5.74	0.02	0.12	0.06
			Total	0.116	0.828	1.250	0.005	0.045	0.021	Total	1.60	12.29	7.18	0.04	0.48	0.22

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1J	Piping and Pump Installation	Passenger	300	0.123	0.975	0.084	0.002	0.031	0.013	6,000	2.45	19.51	1.68	0.05	0.62	0.27
		Delivery	60	0.041	0.335	0.119	0.001	0.010	0.005	1,200	0.82	6.70	2.38	0.02	0.20	0.10
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	900	0.34	1.73	11.49	0.03	0.24	0.12
			Total	0.198	1.484	1.352	0.006	0.066	0.030	Total	3.62	27.94	15.55	0.10	1.07	0.49

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1K	Piping to Tank	Passenger	240	0.098	0.780	0.067	0.002	0.025	0.011	2,400	0.98	7.80	0.67	0.02	0.25	0.11
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	150	0.10	0.84	0.30	0.00	0.03	0.01
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	90	0.03	0.17	1.15	0.00	0.02	0.01
			Total	0.153	1.121	1.275	0.006	0.054	0.025	Total	1.12	8.81	2.12	0.02	0.30	0.13

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1L	Elect and Mech Equip.	Passenger	240	0.098	0.780	0.067	0.002	0.025	0.011	7,200	2.95	23.41	2.02	0.06	0.75	0.32
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	900	0.62	5.03	1.79	0.01	0.15	0.08
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	450	0.17	0.87	5.74	0.02	0.12	0.06
			Total	0.153	1.121	1.275	0.006	0.054	0.025	Total	3.74	29.30	9.55	0.09	1.02	0.46

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				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1M	Surge Tank System	Passenger	180	0.074	0.585	0.050	0.001	0.019	0.008	3,600	1.47	11.70	1.01	0.03	0.37	0.16
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	450	0.31	2.51	0.89	0.01	0.08	0.04
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	450	0.17	0.87	5.74	0.02	0.12	0.06
			Total	0.129	0.926	1.259	0.005	0.048	0.023	Total	1.95	15.08	7.64	0.05	0.57	0.26

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1N	Install IS/ Switchgear/ MCC/UPS	Passenger	210	0.086	0.683	0.059	0.002	0.022	0.009	8,400	3.44	27.31	2.35	0.07	0.87	0.37
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	1,200	0.82	6.70	2.38	0.02	0.20	0.10
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	270	0.10	0.52	3.45	0.01	0.07	0.04
			Total	0.141	1.023	1.267	0.005	0.051	0.024	Total	4.36	34.53	8.18	0.09	1.15	0.51

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1O	Install Elec Wiring	Passenger	180	0.074	0.585	0.050	0.001	0.019	0.008	3,600	1.47	11.70	1.01	0.03	0.37	0.16
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	600	0.41	3.35	1.19	0.01	0.10	0.05
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	180	0.07	0.35	2.30	0.01	0.05	0.02
			Total	0.129	0.926	1.259	0.005	0.048	0.023	Total	1.95	15.40	4.50	0.04	0.52	0.23

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
1P	Testing and Commissioning	Passenger	240	0.098	0.780	0.067	0.002	0.025	0.011	14,160	5.79	46.03	3.96	0.11	1.47	0.63
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	1,770	1.22	9.89	3.51	0.03	0.30	0.15
		Heavy Truck	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
			Total	0.119	0.948	0.127	0.002	0.030	0.013	Total	7.01	55.92	7.48	0.14	1.77	0.78

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
	Daily Needs	Passenger	60	0.027	0.219	0.019	0.000	0.006	0.003	14,160	6.43	51.72	4.53	0.11	1.48	0.63
		Delivery	30	0.022	0.182	0.065	0.000	0.005	0.003	7,080	5.14	43.06	15.23	0.10	1.21	0.62
		Heavy Truck	10	0.004	0.021	0.140	0.000	0.003	0.002	2,360	1.04	4.86	33.04	0.09	0.71	0.38
			Total	0.053	0.422	0.224	0.001	0.014	0.007	Total	12.61	99.64	52.80	0.30	3.40	1.63

Onroad Equipment Use (Phase 2)

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
2A	Demo Fuel Storage Tank	Passenger	180	0.074	0.585	0.050	0.001	0.019	0.008	2,700	1.10	8.78	0.76	0.02	0.28	0.12
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	450	0.31	2.51	0.89	0.01	0.08	0.04
		Heavy Truck	180	0.069	0.346	2.297	0.007	0.049	0.024	900	0.34	1.73	11.49	0.03	0.24	0.12
			Total	0.163	1.099	2.407	0.008	0.073	0.035	Total	1.76	13.02	13.14	0.06	0.60	0.28

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On-road Vehicle Emissions Calculations

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
2B	Demo Exist PS Building	Passenger	240	0.098	0.780	0.067	0.002	0.025	0.011	3,600	1.47	11.70	1.01	0.03	0.37	0.16
		Delivery	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
		Heavy Truck	75	0.029	0.144	0.957	0.003	0.020	0.010	675	0.26	1.30	8.61	0.02	0.18	0.09
			Total	0.127	0.925	1.024	0.005	0.045	0.021	Total	1.73	13.00	9.62	0.05	0.56	0.25

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
2C	Grading and Excavation	Passenger	150	0.061	0.488	0.042	0.001	0.016	0.007	1,500	0.61	4.88	0.42	0.01	0.16	0.07
		Delivery	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
		Heavy Truck	15	0.006	0.029	0.191	0.001	0.004	0.002	60	0.02	0.12	0.77	0.00	0.02	0.01
			Total	0.067	0.517	0.233	0.002	0.020	0.009	Total	0.64	4.99	1.19	0.01	0.17	0.07

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
2D	Prepare Subgrade	Passenger	120	0.049	0.390	0.034	0.001	0.012	0.005	600	0.25	1.95	0.17	0.00	0.06	0.03
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	150	0.10	0.84	0.30	0.00	0.03	0.01
		Heavy Truck	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
			Total	0.070	0.558	0.093	0.001	0.018	0.008	Total	0.35	2.79	0.47	0.01	0.09	0.04

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
2E	Form and Pour Tank Foundation	Passenger	240	0.098	0.780	0.067	0.002	0.025	0.011	3,600	1.47	11.70	1.01	0.03	0.37	0.16
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	450	0.31	2.51	0.89	0.01	0.08	0.04
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	195	0.07	0.38	2.49	0.01	0.05	0.03
			Total	0.153	1.121	1.275	0.006	0.054	0.025	Total	1.86	14.59	4.39	0.04	0.50	0.22

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
2F	Erect and Weld Tank	Passenger	210	0.086	0.683	0.059	0.002	0.022	0.009	16,800	6.87	54.62	4.70	0.13	1.75	0.75
		Delivery	60	0.041	0.335	0.119	0.001	0.010	0.005	4,800	3.30	26.81	9.53	0.07	0.81	0.41
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	450	0.17	0.87	5.74	0.02	0.12	0.06
			Total	0.161	1.191	1.327	0.006	0.056	0.026	Total	10.34	82.29	19.98	0.22	2.68	1.21

				Daily Emissions							Total Emissions					
#	Subphase Name	Vehicle Type	Daily VMT	VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	VOC	CO	NOx	SOx	PM10	PM2.5
2G	Install Electrical and Comm Conduit	Passenger	180	0.074	0.585	0.050	0.001	0.019	0.008	2,700	1.10	8.78	0.76	0.02	0.28	0.12
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	450	0.31	2.51	0.89	0.01	0.08	0.04
		Heavy Truck	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
			Total	0.094	0.753	0.110	0.002	0.024	0.011	Total	1.41	11.29	1.65	0.03	0.36	0.16

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On-road Vehicle Emissions Calculations

#	Subphase Name	Vehicle Type	Daily VMT	Daily Emissions VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	Total Emissions VOC	CO	NOx	SOx	PM10	PM2.5
2H	Clean and Paint Interior	Passenger	120	0.045	0.351	0.030	0.001	0.012	0.005	1,200	0.45	3.51	0.30	0.01	0.12	0.05
		Delivery	30	0.019	0.152	0.054	0.000	0.005	0.002	300	0.19	1.52	0.54	0.00	0.05	0.02
		Heavy Truck	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
			Total	0.064	0.503	0.084	0.001	0.017	0.008	Total	0.64	5.03	0.84	0.01	0.17	0.08

#	Subphase Name	Vehicle Type	Daily VMT	Daily Emissions VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	Total Emissions VOC	CO	NOx	SOx	PM10	PM2.5
2I	Install Mech Equip.	Passenger	210	0.079	0.615	0.052	0.002	0.022	0.009	3,150	1.18	9.22	0.78	0.02	0.33	0.14
		Delivery	30	0.019	0.152	0.054	0.000	0.005	0.002	450	0.29	2.28	0.82	0.01	0.07	0.04
		Heavy Truck	90	0.033	0.173	1.079	0.003	0.024	0.012	450	0.16	0.86	5.39	0.02	0.12	0.06
			Total	0.130	0.939	1.185	0.005	0.051	0.023	Total	1.63	12.36	6.99	0.05	0.52	0.23

#	Subphase Name	Vehicle Type	Daily VMT	Daily Emissions VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	Total Emissions VOC	CO	NOx	SOx	PM10	PM2.5
2J	Install Piping Connections	Passenger	210	0.086	0.683	0.059	0.002	0.022	0.009	3,150	1.29	10.24	0.88	0.02	0.33	0.14
		Delivery	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
		Heavy Truck	90	0.034	0.173	1.149	0.003	0.024	0.012	180	0.07	0.35	2.30	0.01	0.05	0.02
			Total	0.120	0.856	1.207	0.005	0.046	0.021	Total	1.36	10.59	3.18	0.03	0.38	0.16

#	Subphase Name	Vehicle Type	Daily VMT	Daily Emissions VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	Total Emissions VOC	CO	NOx	SOx	PM10	PM2.5
2K	Install Electric Equip.	Passenger	180	0.067	0.527	0.044	0.001	0.019	0.008	3,600	1.35	10.53	0.89	0.03	0.37	0.16
		Delivery	30	0.019	0.152	0.054	0.000	0.005	0.002	600	0.39	3.04	1.09	0.01	0.10	0.05
		Heavy Truck	90	0.033	0.173	1.079	0.003	0.024	0.012	90	0.03	0.17	1.08	0.00	0.02	0.01
			Total	0.119	0.852	1.178	0.005	0.048	0.022	Total	1.76	13.75	3.06	0.04	0.50	0.22

#	Subphase Name	Vehicle Type	Daily VMT	Daily Emissions VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	Total Emissions VOC	CO	NOx	SOx	PM10	PM2.5
2L	Testing and Commissioning	Passenger	210	0.079	0.615	0.052	0.002	0.022	0.009	10,500	3.93	30.73	2.59	0.08	1.09	0.47
		Delivery	30	0.019	0.152	0.054	0.000	0.005	0.002	1,500	0.96	7.61	2.72	0.02	0.25	0.12
		Heavy Truck	0	0.000	0.000	0.000	0.000	0.000	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00
			Total	0.098	0.767	0.106	0.002	0.027	0.012	Total	4.89	38.34	5.31	0.10	1.34	0.59

#	Subphase Name	Vehicle Type	Daily VMT	Daily Emissions VOC	CO	NOx	SOx	PM10	PM2.5	VMT Total	Total Emissions VOC	CO	NOx	SOx	PM10	PM2.5
2M	Final Civil (grading, paving, landscape)	Passenger	180	0.067	0.527	0.044	0.001	0.019	0.008	9,000	3.37	26.34	2.22	0.07	0.94	0.40
		Delivery	30	0.019	0.152	0.054	0.000	0.005	0.002	1,500	0.96	7.61	2.72	0.02	0.25	0.12
		Heavy Truck	60	0.022	0.115	0.719	0.002	0.016	0.008	450	0.16	0.86	5.39	0.02	0.12	0.06
			Total	0.108	0.794	0.818	0.004	0.040	0.018	Total	4.49	34.81	10.34	0.11	1.31	0.58

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#	Subphase Name	Vehicle Type	Daily VMT	Daily Emissions						VMT Total	Total Emissions					
				VOC	CO	NOx	SOx	PM10	PM2.5		VOC	CO	NOx	SOx	PM10	PM2.5
	Daily Needs	Passenger	60	0.025	0.195	0.017	0.000	0.006	0.003	16,980	6.95	55.20	4.75	0.13	1.77	0.75
		Delivery	30	0.021	0.168	0.060	0.000	0.005	0.003	8,490	5.83	47.42	16.85	0.12	1.43	0.72
		Heavy Truck	10	0.004	0.019	0.128	0.000	0.003	0.001	2,830	1.08	5.44	36.12	0.10	0.77	0.38
			Total	0.049	0.382	0.204	0.001	0.014	0.007	Total	13.86	108.07	57.72	0.36	3.97	1.85

Maximum Daily Emissions Totals by Year

Max phase(s)		ROG	CO	NOx	SOx	PM10	PM2.5
1B	2017	0.29	1.88	4.55	0.01	0.13	0.07
2C	2018	0.12	0.94	0.46	0.00	0.03	0.02
2M	2019	0.16	1.18	1.02	0.01	0.05	0.02

Emissions Totals

	ROG	CO	NOx	SOx	PM	PM2.5
All Years	108	843	345	3	30	14

Redmont Pump Station Construction

Off-Road Emissions Calculations

2017 Emissions Factors

Item	Hp	ROG	CO	NOx	SOx	PM
Backhoe/Loader	105	0.0368	0.3012	0.4234	0.0004	0.0308
Concrete Trowel Mach.	44	0.0256	0.1118	0.1536	0.0002	0.0107
Crane	173	0.0692	0.4719	0.8805	0.0006	0.0437
Dozer	238	0.0862	0.4101	1.3825	0.0011	0.0495
Excavator w/Hoe Ram	153	0.0376	0.5809	0.5024	0.0006	0.0234
Generator/Welder	20	0.0192	0.0435	0.1000	0.0001	0.0087
Gradall Forklift	130	0.0195	0.4554	0.4013	0.0006	0.0209
Loader	148	0.0546	0.5272	0.6602	0.0006	0.0342
Manlift	49	0.0058	0.1517	0.1158	0.0002	0.0026
Paver	46	0.0634	0.3001	0.2346	0.0002	0.0227
Roller	48.8	0.0419	0.2549	0.2095	0.0002	0.0176
Skip Loader	73	0.0256	0.2094	0.2944	0.0003	0.0214
Trench Compactor	21	0.0180	0.0461	0.0901	0.0001	0.0076
Trencher	25	0.0270	0.1355	0.1443	0.0002	0.0124
Welder	20	0.0192	0.0435	0.1000	0.0001	0.0087
Wood Chipper	85	0.0451	0.3642	0.4868	0.0004	0.0370
Chainsaw	4	0.3580	1.2259	0.0148	0.0000	0.0019

2017 Emissions

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
ii	Mobilization	Gradall Forklift	130	1	2	0.04	0.91	0.80	0.00	0.04	15	0.58	13.66	12.04	0.02	0.63
		Wood Chipper	85	1	4	0.18	1.46	1.95	0.00	0.15	2	0.36	2.91	3.89	0.00	0.30
		Chainsaw	4	2	4	2.86	9.81	0.12	0.00	0.02	2	5.73	19.61	0.24	0.00	0.03
					Totals	3.08	12.17	2.87	0.00	0.21	Totals	6.67	36.19	16.17	0.02	0.95

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1A	Reservoir Demo	Excavator w/Hoe Ram	153	1	8	0.30	4.65	4.02	0.01	0.19	8	2.41	37.18	32.15	0.04	1.50
		Gradall Forklift	130	1	4	0.08	1.82	1.61	0.00	0.08	8	0.62	14.57	12.84	0.02	0.67
		Backhoe/Loader	105	1	8	0.29	2.41	3.39	0.00	0.25	8	2.36	19.27	27.10	0.03	1.97
					Totals	0.67	8.88	9.01	0.01	0.52	Totals	5.38	71.02	72.10	0.09	4.14

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1B	Grading and Excavation	Dozer	238	1	8	0.69	3.28	11.06	0.01	0.40	6	4.14	19.69	66.36	0.05	2.37
		Skip Loader	73	1	6	0.15	1.26	1.77	0.00	0.13	6	0.92	7.54	10.60	0.01	0.77
		Roller	49	1	6	0.25	1.53	1.26	0.00	0.11	6	1.51	9.18	7.54	0.01	0.63
		Loader	148	1	6	0.33	3.16	3.96	0.00	0.21	8	2.62	25.31	31.69	0.03	1.64
					Totals	1.42	9.23	18.04	0.02	0.83	Totals	9.19	61.71	116.19	0.10	5.42

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1C	Prepare Subgrade	Excavator	153	1	6	0.23	3.49	3.01	0.00	0.14	2	0.45	6.97	6.03	0.01	0.28
		Backhoe/Loader	105	1	4	0.15	1.20	1.69	0.00	0.12	4	0.59	4.82	6.78	0.01	0.49
					Totals	0.37	4.69	4.71	0.01	0.26	Totals	1.04	11.79	12.80	0.01	0.77

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1D	Install undr Elect Conduit	Gradall Forklift	130	1	2	0.04	0.91	0.80	0.00	0.04	15	0.58	13.66	12.04	0.02	0.63
		Generator	20	1	4	0.08	0.17	0.40	0.00	0.03	15	1.15	2.61	6.00	0.01	0.52
		Backhoe/Loader	105	1	4	0.15	1.20	1.69	0.00	0.12	15	2.21	18.07	25.41	0.03	1.85
					Totals	0.26	2.29	2.90	0.00	0.20	Totals	3.95	34.34	43.44	0.05	3.00

Redmont Pump Station Construction

Off-Road Emissions Calculations

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1E	Install undr mech piping	Gradall Forklift	130	1	2	0.04	0.91	0.80	0.00	0.04	15	0.58	13.66	12.04	0.02	0.63
		Generator	20	1	4	0.08	0.17	0.40	0.00	0.03	15	1.15	2.61	6.00	0.01	0.52
		Backhoe/Loader	105	1	4	0.15	1.20	1.69	0.00	0.12	15	2.21	18.07	25.41	0.03	1.85
					Totals	0.26	2.29	2.90	0.00	0.20	Totals	3.95	34.34	43.44	0.05	3.00

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1F	Form and Pour PS Foundation	Concrete Trowel Mach.	44	1	4	0.10	0.45	0.61	0.00	0.04	4	0.41	1.79	2.46	0.00	0.17

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1G	Form and Pour IS and Elec Pad	Concrete Trowel Mach.	44	1	4	0.10	0.45	0.61	0.00	0.04	4	0.41	1.79	2.46	0.00	0.17

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1H	Building Form and Pour	Crane	173	1	4	0.28	1.89	3.52	0.00	0.17	15	4.15	28.32	52.83	0.03	2.62
		Generator	20	2	6	0.23	0.52	1.20	0.00	0.10	30	6.93	15.67	35.99	0.04	3.15
		Manlift	49	2	6	0.07	1.82	1.39	0.00	0.03	30	2.09	54.60	41.68	0.07	0.95
					Totals	0.58	4.23	6.11	0.01	0.31	Totals	13.17	98.59	130.50	0.14	6.71

2018 Emissions Factors

Item	Hp	ROG	CO	NOx	SOx	PM
Backhoe/Loader	105	0.0320	0.2998	0.3752	0.0004	0.0251
Concrete Trowel Mach.	44	0.0260	0.1093	0.1541	0.0002	0.0094
Crane	173	0.0661	0.4712	0.8385	0.0006	0.0386
Dozer	238	0.0822	0.3979	1.2999	0.0011	0.0450
Excavator w/Hoe Ram	153	0.0329	0.5806	0.4255	0.0006	0.0183
Generator/Welder	20	0.0182	0.0435	0.0976	0.0001	0.0082
Gradall Forklift	130	0.0171	0.4527	0.2876	0.0006	0.0101
Loader	148	0.0496	0.5266	0.5913	0.0006	0.0286
Manlift	49	0.0055	0.1476	0.1079	0.0002	0.0018
Paver	46	0.0605	0.2933	0.2290	0.0002	0.0201
Roller	49	0.0379	0.2486	0.2000	0.0002	0.0156
Skip Loader	73	0.0222	0.2084	0.2609	0.0003	0.0175
Trench Compactor	21	0.0163	0.0461	0.0861	0.0001	0.0067
Trencher	25	0.0243	0.1355	0.1383	0.0002	0.0113
Welder	20	0.0182	0.0435	0.0976	0.0001	0.0082

2018 Emissions

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1I	Roof System	Crane	173	1	4	0.26	1.88	3.35	0.00	0.15	10	2.65	18.85	33.54	0.02	1.54
		Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	15	1.03	27.16	17.26	0.03	0.61
		Manlift	49	2	6	0.07	1.77	1.29	0.00	0.02	20	1.31	35.42	25.89	0.04	0.43
					Totals	0.40	5.47	5.80	0.01	0.22	Totals	4.99	81.43	76.68	0.10	2.58

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1J	Piping and Pump Installation	Crane	173	1	4	0.26	1.88	3.35	0.00	0.15	10	2.65	18.85	33.54	0.02	1.54
		Backhoe/Loader	105	1	6	0.20	3.48	2.55	0.00	0.11	15	2.96	52.25	38.30	0.06	1.64
		Gradall Forklift	130	1	6	0.10	2.72	1.73	0.00	0.06	10	1.03	27.16	17.26	0.03	0.61
					Totals	0.56	8.08	7.63	0.01	0.32	Totals	6.63	98.26	89.10	0.11	3.79

Redmont Pump Station Construction

Off-Road Emissions Calculations

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1K	Piping to Tank	Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	5	0.34	9.05	5.75	0.01	0.20
		Welder	20	2	6	0.22	0.52	1.17	0.00	0.10	10	2.18	5.22	11.71	0.01	0.99
					Totals	0.29	2.33	2.32	0.00	0.14	Totals	2.52	14.28	17.46	0.02	1.19

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1L	Elect and Mech Equip.	Crane	173	1	4	0.26	1.88	3.35	0.00	0.15	25	6.61	47.12	83.85	0.06	3.86
		Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	15	1.03	27.16	17.26	0.03	0.61
					Totals	0.33	3.70	4.50	0.00	0.19	Totals	7.64	74.28	101.11	0.09	4.46

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1M	Surge Tank System	Crane	173	1	4	0.26	1.88	3.35	0.00	0.15	10	2.65	18.85	33.54	0.02	1.54
		Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	15	1.03	27.16	17.26	0.03	0.61
		Welder	20	3	6	0.33	0.78	1.76	0.00	0.15	15	4.90	11.76	26.35	0.03	2.22
					Totals	0.66	4.48	6.26	0.01	0.34	Totals	8.57	57.77	77.14	0.08	4.37

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1N	Install IS/Switchgear/MCC/UPS	Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	20	1.37	36.22	23.01	0.05	0.81
		Generator/Welder	20	1	6	0.11	0.26	0.59	0.00	0.05	40	4.36	10.45	23.42	0.02	1.97
					Totals	0.18	2.07	1.74	0.00	0.09	Totals	5.73	46.67	46.43	0.07	2.78

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
1P	Testing and Commissioning	Manlift	49	2	4	0.04	1.18	0.86	0.00	0.01	15	0.66	17.71	12.94	0.02	0.22

Phase 2 Subphases

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2A	Demo Fuel Storage Tank	Excavator	153	1	6	0.20	3.48	2.55	0.00	0.11	10	1.97	34.84	25.53	0.04	1.10
		Backhoe/Loader	105	1	4	0.13	1.20	1.50	0.00	0.10	10	1.28	11.99	15.01	0.02	1.00
		Generator	20	1	8	0.15	0.35	0.78	0.00	0.07	15	2.18	5.22	11.71	0.01	0.99
					Totals	0.47	5.03	4.83	0.01	0.28	Totals	5.43	52.05	52.25	0.07	3.09

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2B	Demo Exist PS Building	Excavator w/Hoe Ram	153	1	8	0.26	4.64	3.40	0.01	0.15	12	3.16	55.74	40.85	0.06	1.75
		Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	12	0.82	21.73	13.81	0.03	0.48
		Backhoe/Loader	105	1	6	0.19	1.80	2.25	0.00	0.15	15	2.88	26.98	33.77	0.04	2.26
					Totals	0.52	8.25	6.81	0.01	0.34	Totals	6.86	104.45	88.43	0.13	4.50

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2C	Grading and Excavation	Excavator	153	1	8	0.26	4.64	3.40	0.01	0.15	8	2.11	37.16	27.23	0.04	1.17
		Dozer	238	1	8	0.66	3.18	10.40	0.01	0.36	6	3.94	19.10	62.39	0.05	2.16
		Skip Loader	73	1	8	0.18	1.67	2.09	0.00	0.14	6	1.07	10.00	12.52	0.01	0.84
		Roller	49	1	8	0.30	1.99	1.60	0.00	0.12	4	1.21	7.96	6.40	0.01	0.50
		Loader	148	1	6	0.30	3.16	3.55	0.00	0.17	10	2.98	31.60	35.48	0.04	1.72
					Totals	1.70	14.64	21.04	0.02	0.94	Totals	11.31	105.81	144.03	0.15	6.38

Redmont Pump Station Construction

Off-Road Emissions Calculations

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2D	Prepare Subgrade	Excavator	153	1	6	0.20	3.48	2.55	0.00	0.11	2	0.39	6.97	5.11	0.01	0.22
		Excavator/Drill	153	1	8	0.26	4.64	3.40	0.01	0.15	4	1.05	18.58	13.62	0.02	0.58
		Backhoe/Loader	105	1	4	0.13	1.20	1.50	0.00	0.10	5	0.64	6.00	7.50	0.01	0.50
					Totals	0.59	9.33	7.46	0.01	0.36	Totals	2.09	31.54	26.23	0.04	1.31

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2E	Form and Pour Tank Foundation	Concrete Trowel Mach.	44	1	4	0.10	0.44	0.62	0.00	0.04	4	0.42	1.75	2.47	0.00	0.15

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2F	Erect and Weld Tank	Crane	173	1	4	0.26	1.88	3.35	0.00	0.15	40	10.58	75.39	134.16	0.09	6.17
		Generator/Welder	20	4	6	0.44	1.04	2.34	0.00	0.20	75	32.67	78.37	175.64	0.18	14.81
		Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	40	2.74	72.44	46.02	0.09	1.61
		Manlift	49	4	6	0.13	3.54	2.59	0.00	0.04	60	7.88	212.53	155.31	0.27	2.60
					Totals	0.90	8.28	9.43	0.01	0.44	Totals	53.87	438.73	511.13	0.63	25.20

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2G	Install Electrical and Comm Condui	Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	5	0.34	9.05	5.75	0.01	0.20

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2J	Install Piping Connections	Crane	173	1	4	0.26	1.88	3.35	0.00	0.15	5	1.32	9.42	16.77	0.01	0.77
		Gradall Forklift	130	1	4	0.07	1.81	1.15	0.00	0.04	5	0.34	9.05	5.75	0.01	0.20
		Welder	20	1	8	0.15	0.35	0.78	0.00	0.07	12	1.74	4.18	9.37	0.01	0.79
					Totals	0.48	4.04	5.29	0.01	0.26	Totals	3.41	22.66	31.89	0.03	1.76

2019 Emissions Factors

Item	Hp	ROG	CO	NOx	SOx	PM
Backhoe/Loader	105	0.0288	0.2986	0.3396	0.0004	0.0210
Concrete Trowel Mach.	44	0.0248	0.1069	0.1470	0.0002	0.0073
Crane	173	0.0638	0.4705	0.8066	0.0006	0.0349
Dozer	238	0.0787	0.3870	1.2274	0.0011	0.0422
Excavator w/Hoe Ram	153	0.0301	0.5804	0.3762	0.0006	0.0157
Generator/Welder	20	0.0178	0.0435	0.0962	0.0001	0.0080
Gradall Forklift	130	0.0160	0.4504	0.2582	0.0006	0.0087
Loader	148	0.0465	0.5261	0.5454	0.0006	0.0252
Manlift	49	0.0052	0.1437	0.1033	0.0002	0.0014
Paver	46	0.0556	0.2870	0.2188	0.0002	0.0184
Roller	49	0.0355	0.2429	0.1935	0.0002	0.0141
Skip Loader	73	0.0200	0.2076	0.2361	0.0003	0.0146
Trench Compactor	21	0.0153	0.0461	0.0833	0.0001	0.0061
Trencher	25	0.0226	0.1355	0.1340	0.0002	0.0104
Welder	20	0.0178	0.0435	0.0962	0.0001	0.0080

Redmont Pump Station Construction

Off-Road Emissions Calculations

2019 Emissions

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2I	Install Mech Equip.	Crane	173	1	4	0.26	1.88	3.23	0.00	0.14	10	2.55	18.82	32.26	0.02	1.40
		Gradall Forklift	130	1	4	0.06	1.80	1.03	0.00	0.03	10	0.64	18.02	10.33	0.02	0.35
					Totals	0.32	3.68	4.26	0.00	0.17	Totals	3.19	36.84	42.59	0.05	1.74

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2K	Install Electric Equip.	Crane	173	1	4	0.26	1.88	3.23	0.00	0.14	10	2.55	18.82	32.26	0.02	1.40
		Gradall Forklift	130	1	4	0.06	1.80	1.03	0.00	0.03	10	0.64	18.02	10.33	0.02	0.35
					Totals	0.32	3.68	4.26	0.00	0.17	Totals	3.19	36.84	42.59	0.05	1.74

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2L	Testing and Commissioning	Manlift	49	1	4	0.02	0.57	0.41	0.00	0.01	15	0.31	8.62	6.20	0.01	0.08

						Daily Emissions lbs						Total Emissions lbs				
Phase	Phase Name	Offroad Equipment	HP	Number	Hours/day	ROG	CO	NOx	SOx	PM	Days	ROG	CO	NOx	SOx	PM
2M		Dozer	238	1	8	0.63	3.10	9.82	0.01	0.34	10	6.30	30.96	98.19	0.09	3.37
		Skip Loader	73	1	6	0.12	1.25	1.42	0.00	0.09	10	1.20	12.46	14.17	0.02	0.88
			49	1	6	0.21	1.46	1.16	0.00	0.08	10	2.13	14.57	11.61	0.01	0.85
			46	1	8	0.45	2.30	1.75	0.00	0.15	5	2.23	11.48	8.75	0.01	0.73
		Gradall Forklift	130	1	4	0.06	1.80	1.03	0.00	0.03	15	0.96	27.02	15.49	0.03	0.52
		Trencher	25	1	6	0.14	0.81	0.80	0.00	0.06	5	0.68	4.07	4.02	0.00	0.31
					Totals	1.61	10.71	15.98	0.02	0.75	Totals	13.50	100.57	152.23	0.17	6.67

Maximum Daily Emissions Totals by Year

		ROG	CO	NOx	SOx	PM
1B	2017	1.42	9.23	18.04	0.02	0.83
2C	2018	1.70	14.64	21.04	0.02	0.94
2M	2019	1.61	10.71	15.98	0.02	0.75

Emissions Totals

	ROG	CO	NOx	SOx	PM
All Years	185	1,691	1,966	2	97

Redmont Pump Station Construction

Construction - Fugitive Dust Mitigated Emission Calculations

Assumptions:
1. Fugitive dust emissions are estimated using AP-42.
2. Equipment usage, amount of material handling, and VMT assumptions are presented under "Schedule & Equipment"
3. Mitigation level assumes minimum mitigation required for SCAQMD Rule 403 compliance.

Emission Categories

1) Earthmoving
2) Road Dust Paved/Unpaved
3) Disturbed Area Windblown Emissions

1) Earthmoving

Emission Types
A) Dozing
B) Material Loading/Handling

A) Dozing (AP-42 Section 11.9 for overburden)

E = k x $(s)^{1.5}$ / $(M)^{1.4}$ For PM10 and k x 5.7 x $(s)^{1.2}$ / $(M)^{1.3}$ for PM2.5
E = lb/hr
k = Scaling Constant (0.75 for PM10 and 0.105 for PM2.5)
s = Silt Content (assumed to be 12%)
M = Moisture Content = 15% (based on SCAQMD moist and soil definition)

Emission Factor, lb/hr

PM10	PM2.5
0.70357	0.34927

Maximum Daily Dozer Use

	Hrs/day
2017 Max Case	8
2018 Max Case	8
2019 Max Case	8

Dozer Emissions (Lbs/day)

	PM10	PM2.5
2017 Max Case	5.63	2.79
2018 Max Case	5.63	2.79
2019 Max Case	5.63	2.79

Total Dozer Use

	Hrs
Total Dozer Use	176

Dozer Emissions (Tons)

	PM10	PM2.5
Total Dozer Use	0.06	0.03

B) Material Loading/Handling (AP-42, p. 13.2.4.3)

Assumptions:
1. This emission source covers the material handling of the stockpiled and used materials.
2. The worst case daily throughput is assumed to be 3,000 cu yds of wet soil total with two drops, or a total drop weight of 8,910 tons, annual is 140,000 cu yds with two drops (415,800 tons).

E = (k)(0.0032)[$(U/5)^{1.3}$]/[$(M/2)^{1.4}$]
E = lb/ton
k = Particle Size Constant (0.35 for PM10 and 0.053 for PM2.5)
U = average wind speed = 25 MPH worst day, 8 MPH avg daytime (engineering assumption)
M = moisture content = 15% (SCAQMD moist)

	tons/period
2017 Max Case	1,600
2018 Max Case	1,000
2019 Max Case	0
Total	50,000

Emission Factors and Emissions
Emission Factors

PM10 Total	PM2.5 Total
0.00012	0.00002

PM10 Daily	PM2.5 Daily
0.00054	0.00008

Emissions (Lbs/day)

	PM10	PM2.5
2017 Max Case	0.86	0.13
2018 Max Case	0.54	0.08
2019 Max Case	0.00	0.00

Emissions (Tons/year)

	PM10	PM2.5
Total	0.01	0.00

Redmont Pump Station Construction

Construction - Fugitive Dust Mitigated Emission Calculations

2) Road Dust

Emission Types
A) Paved Road Dust
B) Unpaved Road Dust

A) Paved Road Dust

$E = [k \times (sL)^{0.91} \times (W)^{1.02}]*(1-P/4N)$
E = lb/VMT
k = Constant (0.0022 for PM10 and 0.00054 for PM2.5)
sL = Silt Loading (assumed to be 0.2 g/m2 for ADT between 500 and 5,000 from Table 13.2.1-2)
W = Average weight of vehicles in tons (calculated below)
P = Days of precipitation (15 assumed for annual calculation)
N = Days in period (365 for annual calculation)

Average Vehicle Weight Calculation

Assumptions
Passenger Vehicles = 2 tons average
Midsize "Delivery" Vehicles = 8 ton average
Heavy-Heavy Duty Trucks = 16.5 tons average (loaded 23 tons, unloaded 10 tons)

Daily Case VMT	Passenger Vehicles	Delivery/Work Vehicles	Heavy-Heavy Duty Vehicles	Total Paved VMT	Average Weight (Tons)
2017 Max Case	240	60	307	607	9.9
2018 Max Case	210	30	24	264	4.0
2019 Max Case	240	60	69	368	5.7

Total Case VMT	Passenger Vehicles	Delivery/Work Vehicles	Heavy-Heavy Duty Vehicles	Total Paved VMT	Average Weight (Tons)
Total Project	181,060	36,677	15,749	233,485	3.9

Daily Emission Factors (lb/VMT)

	PM10 Daily	PM2.5 Daily
2017 Max Case	0.00529	0.00130
2018 Max Case	0.00209	0.00051
2019 Max Case	0.00300	0.00074

Emissions (Lbs/day)

	PM10	PM2.5
2017 Max Case	3.21	0.79
2018 Max Case	0.55	0.14
2019 Max Case	1.10	0.27

Total Emission Factors (lb/VMT)

	PM10 Annual	PM2.5 Annual
Total Project	0.0020	0.0005

Emissions (Tons)

	PM10	PM2.5
Total Project	0.24	0.06

Redmont Pump Station Construction

Construction - Fugitive Dust Mitigated Emission Calculations

B) Unpaved Road Dust

$E = (k)[(s/12)^{0.9}][(W/3)^{0.45}][(365\text{-}P)/365]$

k = constant = 1.5 lb/VMT for PM10 and 0.15 lb/VMT for PM2.5
s = Silt Content (assumed to be 12%, SCAQMD 1993 Handbook value for mountain roads)
W = avg. vehicle weight = calculated below
P = Days of precipitation (40 assumed for annual calculation)
No correction for number of wet days due to assumption of working in dry season

Average Vehicle Weight Calculation

Assumptions:
Passenger Vehicles = 2 tons average
Midsize "Delivery" Vehicles = 8 ton average
Heavy-Heavy Duty Trucks = 20 tons average (loaded 30 tons, unloaded 10 tons)

Daily Case VMT	Passenger Vehicles	Delivery/Work Vehicles	Heavy-Heavy Duty Vehicles	Total Unpaved VMT	Average Weight (Tons)
2017 Max Case	0.00	0.00	2.00	2	20.0
2018 Max Case	0.00	0.00	2.00	2	20.0
2019 Max Case	0.00	0.00	1.00	1	20.0

Total Case VMT	Passenger Vehicles	Delivery/Work Vehicles	Heavy-Heavy Duty Vehicles	Total Unpaved VMT	Average Weight (Tons)
Total Project	260	73	766	1,100	14.9

Uncontrolled Emission Factors and Emissions

Daily Emission Factors (lb/VMT)

	PM10 Daily	PM2.5 Daily
2017 Max Case	3.52	0.35
2018 Max Case	3.52	0.35
2019 Max Case	3.52	0.35

Emissions (Lbs/day)

	PM10	PM2.5
2017 Max Case	7.04	0.70
2018 Max Case	7.04	0.70
2019 Max Case	3.52	0.35

Total Emission Factors (lb/VMT)

	PM10 Annual	PM2.5 Annual
Total Project	2.96	0.30

Emissions (Tons)

	PM10	PM2.5
Total Project	1.63	0.16

Controlled Emissions (assumes 61% with watering)

Emissions (Lbs/day)

	PM10	PM2.5
2017 Max Case	2.75	0.27
2018 Max Case	2.75	0.27
2019 Max Case	1.37	0.14

Emissions (Tons)

	PM10	PM2.5
Total Project	0.64	0.06

Watering (61%) is assumed as a necessary Rule 403 control measure

Emission Control
61%

3) Disturbed Area Windblown Emissions

Assumptions
1. Emission Factor is 0.38 tons/disturbed acres/year of Total Suspended Particulate (AP-42 Section 11.9).
2. PM10 and PM2.5 fractions of TSP are 0.489 and 0.102 respectively per CEIDARS factors from SCAQMD CEQA Website.
3. The disturbed area totals 0.2 acres for 1.5 years (0.3 acre-years).
4. Duration of disturbance is the eight month construction schedule.
5. Disturbed areas are controlled by water dust suppression of 61% control.
6. Restoration of disturbed acres creates no net emission increase of permanently disturbed acres

Disturbed Acres (acre-years)	Total Emissions (Tons) PM10	Total Emissions (Tons) PM2.5
0.3	0.02	0.00

Emissions (Lbs/day) PM10	Emissions (Lbs/day) PM2.5
0.08	0.02

* Disturbance area includes piles of earth fill.

Redmont Pump Station Construction

Construction - Fugitive Dust Mitigated Emission Calculations

Maximum Daily 2017 (1B)

	PM10	PM2.5
Dozing	5.63	2.79
Material Loading/Handling	0.86	0.13
Paved Road Dust	3.21	0.79
Unpaved Road Dust	2.75	0.27
Disturbed Area Windblown Emissions	0.08	0.02
Total	12.53	4.00

2017 LST Maximum (1B)

	PM10	PM2.5
Dozing	5.63	2.79
Material Loading/Handling	0.86	0.13
Paved Road Dust	0.00	0.00
Unpaved Road Dust	2.75	0.27
Disturbed Area Windblown Emissio	0.08	0.02
Total	9.32	3.22

Maximum Daily 2018 (2C)

	PM10	PM2.5
Dozing	5.63	2.79
Material Loading/Handling	0.54	0.08
Paved Road Dust	0.55	0.14
Unpaved Road Dust	2.75	0.27
Disturbed Area Windblown Emissions	0.08	0.02
Total	9.55	3.30

2018 LST Maximum (2C)

	PM10	PM2.5
Dozing	5.63	2.79
Material Loading/Handling	0.54	0.08
Paved Road Dust	0.00	0.00
Unpaved Road Dust	2.75	0.27
Disturbed Area Windblown Emissio	0.08	0.02
Total	9.00	3.17

Maximum Daily 2019 (2M)

	PM10	PM2.5
Dozing	5.63	2.79
Material Loading/Handling	0.00	0.00
Paved Road Dust	1.10	0.27
Unpaved Road Dust	1.37	0.14
Disturbed Area Windblown Emissions	0.08	0.02
Total	8.19	3.22

2019 LST Maximum (2M)

	PM10	PM2.5
Dozing	5.63	2.79
Material Loading/Handling	0.00	0.00
Paved Road Dust	0.00	0.00
Unpaved Road Dust	1.37	0.14
Disturbed Area Windblown Emissio	0.08	0.02
Total	7.08	2.95

Total Fugitive Emissions

	PM10	PM2.5
Dozing	0.06	0.03
Material Loading/Handling	0.01	0.00
Paved Road Dust	0.24	0.06
Unpaved Road Dust	0.64	0.06
Disturbed Area Windblown Emissions	0.02	0.00
Total	0.96	0.16

Redmont Pump Station Construction

Construction - Painting VOC Emission Calculations

Assumptions

1) Painting occurs in two phases, first for the new pump station building (During Phase 1P) and then for the welded tank (Phase 2H).

2) The surface area for the new pump station painting is assumed to be 8,000 square feet, 2 coats applied, with painting taking 5 days.

3) The surface area for the inside and outside of the new tank is assumed to be 6,550 square feet outside and 6,400 square feet with two coats outside and one inside with painting taking 8 days.

4) Paint is assumed to be 50 grams/liter VOC for architectural coatings per Rule 1113, with coverage of 80 square feet per liter.

5) Paint is assumed to be 100 grams/liter VOC for tank Industrial Maintenance Coating per Rule 1113, with coverage of 66 square feet per liter.

Tank Painting

	Surface	Coats	Coverage	Liters	VOC/liter	lbs/VOC	
Inside	6,400	1	66	96.9697	100	21.38	
Outside	6,550	2	66	198.4848	100	43.76	
			sqft/liter		g/liter	65.14	Total lbs VOC
						8.14	Lbs/day

Pump Station Building

	Surface	Coats	Ft2/liter	Liters	VOC/liter	lbs/VOC	
Inside/Outside	8,000	2	80	200	50	22.05	Total lbs VOC
			sqft/liter		g/liter	4.41	Lbs/day

Redmont Pump Station Construction

Construction - Onroad Vehicles GHG Emission Calculations

Assumptions:

1. GHG emissions are estimated based on guideline and emission factors provided by The Climate Registry General Reporting Protocol (ver. 2.0 March 2013) and April 2015 updated emissions factors

EMFAC 2014 Fuel Consumption Rate in South Coast Air Basin in 2017 (gallon/mile)

Passenger	Gasoline	0.042813
Delivery	Diesel	0.076298
Heavy-Heavy Duty	Diesel	0.179449

TCR Table 13.1 Carbon Dioxide Emission Factors for Transport Fuels (kg CO2/gallon)

	CO2
Motor Gasoline	8.78
Diesel	10.21

TCR Table 13.5 Emission Factors for Each Fuel and Vehicle Type (g/mile)

		CH4	N2O
Passenger	Gasoline	0.0168	0.0051
Delivery	Diesel	0.0010	0.0015
Heavy-Heavy Duty	Diesel	0.0051	0.0048

Onroad Emission Factors - 2014 (pounds/mile)

	CO2	CH4	N2O
Passenger	0.82872	0.00004	0.00001
Delivery	1.71740	0.00001	0.00001
Heavy-Heavy Duty	4.03925	0.00001	0.00001

Total On-road GHG Emissions

	VMT	Total Emissions (tons)			
Vehicle Type	Total	CO2	CH4	N2O	CO2e
Passenger	181,320	75.13	0.00	0.00	75.52
Delivery	36,750	31.56	0.00	0.00	31.62
Heavy-Heavy Duty	16,515	33.35	0.00	0.00	33.38
	Totals	140.04	0.00	0.00	140.52

Redmont Pump Station Construction

2. For diesel-fueled equipment, fuel consumption rate of 0.38 lbs/bhp-hr and density of 6.8 lbs/gallon are used.
3. For gasoline-fueled equipment, fuel consumption rate of 0.47 lbs/bhp-hr and density of 6.0 lbs/gallon are used.

TCR Table 13.1 Carbon Dioxide Emission Factors for Transport Fuels (kg CO2/gallon)

	CO2 (kg/gallon)
Motor Gasoline	8.78
Diesel	10.21

TCR Table 13.7 Methane and Nitrous Oxide Emission Factors for Non-Highway Vehicles

Construction	CH4 (g/gallon)	N2O (g/gallon)
Gasoline	0.50	0.22
Diesel	0.58	0.26

Total Offroad GHG Emissions

	Fuel Use (gallon)	Total Emissions (tons)			
		CO2	CH4	N2O	CO2e
Gasoline	5	0.05	0.00	0.00	0.05
Diesel	11,291	127.09	0.01	0.00	128.25
Totals	11,296	127.14	0.01	0.00	128.30

Redmont Pump Station Operation

Operation GHG Emissions

General Assumptions:

1. GHG emissions for basic O&M inspection work of this non-manned pump station are assumed to be the same or lower due to reduced maintenance requrirements for the new equipment, so GHG emissions would not increase from baseline.
2. LADWP estimates that the total electricity use would increase by 60 to 100 percent from current baseline. It is expected that the future baseline has the same water delivery capacity as for the proposed project (water delivery needs are not effected by the project, the project to some extent is addressing those future delivery needs). Therefore, the worst-case GHG emissions are a comparison with existing baseline and a more reasonable comparison would be a comparison with future baseline based on the differences in pump efficiency.
3. There is no estimate for the increase/decrease of electricty for the use of new pumps, but LADWP has provided information to determine existing and new pump efficiencies.
4. GHG emissions for electricity use are estimated based on guidelines and emission factors provided by The Climate Registry General Reporting Protocol and current Climate Registry Default Emission Factors

Indirect Electricty Use CO2e Emissions

Emissions increase from current baseline

Assumptions:

1. The current average hourly electricity use, determined by LADWP, is 160 kW per hour based on 2015 records.
2. Worst case assumption is an increase from current baseline of 100 percent, or 160 kW/hr.

	kWh	Hours	CO2e/MWh	CO2E tons/yr
Change in Electricity Use	160	8,760	613.22	429.74

Emissions change from future baseline

Assumptions:

1. Pumping to the new 1960-foot tank, based on current limited pumping capacities, would have to be done through new pumping infrastruture regardless of the project. Therefore, the GHG emissions from that new water delivery for the project would be the same as for the future baseline. Therefore, the change in GHG emissions for the project versus future baseline is based on the difference in the pumping efficiency to the 2086-foot system.
2. The current RPS pump efficiency, where all water is pumped to the 2086-foot system, based on average hourly water flow and head, and average electricity consumption is calculated to be 68.81 percent. This is calculated as follows:
   (1523.2 gpm x 60 min/hr x 8.33 lbs/gallon x 384 feet of head / 2,655.34 ft-lb/watt-hours) / 160,000 watts/hour = 0.6881
3. The new pump efficiency for the 2086-foot system pumps is calculated from LADWP supplied vendor data for the motor (95.8 percent efficient) and the pump (76.9 percent efficient) for 393.1 feet of head, which is slightly more than the 387 feet of head required. The multiplication of these two efficiencies provides a total efficiency of 73.67 percent.
4. The difference in electricity use between the project and future baseline, assuming no increase in water delivery to the 2086-foot system from current baseline, is a function of the different pump efficiencies where there is a net reduction in use of 11.3 kW/hr based on the increase in efficiency of the new pumps. (160 kW/hr x (0.7367/0.6881 - 1) = 11.3 kWh)

	kWh	Hours	CO2e/MWh	CO2E tons/yr
Change in Electricity Use	-11.3	8,760	613.22	-30.35

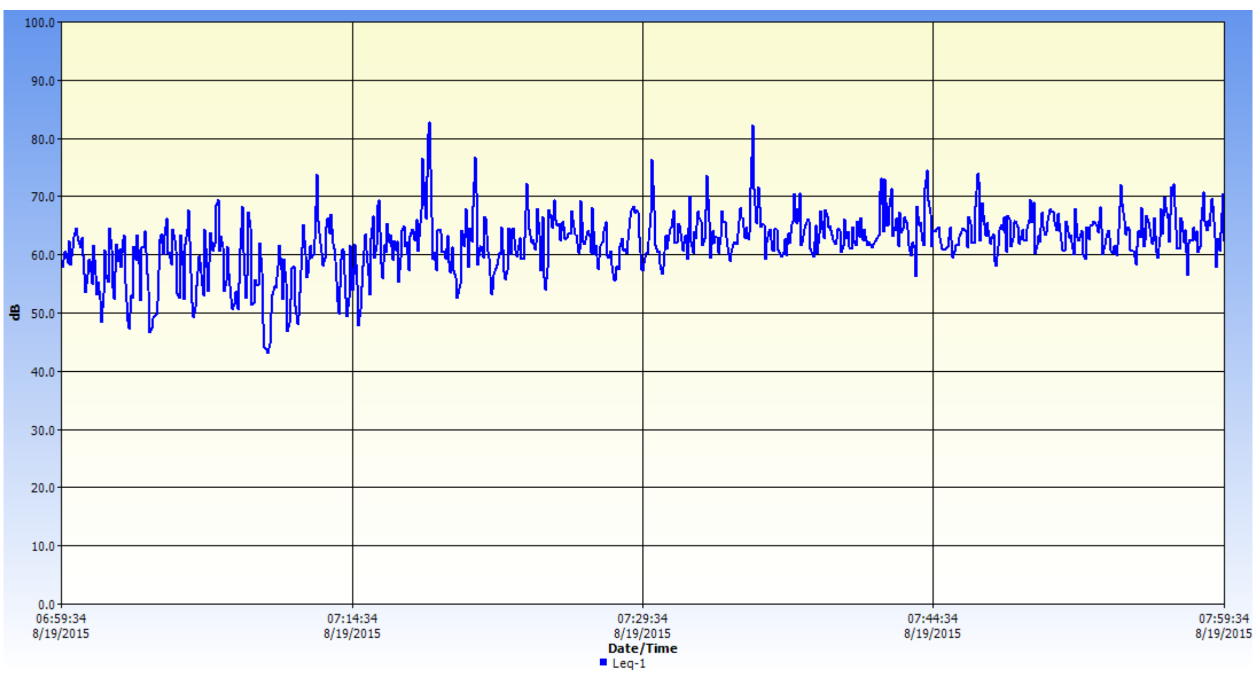
APPENDIX D: Ambient Noise Measurement Details

Location N1: 10461 Tujunga Canyon Boulevard (Residence)

TABLE 1. AMBIENT NOISE MEASUREMENT N1: SUMMARY

No.	Date/Time	Measurement (dBA)			Notes
		Lmin	Leq	Lmax	
N1	August 19, 2015 (Wednesday) 6:59 a.m. – 8:00 a.m.	42.8	65.2	87.7	The primary noise source was continuous traffic on Tujunga Canyon Boulevard and Summitrose Street. The sound meter was located 30' from the centerline of Tujunga Canyon Boulevard and 60' from the centerline of Summitrose Street. Secondary noise sources included students walking along street to school. Measurement location was ~85' from RPS site boundary and ~185' from RPS site center.

CHART 1. AMBIENT NOISE MEASUREMENT N1: LEQ

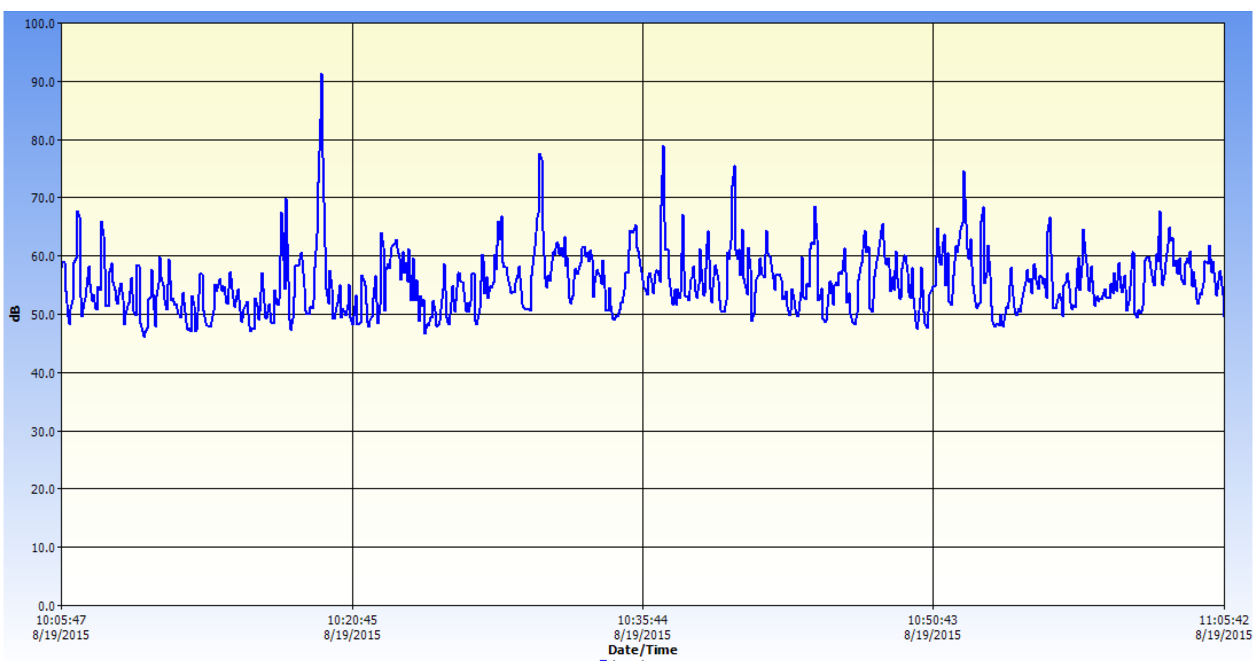


Location N2: 10515 Tujunga Canyon Boulevard (Residence)

TABLE 2. AMBIENT NOISE MEASUREMENT N2: SUMMARY

No.	Date/Time	Measurement (dBA)			Notes
		Lmin	Leq	Lmax	
N2	August 19, 2015 (Wednesday) 10:05 a.m. – 11:05 a.m.	44.9	59.6	91.0	The primary noise source was roadway traffic on Tujunga Canyon Boulevard and Summitrose Street. The sound meter was located 35’ from the centerline of Tujunga Canyon Boulevard and 145’ from the centerline of Summitrose Street. Secondary noise sources included nearby dog barking. Measurement location was ~ 70’ from RPS site boundary and ~130’ from RPS site center.

CHART 2. AMBIENT NOISE MEASUREMENT N2: LEQ



Location N3: 10514 Redmont Avenue (Residence)

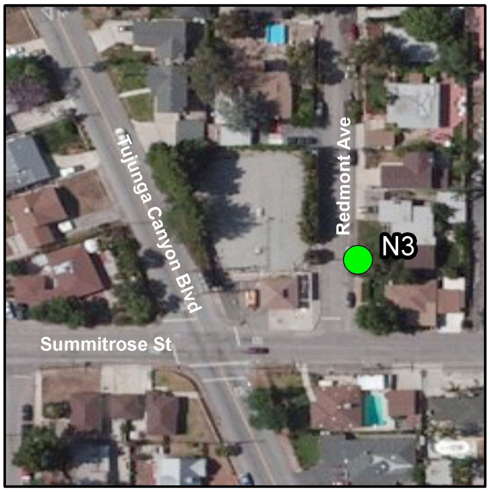
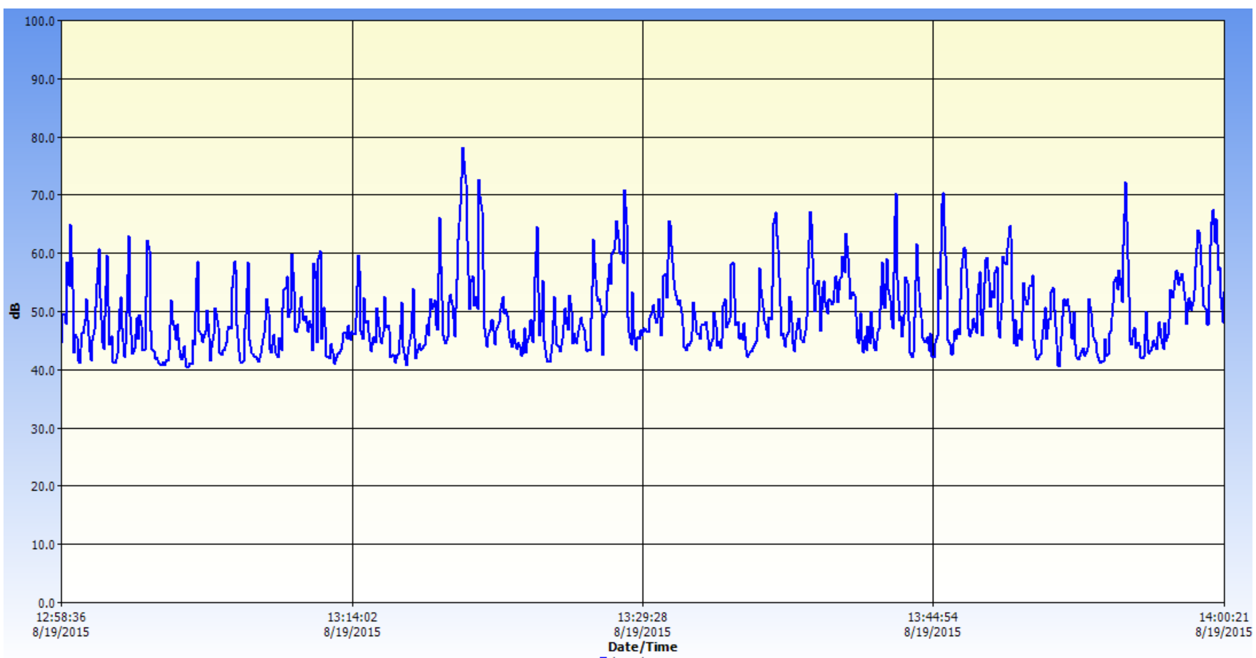


TABLE 3. AMBIENT NOISE MEASUREMENT N3: SUMMARY

No.	Date/Time	Measurement (dBA)			Notes
		Lmin	Leq	Lmax	
N3	August 19, 2015 (Wednesday) 12:58 p.m. – 2:00 p.m.	39.8	57.3	79.7	The primary noise source was relatively frequent traffic on Redmont Avenue and Summitrose Street. The sound meter was located 15' from the centerline of Redmont Avenue and 115' from the centerline of Summitrose Street. Secondary noise sources included nearby yard maintenance. Measurement location was ~ 35' from RPS site boundary and ~80' from RPS site center.

CHART 3. AMBIENT NOISE MEASUREMENT N3: LEQ

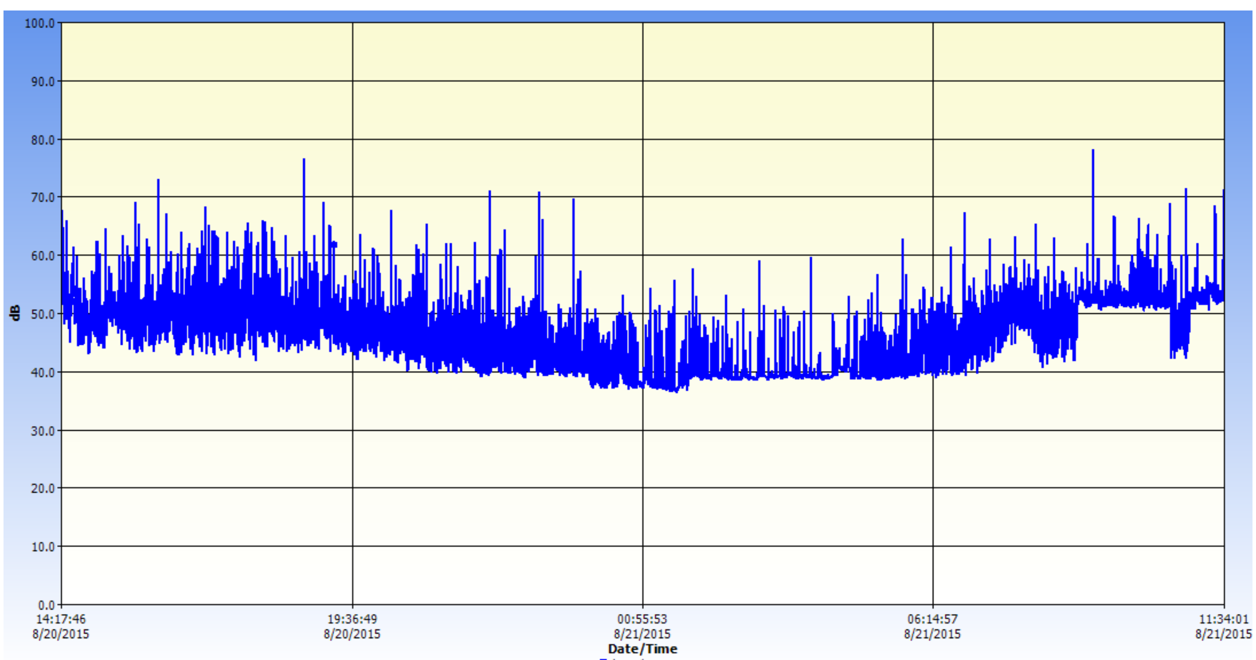


Location N4: Redmont Pump Station (Northern Site Boundary)

TABLE 4. AMBIENT NOISE MEASUREMENT N4: SUMMARY

No.	Date/Time	Measurement (dBA) Lmin	Leq	Lmax	Notes
N4	August 20, 2015 (Thursday) 2:17 p.m. – August 21, 2015 (Friday) 11:34 a.m.	35.8	50.9	81.8	The primary noise source was roadway traffic on Tujunga Canyon Boulevard, Summitrose Street, and Redmont Avenue. Secondary noise sources included adjacent resident activities and dog barking. The sound meter was located 95' from the centerline of Tujunga Canyon Boulevard, 185' from the centerline of Summitrose Street, 70' from the centerline of Redmont Avenue, and 25' from the nearest residential structure to the north.

CHART 4. AMBIENT NOISE MEASUREMENT N4: LEQ



APPENDIX E: Traffic Study

Traffic Study for the Los Angeles Department of Water and Power Redmont Pumping Station and Tank

DRAFT

Los Angeles, California

October 30, 2015

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1. Introduction

This report documents the traffic analysis prepared by KOA Corporation to assess the traffic impact of the proposed Los Angeles Department of Water and Power (LADWP) construction of the new Redmont Pumping Station (RPS) and Tank, located at the site of the existing Redmont Reservoir in the Sunland-Tujunga neighborhood of the City of Los Angeles.

LADWP is considering the following under the Project environmental review effort:

Construction of the new RPS and Tank facility will have a total of eight pumps, six electric pumps and two internal combustion pumps. The new Redmont Tank will be a 570,000 gallon steel tank. Both facilities will replace the existing Redmont Reservoir and tank facility.

The traffic study was conducted by KOA to satisfy the requirements of project environmental documentation by LADWP. The analysis focused on project construction-related effects on intersection and roadways for site-based construction of necessary facilities. Additional focus of the traffic study effort was on the effects on potential impacts to transit access and pedestrian/bicycle access.

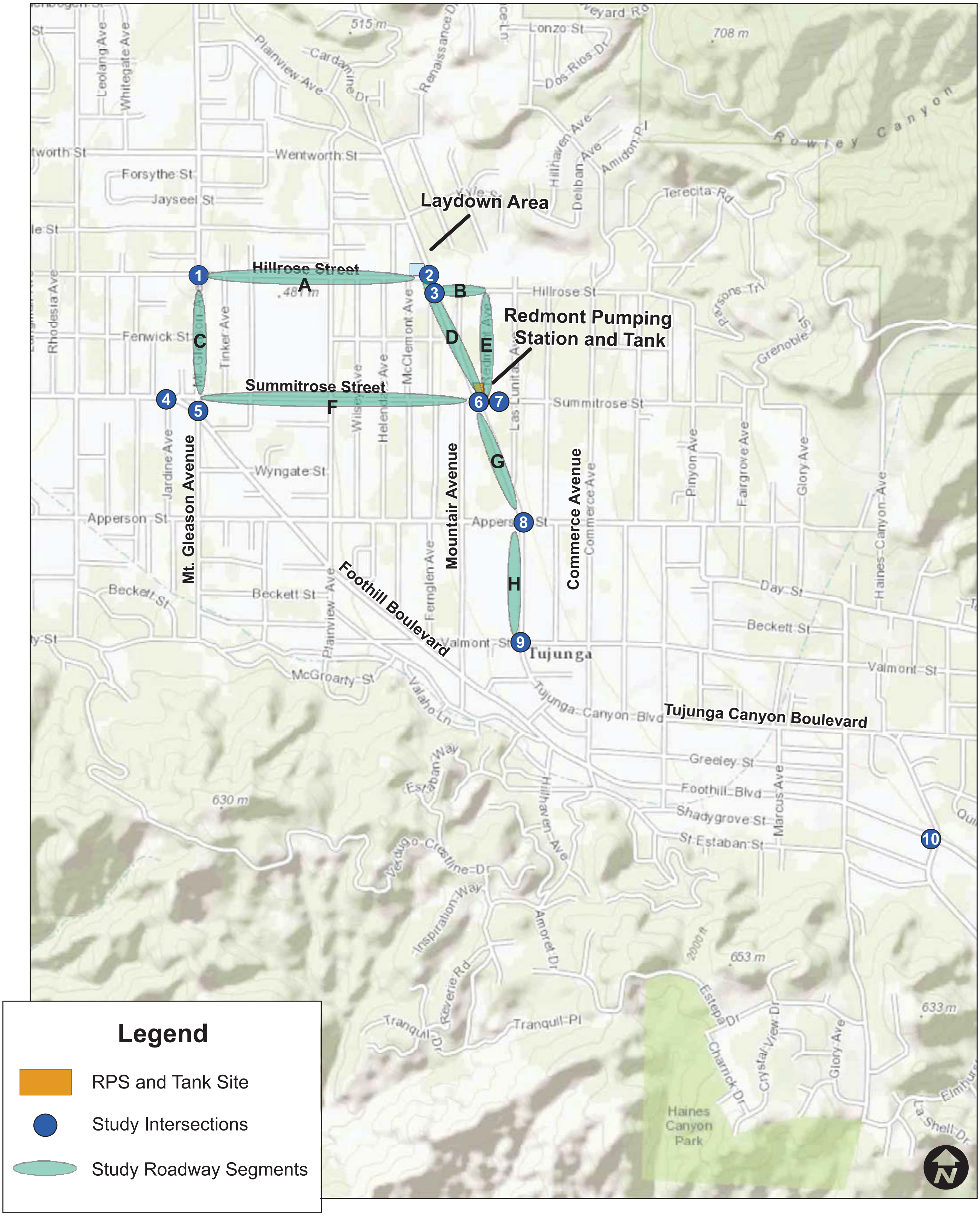
This analysis assumes that any trip generation increases in the post construction period, as a result of new site facilities, would not require the analysis of traffic impacts from Project operations, due to the anticipated low number of trips that would be generated by operations. Routine project maintenance in the operations period will not create a significant level of regularly-generated trips.

1.1 Project Location

The Redmont Pumping Station (RPS) is located at 10501 Redmont Avenue in the Sunland-Tujunga community in the City of Los Angeles.

Figure 1 illustrates the Project study area.

The Project would be located within an urbanized area in the City of Los Angeles. Land uses in the vicinity of the proposed Project are predominantly residential (single- and multi-family) and commercial.



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LADWP Redmont Pumping Station and Tank Project	Figure 1
	Project Study Area

1.2 Project Description

Construction of the new RPS and Tank facility will have a total of eight pumps, six electric pumps and two internal combustion pumps. The new Redmont Tank will be a 570,000 gallon steel tank. Both facilities will replace the existing Redmont Reservoir and tank facility.

Project Background and Need:

Redmont Reservoir, located at 10501 Redmont Avenue in Sunland, was built in 1920 by the Southern California Water Company and acquired by LADWP in 1951. The 435,000-gallon reservoir is an excavated and concrete-lined reservoir with a built-up roof supported by redwood timber roof framing and ¾-inch thick redwood planking. The quadrilateral shaped reservoir measures on average 80 feet in width and 105 feet in length and is 12.75 feet deep. An inspection of the reservoir in 1992, found that the reservoir liner and roof were in poor condition. The liner had horizontal cracking, tree root intrusion, and was constructed of low strength concrete. Necessary repairs were made to the liner and roof; however, the inspection report recommended that the roof and liner be replaced within the next ten years.

During the summer months when water demands are high the suction grades become low, and the three vertical turbine pumps with a priming system that draws from Redmont Reservoir must be placed on line suction requiring manual valve changes. The new pump station and tank design will eliminate low suction issues and switching to line suction will no longer be necessary.

The traffic study analyzed construction impacts at nearby intersections and roadways.

1.3 Traffic Analysis Methodology

The focus of this traffic impact study is on the construction period of the proposed Project. The post-construction operations period will not generate significant levels of daily traffic, and only routine maintenance activities will be required. Selected intersections and roadway segments were analyzed along the major construction truck routes.

The steps involved in the analysis included internal scoping of the work with the project team; collection of baseline traffic data; analysis of existing, existing-with-construction, and future with-construction conditions; identification of significant impacts and other circulation issues; and development of recommendations for mitigation, if necessary. Further details of the methodology applied to this effort are summarized below.

Study Area and Orientation

Key intersections and roadway segments that would be most affected by construction traffic to and from the Project site were identified and analyzed.

Data Collection

Weekday turn movement counts (7:00 a.m. to 10:00 a.m. and 3:00 p.m. to 6:00 p.m.) were conducted at 10 study intersections. In addition, daily roadway volume counts were collected at eight (8) study area roadway segments. Study intersection and roadway segment traffic volumes were collected on September 17, 2015.

Definition of Analysis Periods

The study analysis periods were based on existing conditions (the time when the traffic counts were conducted), and the peak and latest year of construction of the proposed Project (defining the future analysis year with the highest background traffic volumes). The future analysis period was defined as the year 2019, based on construction details.

1.4 Level of Service Definition

The concept of level of service (LOS) for roadway segments is typically defined in terms of average travel speed of all vehicles on the facility. The number of vehicles using the roadway, as compared to the capacity of the roadway, greatly affects travel speed. Roadway operations are influenced by the density of signalized intersections per mile, average intersection delay, the number of driveways per segment and the presence of on-street parking.

Table 1 provides descriptions of general roadway operations for each LOS value, as defined within the 2010 *Highway Capacity Manual* (published by the Transportation Research Board).

Table 1 – Level of Service Definitions

LOS	Definition	Average Stop Delay Per Vehicle (Sec/Veh) (HCM)	Volume to Capacity Ratio (ICU)
A	LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.	≤10	0.000 - 0.600
B	LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.	>10 - 15	0.601 - 0.700
C	LOS C describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.	>15 - 25	0.701 - 0.800
D	LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.	>25 - 35	0.801 - 0.900
E	LOS E is characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.	>35 - 50	0.901 - 1.000
F	LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.	>50	Greater than 1.000

Source: Highway Capacity Manual, 2010.

Section 3 of this report provides a review of existing LOS values at the study intersections and roadway segments. Section 5 provides a review of existing plus-Project conditions and impacts, and Section 6 provides a review of pre-Project (pre-construction and pre-operations) conditions. Future with-Project construction period conditions and impacts are reviewed within Section 7.

2. Project Construction Summary

This section of the report identifies the construction activity that would occur with the proposed Project and pipeline construction.

Truck traffic and construction employee traffic at the RPS site has been included in this analysis.

2.1 Project Construction Details

Project construction would be accomplished in two phases and will last approximately two years. Phase 1 will commence in mid-2017 and last until mid-2018. Phase 2 will commence in mid-2018 and last until mid-2019. Construction activities would typically occur from 7:00am to 3:30pm, but with construction on major city streets not beginning before 9:00am in accordance with the City of Los Angeles Mayor's Directive No. 2, which prohibits construction on selected roads between 6:00am and 9:00am and between 3:30pm and 7:00pm.

Throughout the construction period, asphalt, concrete, and other demolished material would be hauled off by truck for disposal at a designated disposal site.

As trucks are filled with spoils, they would leave the work areas and be replaced by empty trucks. Delivery trucks carrying materials and pipeline elements would arrive as-needed during construction, with a low average number of truck trips generated on an average day.

Deliveries to the RPS site will take place by creating temporary access to the site via a dirt road from Tujunga Canyon Boulevard. Additional temporary access points may also be created along Summitrose Street or Redmont Avenue, as needed. The small size of the RPS site will likely require temporary staging and work activities to take place on-street periodically. Impacts due to temporary lane closures and parking are discussed in Section 7 of this report.

Lane closure for construction activities will be shown on the traffic control plans, to be submitted by the applicant to LADOT for the construction zone at the site.

Construction staging will mostly take place on-site. Some staging will take place on an empty lot located on the northwest corner of Tujunga Canyon Boulevard and Hillrose Street, called the Laydown Area.

Construction personnel will also park their vehicles at the Laydown Area at Tujunga Canyon Boulevard and Hillrose Street.

3. Existing Area Traffic Conditions

This report section describes the characteristics of the intersections and roadways within the study area. A review of the collected traffic volumes is provided, along with a level of service analysis for these facilities.

3.1 Study Intersections and Roadway Segments

For the traffic impact analysis, 10 locations were defined as study intersections. Existing intersection traffic volumes were collected on Thursday, September 17, 2015. The following are the 10 signalized study intersections:

1. Mt. Gleason Avenue & Hillrose Street
2. Tujunga Canyon Boulevard & Hillrose Street (North)
3. Tujunga Canyon Boulevard & Hillrose Street (South)
4. Jardine Avenue & Foothill Boulevard
5. Mt. Gleason Avenue & Foothill Boulevard
6. Tujunga Canyon Boulevard & Summitrose Street
7. Redmont Avenue & Summitrose Street
8. Tujunga Canyon Boulevard & Apperson Street
9. Tujunga Canyon Boulevard & Valmont Street
10. Tujunga Canyon Boulevard & Foothill Boulevard

The following eight roadway segments were also included in the study area:

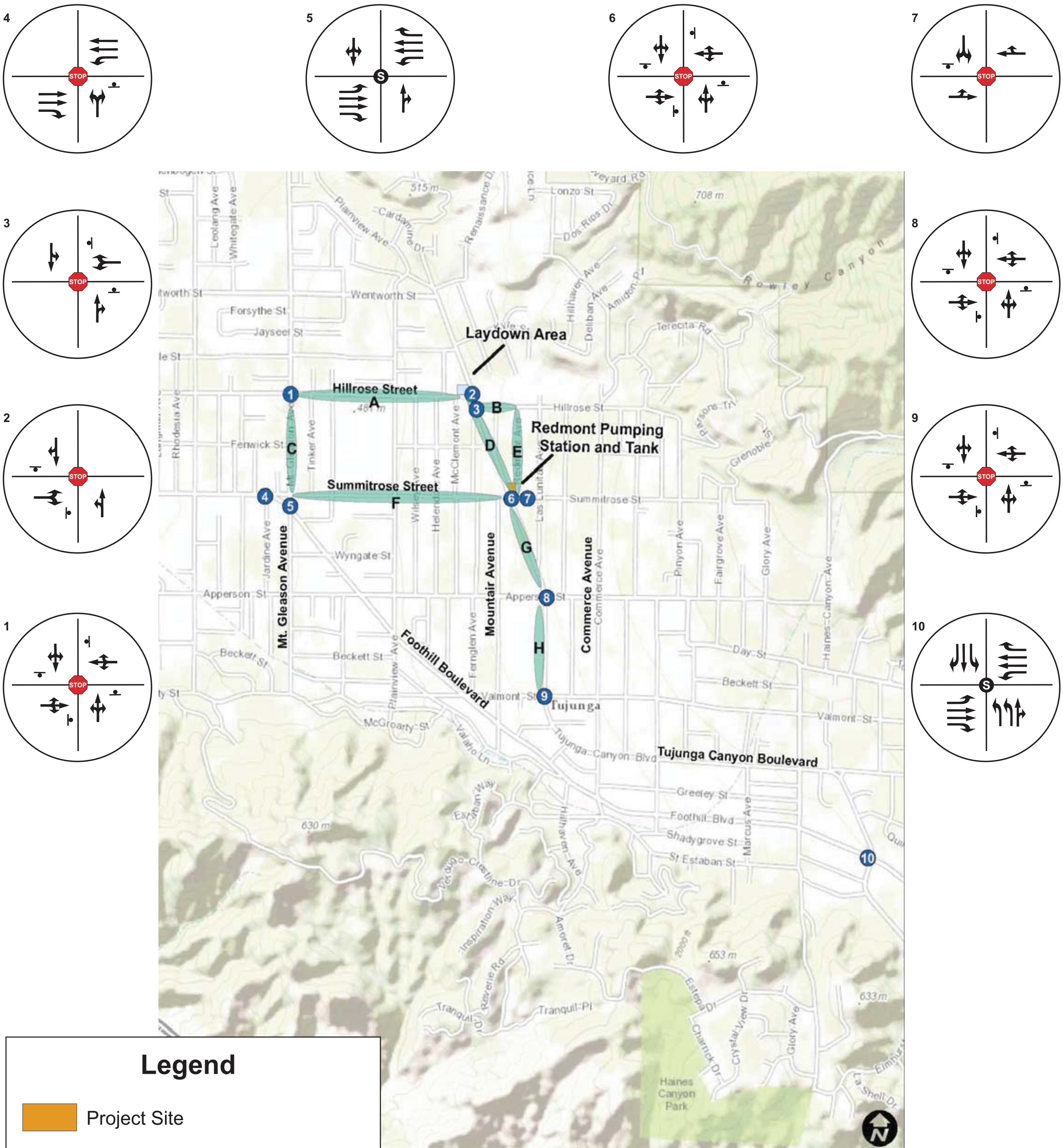
A. Hillrose Street, between Mt. Gleason Avenue & Tujunga Canyon Boulevard
B. Hillrose Street, between Tujunga Canyon Boulevard & Redmont Avenue
C. Mt. Gleason Avenue, between Hillrose Street & Summitrose Street
D. Tujunga Canyon Boulevard, between Hillrose Street & Summitrose Street
E. Redmont Avenue, between Hillrose Street & Summitrose Street
F. Summitrose Street, between Mt. Gleason Avenue & Tujunga Canyon Boulevard
G. Tujunga Canyon Boulevard, between Summitrose Street & Apperson Street
H. Tujunga Canyon Boulevard, between Apperson Street & Valmont Street

The associated daily study roadway segment counts were collected during the same days as the study intersection counts.

Figure 2 illustrates the study intersection approach lanes and control configurations. The intersection traffic count summaries are provided in Appendix A1 of this report, and roadway segment count summaries are provided in Appendix A2.

3.2 Local Roadway Characteristics

Table 2 summarizes the characteristics of key roadway segments along the major construction traffic routes.



Legend

- Project Site
- Study Intersections
- Study Roadway Segments
- STOP Unsignalized Intersection
- S Signalized Intersection
- Intersection Lane Configuration

Note
* De facto right turn lane assumed due to wide curb lane

Table 2 – Project Corridor Roadway Characteristics

Roadway	Classification	# Lanes		Median Type	Parking Restrictions		Posted Speed Limit (mph)	General Land Use
		NB/ EB	SB/ WB		North Side / East Side	South Side / West Side		
Hillrose Street	Collector	1	1	NS	No Restrictions	No Restrictions	30	Residential
Mt. Gleason Avenue	Collector	1	1	ST / NS	No Restrictions	No Restrictions	30 / 25	Residential
Tujunga Canyon Boulevard	Collector / Avenue II	1	1	DY / 2LT	No Restrictions	No Restrictions	30	Commercial / Residential
Redmont Avenue	Local Street	1	1	NS	No Restrictions	NPAT	-	Residential
Summitrose Street	Collector	1	1	ST	No Restrictions / NSAT	No Restrictions / NSAT / NS 7am-5pm School Days	30 / 25	Residential / School
Foothill Boulevard	Avenue I	2	2	DY / 2LT	No Restrictions / 2 Hr Parking 8am-6pm	No Restrictions / 2 Hr Parking 8am-6pm	35	Commercial

DY - Double Yellow
RM - Raised Median
ST - Striped
NSAT - No Stopping Any Time
NS - No Striping
CTL - Center Turn Lane
NPAT - No Parking Any Time
2LT - Two Way Left-Turn lane

3.3 Existing Area Transit Service

The project study area is served by public transit bus lines operated by LADOT and the Los Angeles County Metropolitan Transportation Authority (Metro). Table 3 provides a description of the transit lines that serve the Project area.

Table 3 – Transit Service Summary

Agency	Line	From	To	Via	Peak Frequency
Metro	90	Downtown Los Angeles	Sylmar	Foothill Boulevard	30 - 50 Minutes
Metro	91	Downtown Los Angeles	Sylmar	Foothill Boulevard	30 - 50 Minutes
Metro	222	Hollywood	Sunland	Foothill Boulevard / Mt. Gleason Avenue / Summitrose Street	26 - 45 Minutes
Commuter Express	409	Downtown Los Angeles	Glendale	Foothill Boulevard	10 - 40 Minutes

3.4 Existing Intersection Levels of Service

This report section documents existing weekday a.m. and p.m. peak-hour traffic conditions within the study area. Based on the traffic counts conducted at the study intersections, a level of service (LOS) value and a corresponding volume-to-capacity (v/c) ratio was determined for each study intersection.

Table 4 provides the delay, V/C and LOS values under existing conditions, for the a.m. and p.m. peak hours.

Table 4 – Intersection Level of Service Calculations – Existing Conditions

	Study Intersections	AM Peak		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS
1	Mt. Gleason Avenue & Hillrose Street *	13.5	B	9.6	A
2	Tujunga Canyon Boulevard & Hillrose Street (North) *	10.5	B	8.5	A
3	Tujunga Canyon Boulevard & Hillrose Street (South) *	10.5	B	8.6	A
4	Jardine Avenue & Foothill Bouelvard *	67.9	**F**	58.6	**F**
5	Mt. Gleason Avenue & Foothill Boulevard	0.578	A	0.551	A
6	Tujunga Canyon Boulevard & Summitrose Street *	11.7	B	9.4	A
7	Redmont Avenue & Summitrose Street *	9.2	A	9.1	A
8	Tujunga Canyon Boulevard & Apperson Street *	16.1	C	10.9	B
9	Tujunga Canyon Boulevard & Valmont Street *	13.3	B	10.5	B
10	Tujunga Canyon Boulevard & Foothill Boulevard	0.800	C	0.718	C

LOS = Level of Service; V/C = Volume-to-Capacity Ratio
** Unsignalized Intersections*

The data in Table 4 indicates that 9 of the 10 study intersections are currently operating at LOS D or better during the a.m. and p.m. peak hours. The following intersections are operating at LOS E (poor operating conditions, nearing capacity) or LOS F (at / overcapacity):

- Jardine Avenue / Foothill Boulevard – Operating at LOS F in the a.m. and p.m. peak hours.

The existing peak-hour turn movement volumes at the study intersections are provided on Figure 3 (a.m. peak) and Figure 4 (p.m. peak).

The intersection level of service worksheets for the existing conditions scenario are provided in Appendix B of this report.

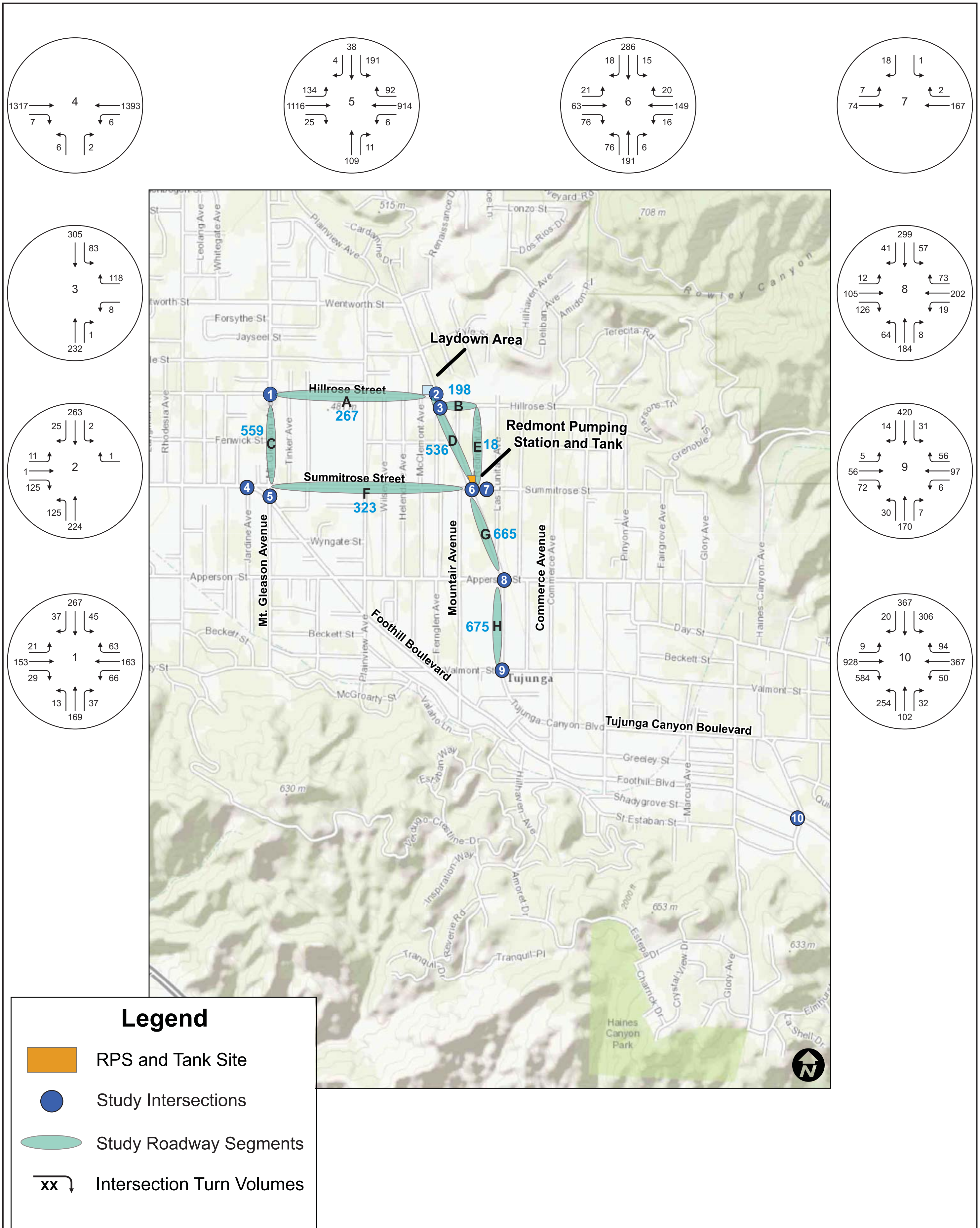


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Figure 3

Existing AM Peak Hour Traffic Volumes

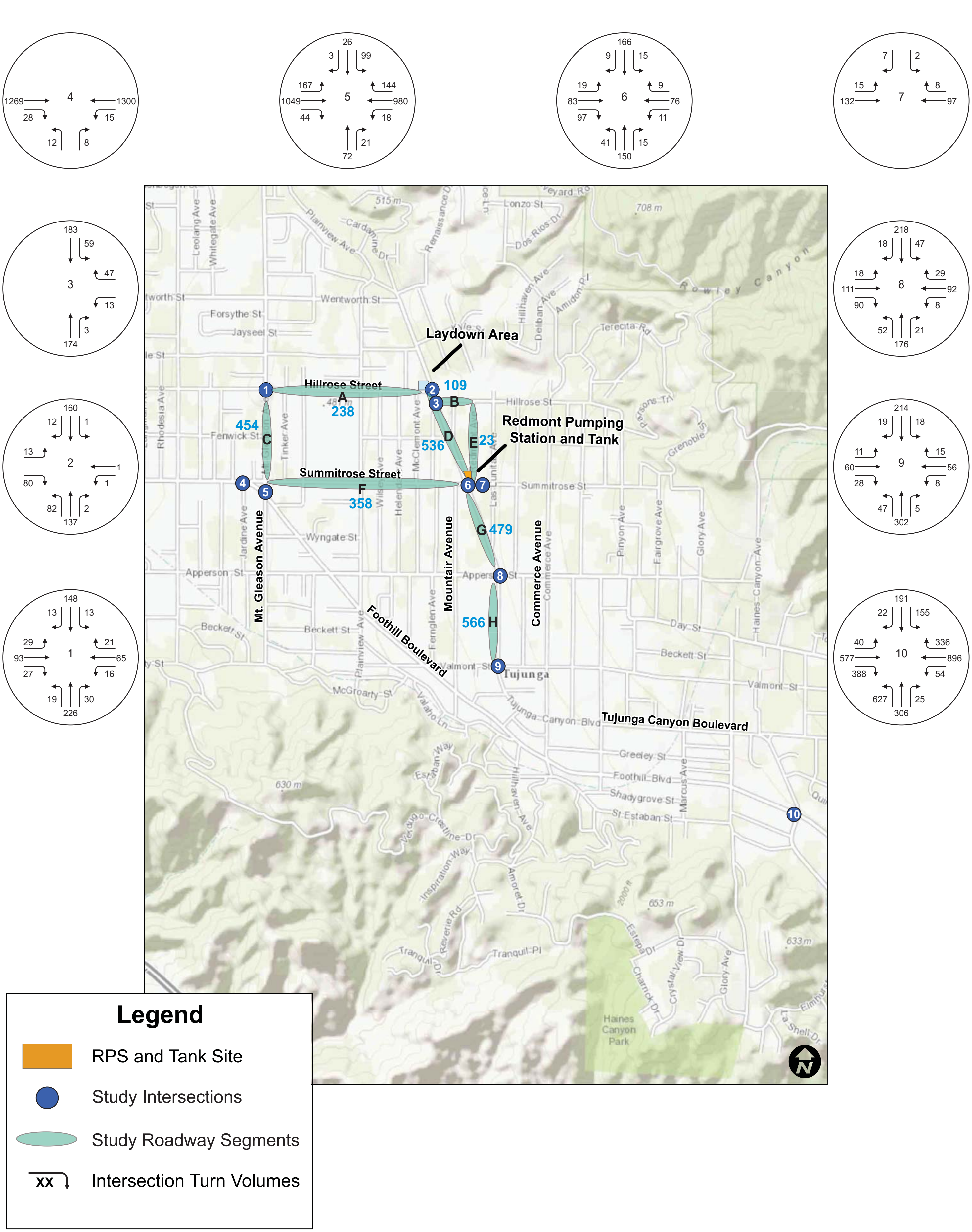

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Figure 4

Existing PM Peak Hour Traffic Volumes

3.5 Existing Roadway Segment Volumes

Table 5 provides a summary of the average daily traffic (ADT) volumes at the study roadway segment locations. Table 6 provides a summary of the existing peak-hour conditions.

**Table 5 – Study Roadway Segments –
Existing Weekday Daily Vehicle Volumes**

	Street Segments	Existing ADT
A	Hillrose Street Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	2,330
B	Hillrose Street Between Tujunga Canyon Boulevard & Redmont Avenue	1,160
C	Mt. Gleason Avenue Between Hillrose Street & Summitrose Street	5,298
D	Tujunga Canyon Boulevard Between Hillrose Street & Summitrose Street	3,965
E	Redmont Avenue Between Hillrose Street & Summitrose Street	200
F	Summitrose Street Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	4,445
G	Tujunga Canyon Boulevard Between Summitrose Street & Apperson Street	5,279
H	Tujunga Canyon Boulevard Between Apperson Street & Valmont Street	6,822

**Table 6 – Study Roadway Segments –
Existing Peak-Hour Level of Service**

	Street Segments	Peak Period	# of Lanes	Capacity	Existing Volumes		
					Existing		
					Volumes	V/C	LOS
A	Hillrose Street	AM	2	1,600	267	0.167	A
	Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	PM			238	0.149	A
B	Hillrose Street	AM	2	1,600	198	0.124	A
	Between Tujunga Canyon Boulevard & Redmont Avenue	PM			109	0.068	A
C	Mt. Gleason Avenue	AM	2	1,600	559	0.349	A
	Between Hillrose Street & Summitrose Street	PM			454	0.284	A
D	Tujunga Canyon Boulevard	AM	2	1,600	536	0.335	A
	Between Hillrose Street & Summitrose Street	PM			362	0.226	A
E	Redmont Avenue	AM	2	1,600	18	0.011	A
	Between Hillrose Street & Summitrose Street	PM			23	0.014	A
F	Summitrose Street	AM	2	1,600	323	0.202	A
	Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	PM			358	0.224	A
G	Tujunga Canyon Boulevard	AM	2	1,600	665	0.416	A
	Between Summitrose Street & Apperson Street	PM			479	0.299	A
H	Tujunga Canyon Boulevard	AM	2	1,600	675	0.422	A
	Between Apperson Street & Valmont Street	PM			566	0.354	A

All roadway segments are operating at LOS A.

4. Construction Period Trip Generation

This section provides definitions for truck and employee vehicle trip generation during the peak period of Project construction, along with the distribution and assignment of those trips to the study area roadway network. To evaluate a worst-case scenario for construction trip generation of the proposed Project, it is assumed that each employee will drive to and from the work areas, with 50% arriving and departing during peak periods.

This is a planning-level analysis of construction activity, used for the purposes of determining traffic impacts during the project construction period. Prior to initiating construction, a detailed construction plan will be developed by the construction manager to identify necessary resources and to define the construction supervisory and technical field organization and staffing levels required for the project. The methods and procedures for sequencing and implementing construction operations will also be detailed in the construction plan. In addition, a project safety program will be developed by the operator, consistent with federal and state requirements. This is a standard LADWP procedural requirement.

Therefore, basic construction details defined for the project planning process have been used to analyze potential construction-period impacts.

4.1 Project Trip Generation Methodology

Project trip generation calculations included construction employee vehicle trips and construction truck trip estimates. The trip generation totals were determined based on the most intense period of construction activity for the project.

In converting trucks to passenger car equivalents, a Passenger Car Equivalent (PCE) factor of 2.5 was assumed. This factoring was used to increase truck volumes due to the additional roadway space and design capacity utilized by larger and slower trucks. The applied value matches typical factors used in area studies that include trips generated by trucking activities. The factor is based on conservative factors defined by the Southern California Association of Governments (SCAG) Heavy Duty Truck Model.

4.2 Project Trip Generation Calculations

In calculating peak-hour trips for the project, it is assumed that a majority of the construction employees will arrive and depart the construction work areas by personal vehicles. The morning arrival by employees is assumed to overlap the a.m. peak hour by 50 percent, with the remaining 50 percent of employees assumed to be at the sites before 7:00 a.m. The same would occur during the p.m. peak hour, with 50 percent of employees assumed to depart the site before 4:00 p.m. Therefore, the same reduction was taken for both peak periods.

During project construction activity, daily truck haul activities will occur over an eight-hour period that begins during the a.m. peak period, and is complete during the p.m. peak period.

As indicated in Table 7, the Proposed Project construction would generate a daily total of 164 passenger car equivalent trips, with 34 (29 inbound and 5 outbound) trips occurring during the a.m. peak hour and 34 (5 inbound and 29 outbound) trips occurring during the p.m. peak hour.

Table 7 – Project Trip Generation

TRIP GENERATION SOURCE	MAXIMUM DAILY TRIPS			AM PEAK HOUR						PM PEAK HOUR					
				Truck Trips*		Employee Trips		Total Trips		Truck Trips*		Employee Trips		Total Trips	
	Trucks*	Employee	Total	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Trip Generation															
Field Personnel	0	47	94	0	0	24	0	24	0	0	0	0	24	0	24
Trucks	70	0	70	5	5	0	0	5	5	5	5	0	0	5	5
Grand Total Trips	**70**	**47**	**164**	**5**	**5**	**24**	**0**	**29**	**5**	**5**	**5**	**0**	**24**	**5**	**29**

** Truck trips include a Passenger Car Equivalency (PCE) factor of 2.5.*

Source: Los Angeles Bureau of Engineering: 14 daily truck roundtrips, 3 daily water truck roundtrips between staging area and RPS, and 47 field personel during most intensive phase of construction/demolition. Assuming 8 hour work day where 50% of personnel arrive before a.m. peak and 50% depart before p.m. peak hour.

In addition to these trips, an additional truck will deliver water from the Laydown Area to the RPS site three times a day, or six daily one-way trips. The water truck trips were included in Table 10 and Table 17 in roadway Segment D.

4.3 Construction Project Trip Distribution/Assignment

The distribution of construction truck trips was assumed to be primarily freeway-oriented.

The distribution pattern for analyzed employee trips assumed that employees would arrive to construction sites using primarily surface streets and freeways. Construction trip distribution is shown in Figure 5, and construction trip assignment is shown in Figure 6 (a.m. peak hour) and Figure 7 (p.m. peak hour).

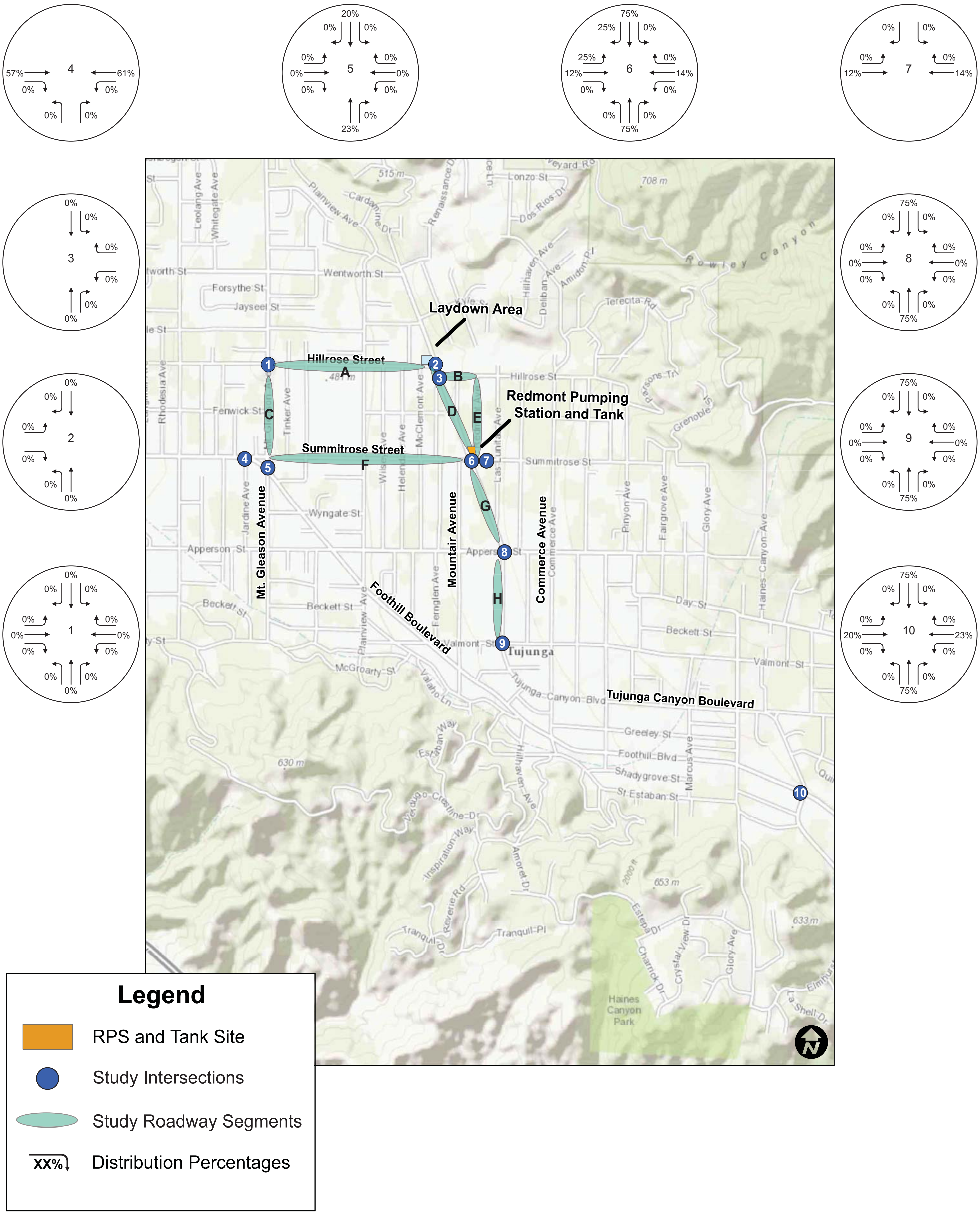

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Figure 5A

Construction Trucks Trip Distribution

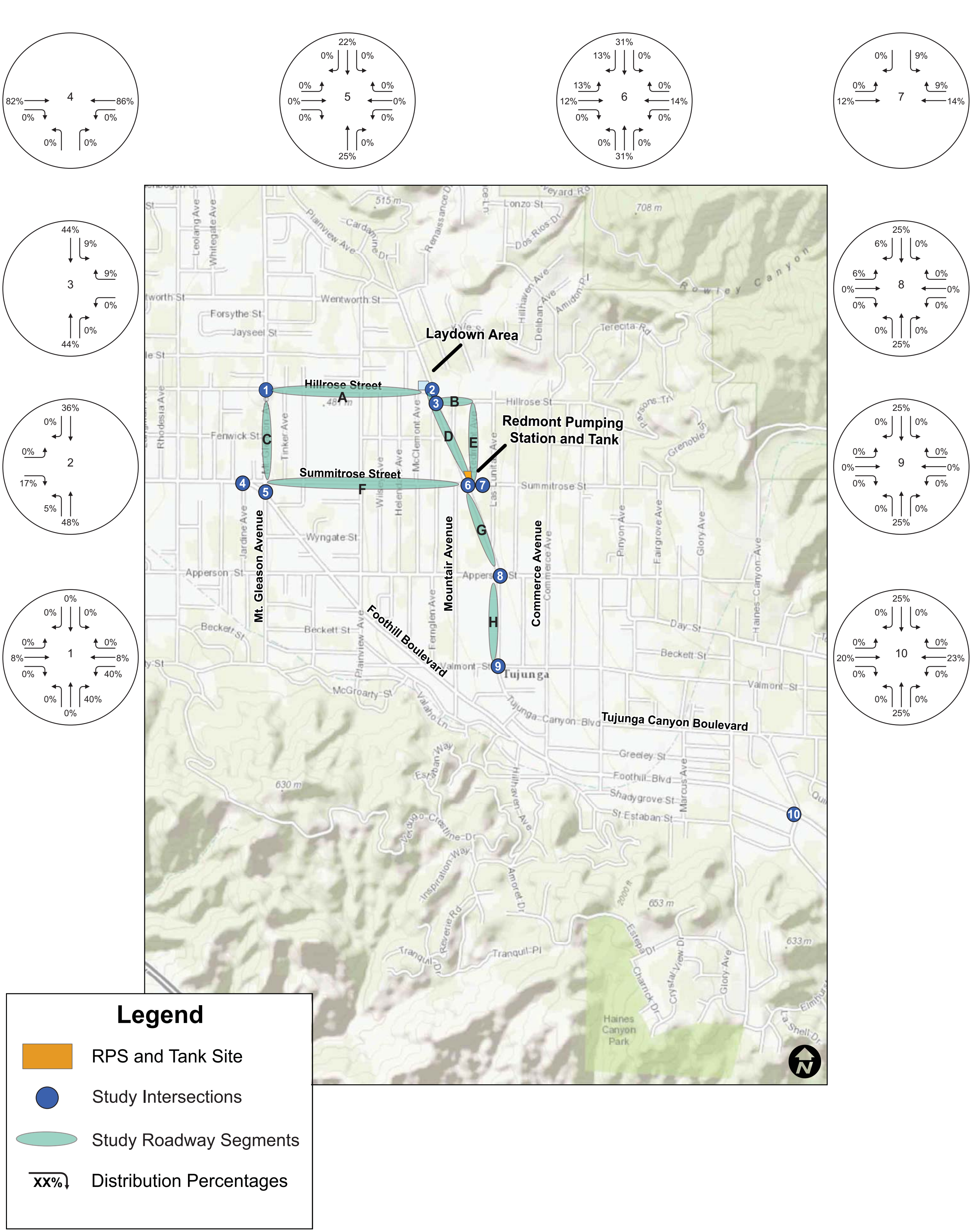

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Figure 5B

Construction Employees Trip Distribution

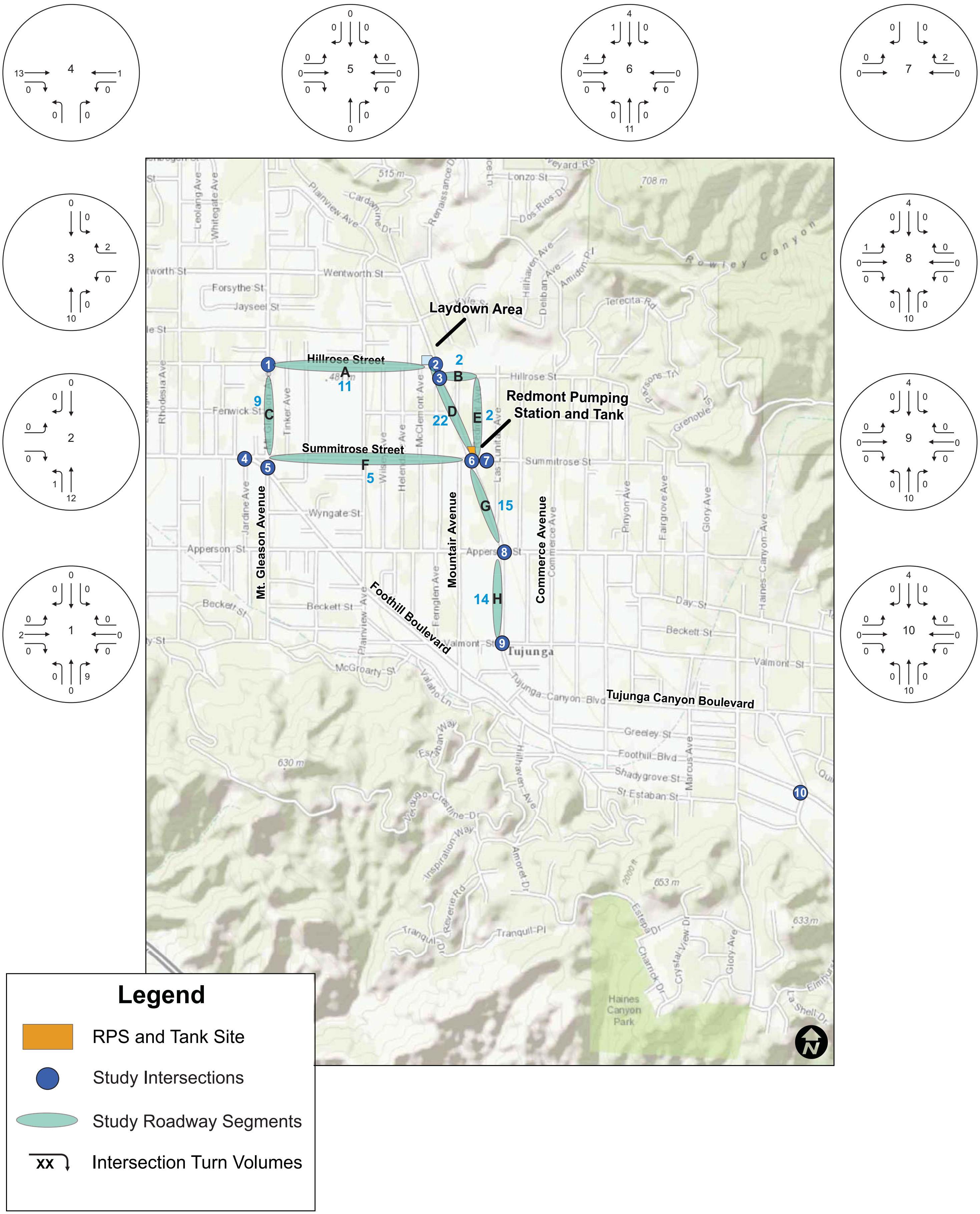

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Figure 6

Construction Trip Assignment - AM Peak Hour

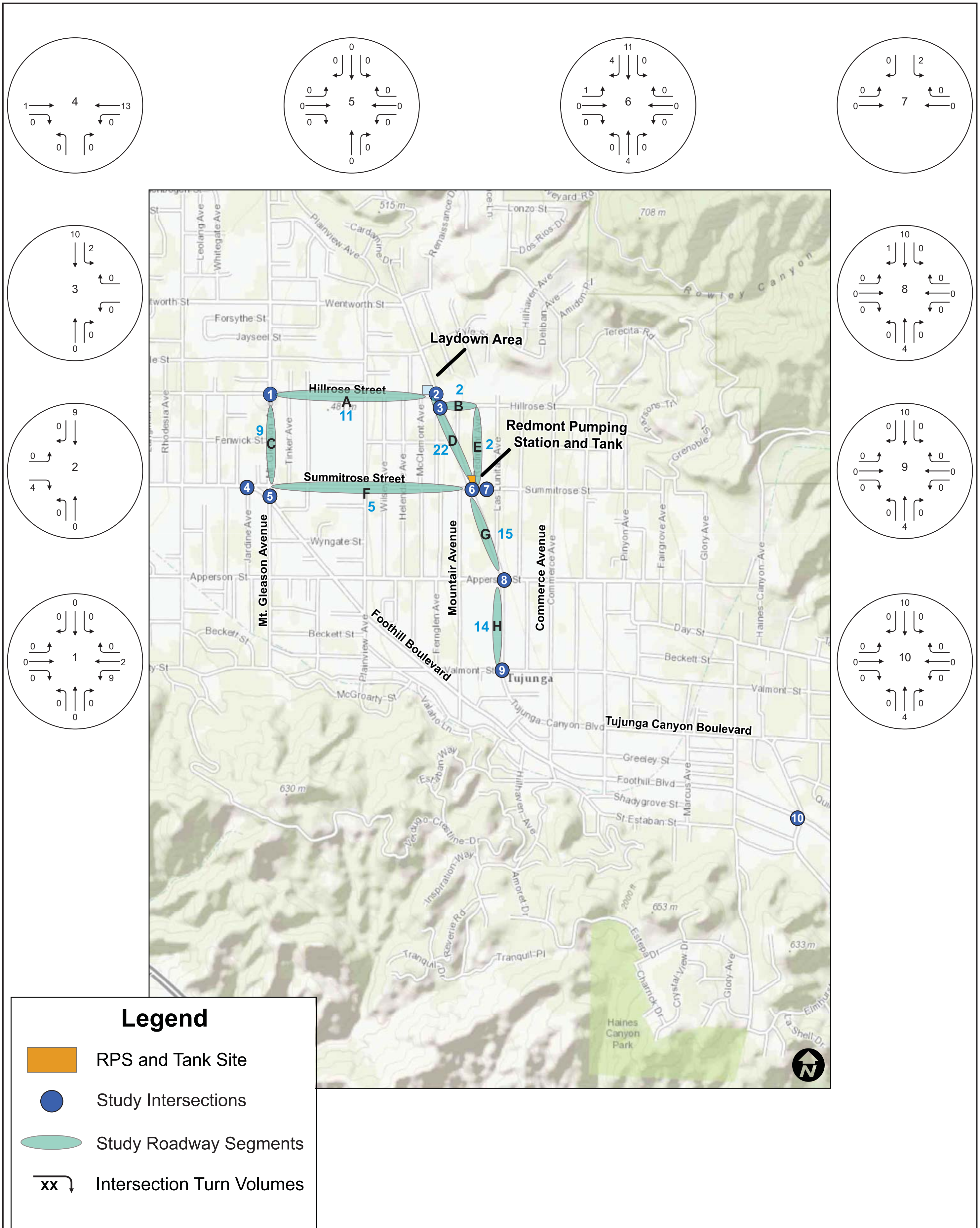

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Figure 7

Construction Trip Assignment - PM Peak Hour

5. Existing Plus-Project Traffic Conditions and Impacts

An additional existing plus-Project construction scenario was included in the analysis, to comply with rulings on existing conditions baseline analysis from the *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council* and *Neighbors for Smart Rail v. Exposition Metro Rail Construction Authority* California Environmental Quality Act (CEQA) court cases. This additional analysis scenario provides information about project impacts under the current baseline conditions.

5.1 Project Construction Period Intersection Analysis

Table 8 provides the delay, V/C and LOS values under existing conditions, for the a.m. and p.m. peak hours.

The data in Table 8 indicates that 9 of the 10 study intersections are currently operating at LOS D or better during the a.m. and p.m. peak hours. The following intersections are operating at LOS E (poor operating conditions, nearing capacity) or LOS F (at / overcapacity):

- Jardine Avenue / Foothill Boulevard – Will continue to operate at LOS F in the a.m. and p.m. peak hours.

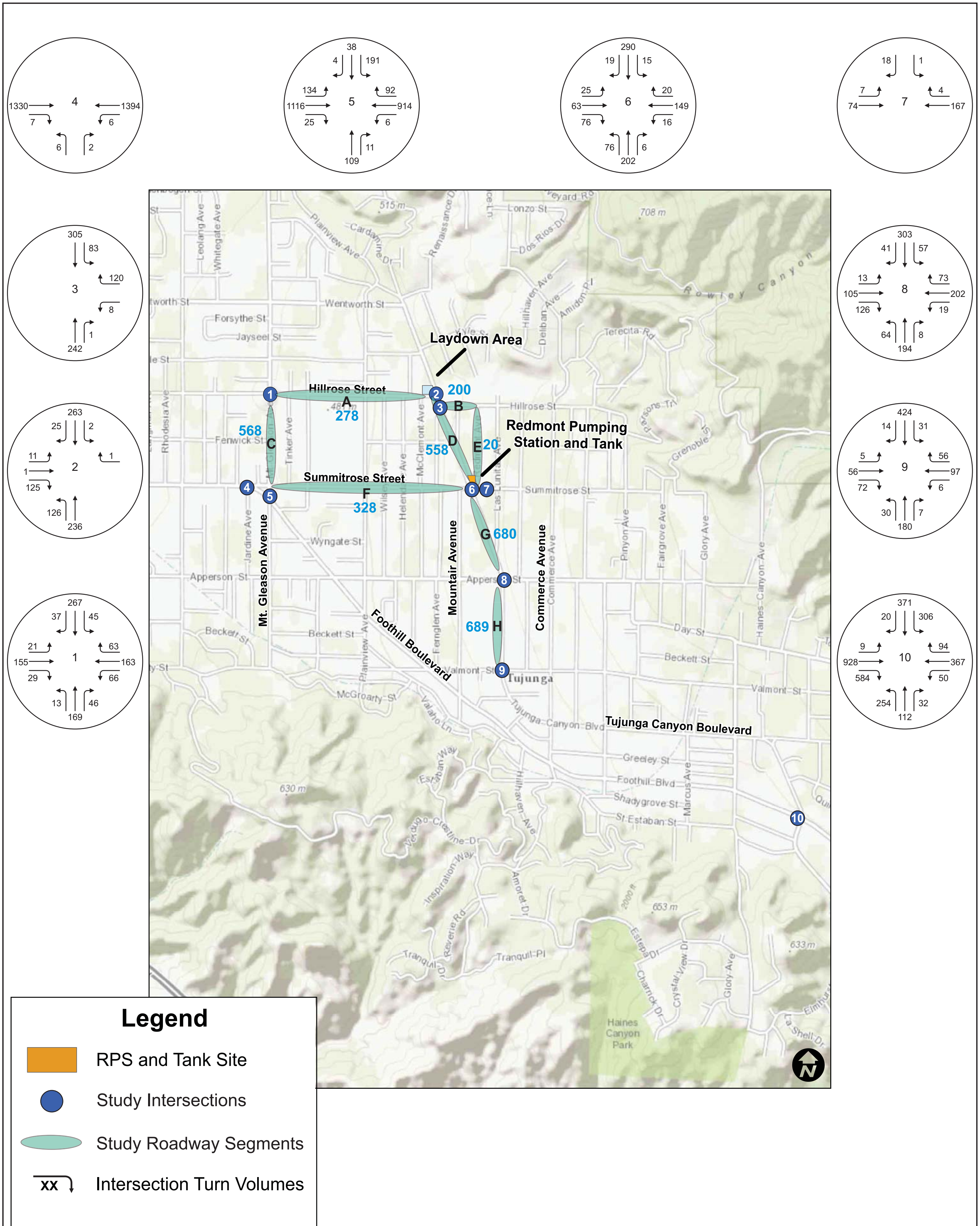
The construction period analyzed traffic volumes for the existing plus-Project scenario at the study intersections and roadways are provided on Figure 8 (a.m. peak) and Figure 9 (p.m. peak).

**Table 8 – Intersection Level of Service Calculations –
Existing plus-Project Construction Conditions**

Study Intersections		AM Peak		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS
1	Mt. Gleason Avenue & Hillrose Street *	13.6	B	9.7	A
2	Tujunga Canyon Boulevard & Hillrose Street (North) *	10.6	B	8.6	A
3	Tujunga Canyon Boulevard & Hillrose Street (South) *	10.5	B	8.7	A
4	Jardine Avenue & Foothill Bouelvard *	69.3	**F**	59.4	**F**
5	Mt. Gleason Avenue & Foothill Boulevard	0.578	A	0.551	A
6	Tujunga Canyon Boulevard & Summitrose Street *	11.9	B	9.6	A
7	Redmont Avenue & Summitrose Street *	9.2	A	9.2	A
8	Tujunga Canyon Boulevard & Apperson Street *	16.5	C	11.1	B
9	Tujunga Canyon Boulevard & Valmont Street *	13.6	B	10.7	B
10	Tujunga Canyon Boulevard & Foothill Boulevard	0.806	D	0.726	C

LOS = Level of Service; V/C = Volume-to-Capacity Ratio
** Unsignalized Intersections*

Determination of significant impacts are provided in Section 8 of this report. The level of service calculation worksheets for this analysis scenario are provided in Appendix C.



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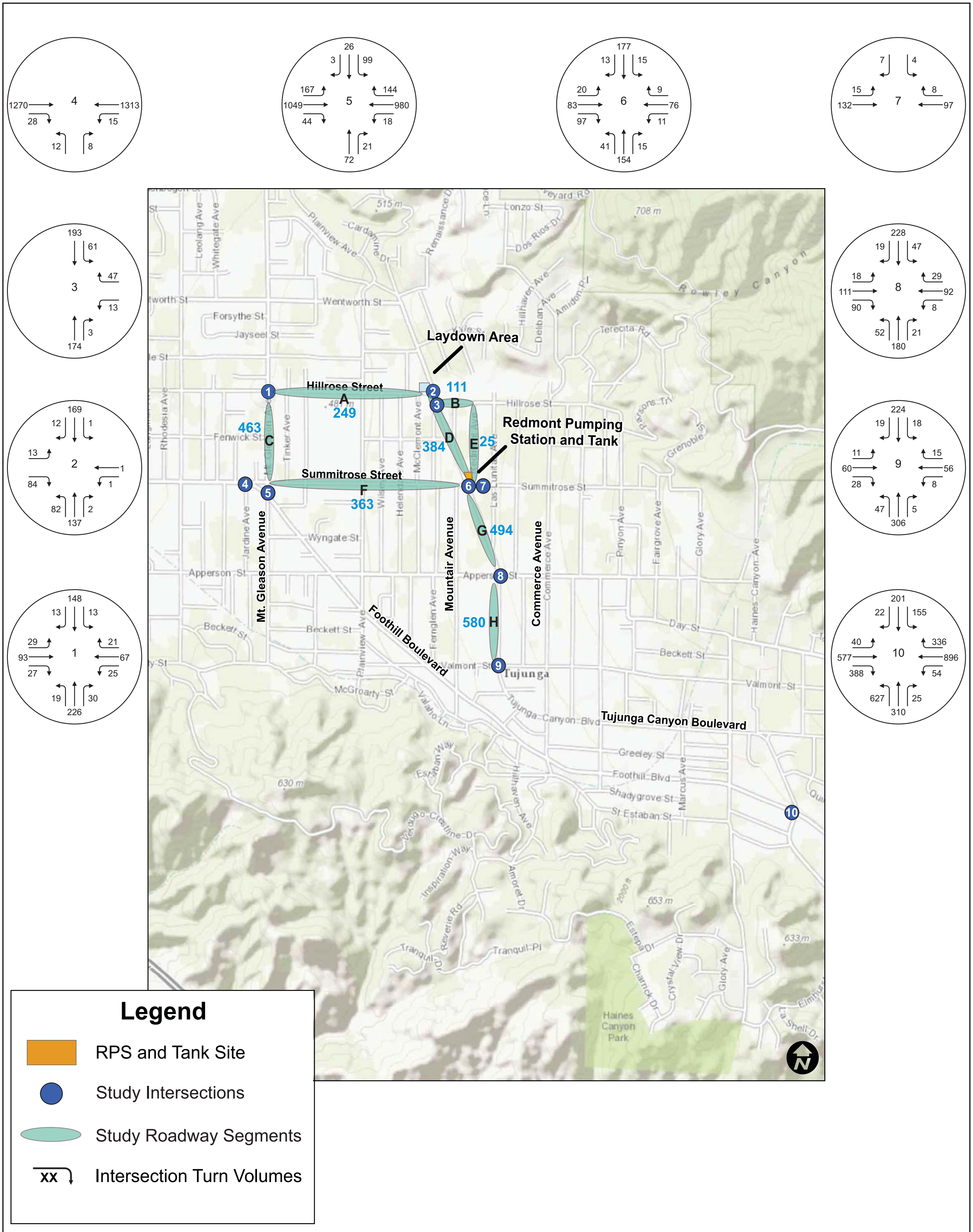
LADWP Redmont Pumping Station and Tank Project

Figure 8

Existing with Project Construction - AM Peak Hour Intersection Volumes



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LADWP Redmont Pumping Station and Tank Project — Figure 9

Existing with Project Construction - PM Peak Hour Intersection Volumes

5.2 Project Construction Period Roadway Segment Analysis

The daily volumes on the study roadway segments, for conditions with the proposed Project construction traffic under the existing baseline, are provided in Table 9.

Table 9 – Study Roadway Segments –
Existing Plus-Project Construction Daily Vehicle Volumes

	Street Segments	Existing + Project ADT
A	Hillrose Street Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	2,383
B	Hillrose Street Between Tujunga Canyon Boulevard & Redmont Avenue	1,170
C	Mt. Gleason Avenue Between Hillrose Street & Summitrose Street	5,341
D	Tujunga Canyon Boulevard Between Hillrose Street & Summitrose Street	4,071
E	Redmont Avenue Between Hillrose Street & Summitrose Street	210
F	Summitrose Street Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	4,469
G	Tujunga Canyon Boulevard Between Summitrose Street & Apperson Street	5,351
H	Tujunga Canyon Boulevard Between Apperson Street & Valmont Street	6,889

The Tujunga Canyon Boulevard segment between Apperson Street and Valmont Street is projected to continue having the highest volume under this scenario.

Peak hour operations were analyzed at the study roadway segments. Table 10 summarizes the peak-hour volumes from the daily counts with Project construction traffic added.

Table 10 – Study Roadway Segments – Existing Plus-Project Peak-Hour Level of Service

	Street Segments	Peak Period	Existing Volumes					Proposed Project						Impact	
			# of Lanes	Capacity	Existing			# of Lanes	Capacity	Project Only	Existing with Project			Project Increase in ADT	Significant Impact
					Volumes	V/C	LOS				Volumes	V/C	LOS		
A	Hillrose Street	AM	2	1,600	267	0.167	A	2	1,600	11	278	0.174	A	4.12%	No
	Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	PM			238	0.149	A			11	249	0.156	A	4.62%	No
B	Hillrose Street	AM	2	1,600	198	0.124	A	2	1,600	2	200	0.125	A	1.01%	No
	Between Tujunga Canyon Boulevard & Redmont Avenue	PM			109	0.068	A			2	111	0.069	A	1.83%	No
C	Mt. Gleason Avenue	AM	2	1,600	559	0.349	A	2	1,600	9	568	0.355	A	1.61%	No
	Between Hillrose Street & Summitrose Street	PM			454	0.284	A			9	463	0.289	A	1.98%	No
D	Tujunga Canyon Boulevard	AM	2	1,600	536	0.335	A	2	1,600	22	558	0.349	A	4.10%	No
	Between Hillrose Street & Summitrose Street	PM			362	0.226	A			22	384	0.240	A	6.08%	No
E	Redmont Avenue	AM	2	1,600	18	0.011	A	2	1,600	2	20	0.013	A	11.11%	No
	Between Hillrose Street & Summitrose Street	PM			23	0.014	A			2	25	0.016	A	8.70%	No
F	Summitrose Street	AM	2	1,600	323	0.202	A	2	1,600	5	328	0.205	A	1.55%	No
	Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	PM			358	0.224	A			5	363	0.227	A	1.40%	No
G	Tujunga Canyon Boulevard	AM	2	1,600	665	0.416	A	2	1,600	15	680	0.425	A	2.26%	No
	Between Summitrose Street & Apperson Street	PM			479	0.299	A			15	494	0.309	A	3.13%	No
H	Tujunga Canyon Boulevard	AM	2	1,600	675	0.422	A	2	1,600	14	689	0.431	A	2.07%	No
	Between Apperson Street & Valmont Street	PM			566	0.354	A			14	580	0.363	A	2.47%	No

Note: Segment D includes one (1) water truck round trip during each peak hour between the Laydown Area and RPS site. Three daily water truck round trips are expected; two of those were assumed to occur during the peak hours.

All of the analyzed roadway segments are projected to continue operating at LOS A with Project construction traffic.

6. Future without-Project Construction Conditions

This section provides an analysis of Future "without-Project" Conditions in the study area with ambient growth and area project trips. The without-Project analysis was defined and analyzed through an application of an annual ambient growth rate to the existing traffic volumes, plus addition of volumes generated by area projects.

6.1 Ambient Growth

In order to forecast baseline traffic volumes for the analysis year of 2019, analyzed year-2015 peak-hour existing volumes from the existing conditions scenario were increased by a compounded annual ambient growth rate of 1 percent. Year 2019 was chosen as the future baseline year as that is the last year of construction and would provide for a more conservative analysis. This rate was applied as a compounded factor of 1.04.

The application of this annual growth rate is consistent with sub-regional traffic growth data defined by the County of Los Angeles Congestion Management Program (CMP) document.

6.2 Area Projects

A 1.5-mile radius from the Project corridor was used to define a capture area for area approved and pending (cumulative) projects. The list of area projects was compiled based on information provided by LADOT Development Review staff.

The projects included in the list would potentially contribute measurable traffic volumes to the study area during the future analysis period. The LADOT project database provides total peak-hour trips, compiled from environmental documentation or traffic studies. The in/out trip generation ratios applied to the area projects were based on rates within *Trip Generation*, published by the Institute of Transportation Engineers.

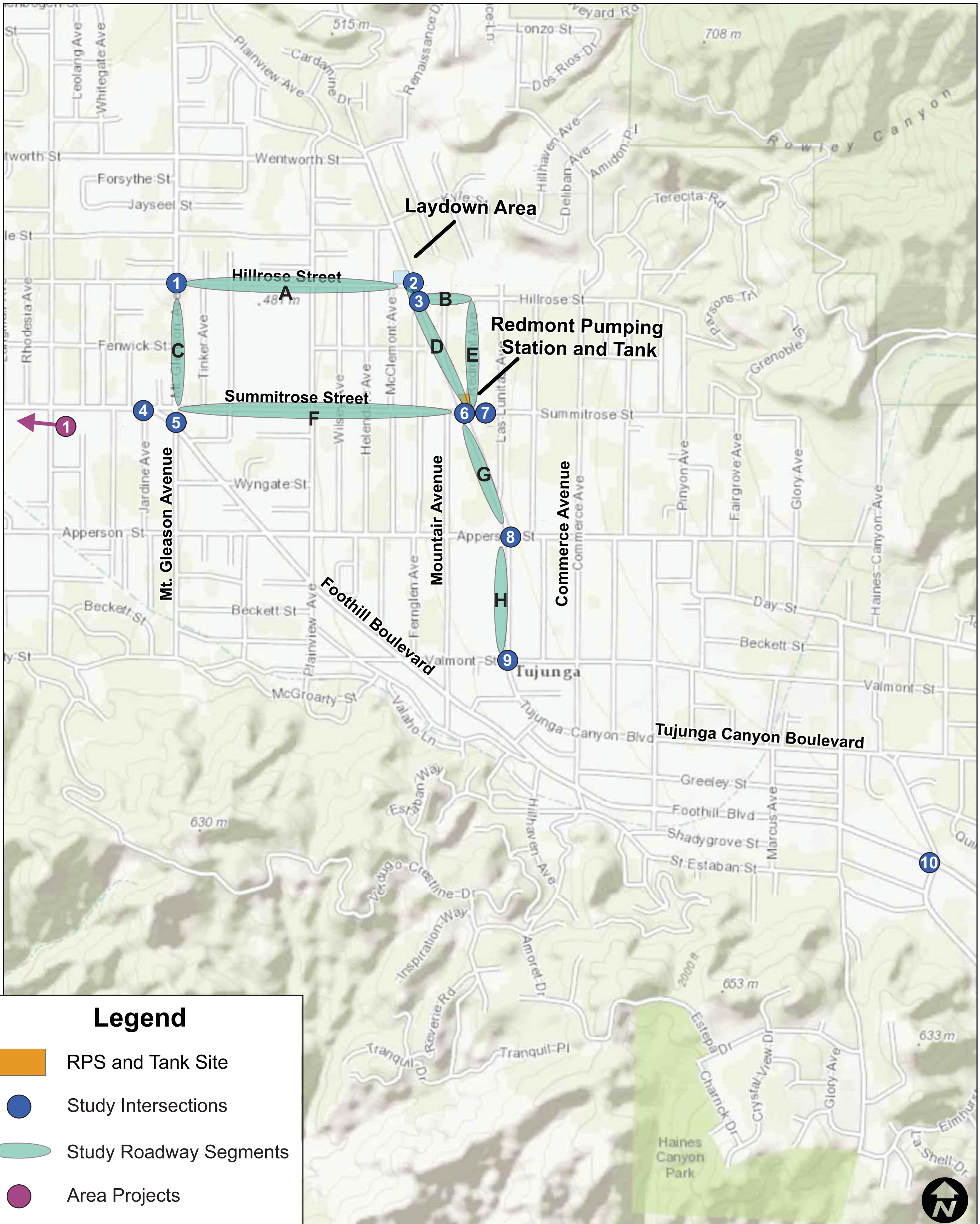
The one (1) area project included in this study for the future period analysis, and its trip generation, is provided in Table 11. Figure 10 illustrates the location of the area projects.

Table 11 – Area/Cumulative Projects Trip Generation

Map ID	Location	Land Use	Intensity	Units	Daily Total	AM Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out
1	7200 W. Foothill Boulvard	Retail	30.000	k.s.f.	3,143	36	22	14	129	62	67
		Restaurant	10.000	k.s.f.	1,303	133	68	65	87	45	42
		Sub-Total			**4,446**	**169**	**90**	**79**	**216**	**107**	**109**
Total					**4,446**	**169**	**90**	**79**	**216**	**107**	**109**

d.u. = dwelling units, k.s.f. = 1,000 square feet of floor area

Source: Los Angeles Department of Transportation (LADOT) Case Logging and Tracking System (CLATS), 2015; City of Los Angeles Engineering, City of Los Angeles Public Works.



Legend

- RPS and Tank Site
- Study Intersections
- Study Roadway Segments
- Area Projects

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Figure 10

Location of Area Projects

6.3 Future Intersection Levels of Service

To analyze future conditions in the year 2019 without the proposed Project construction traffic, intersection turn volumes with ambient growth were analyzed using the same methodology applied to the existing conditions analysis.

Table 12 provides the a.m. and p.m. peak-hour results of this analysis for the study intersections.

Table 12 – Intersection Level of Service Calculations – Future Without-Project Construction Conditions

Study Intersections		AM Peak		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS
1	Mt. Gleason Avenue & Hillrose Street *	14.3	B	9.8	A
2	Tujunga Canyon Boulevard & Hillrose Street (North) *	10.8	B	8.6	A
3	Tujunga Canyon Boulevard & Hillrose Street (South) *	10.8	B	8.7	A
4	Jardine Avenue & Foothill Bouelvard *	84.8	**F**	77.1	**F**
5	Mt. Gleason Avenue & Foothill Boulevard	0.616	B	0.592	A
6	Tujunga Canyon Boulevard & Summitrose Street *	12.5	B	9.8	A
7	Redmont Avenue & Summitrose Street *	9.3	A	9.2	A
8	Tujunga Canyon Boulevard & Apperson Street *	17.7	C	11.3	B
9	Tujunga Canyon Boulevard & Valmont Street *	14.2	B	10.9	B
10	Tujunga Canyon Boulevard & Foothill Boulevard	0.833	D	0.757	C

LOS = Level of Service; V/C = Volume-to-Capacity Ratio
** Unsignalized Intersections*

Under this scenario, all intersections would continue to operate at LOS D or better during the weekday a.m. and p.m. peak hours, except for the following:

- Jardine Avenue / Foothill Boulevard– Is projected to continue operating at LOS F during the a.m. and p.m. peak hours.

The study intersection analysis worksheets for this scenario are provided in Appendix D of this report. The analyzed peak-hour traffic volumes at the study intersections and roadways for this scenario are provided on Figure 11 (a.m. peak) and Figure 12 (pm. peak).

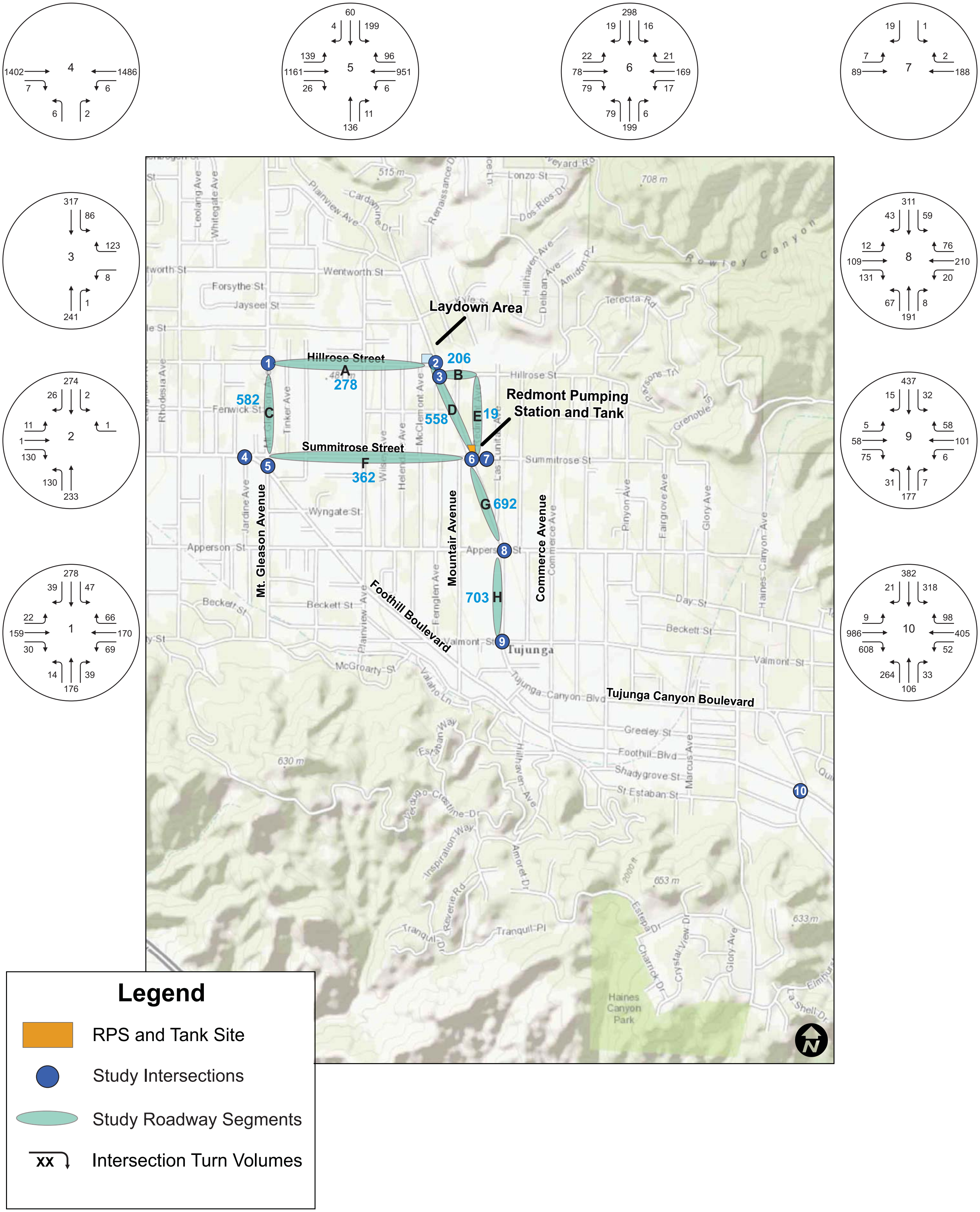

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Figure 11

Future without Project Construction - AM Peak Hour Intersection Volumes

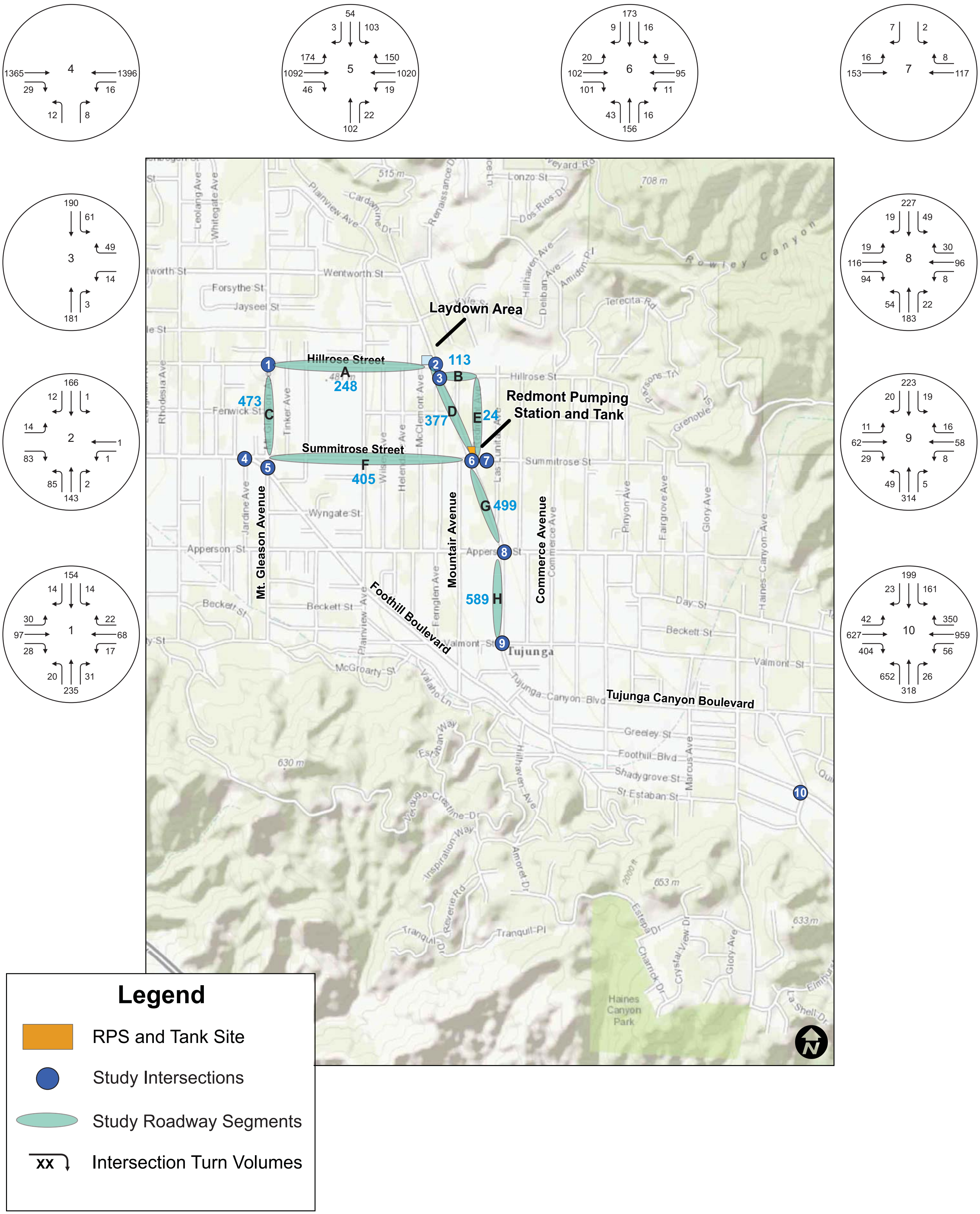

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Figure 12

Future without Project Construction - PM Peak Hour Intersection Volumes

6.4 Future Study Roadway Segment Volumes

Table 13 provides the average daily traffic volumes for year-2019 conditions at the study roadway segments, based on the application of ambient growth and related project trips.

Table 13 – Study Roadway Segments –
Future Without-Project Construction Daily Vehicle Volumes

	Street Segments	Future Pre-Project ADT
A	Hillrose Street Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	2,426
B	Hillrose Street Between Tujunga Canyon Boulevard & Redmont Avenue	1,208
C	Mt. Gleason Avenue Between Hillrose Street & Summitrose Street	5,515
D	Tujunga Canyon Boulevard Between Hillrose Street & Summitrose Street	4,128
E	Redmont Avenue Between Hillrose Street & Summitrose Street	208
F	Summitrose Street Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	5,303
G	Tujunga Canyon Boulevard Between Summitrose Street & Apperson Street	5,495
H	Tujunga Canyon Boulevard Between Apperson Street & Valmont Street	7,102

The highest daily vehicle volume, under this scenario, would continue to be at the roadway segment of Tujunga Canyon Boulevard between Apperson Street and Valmont Street.

Peak hour operations were analyzed at the study roadway segments. Table 14 summarizes the peak-hour volumes from the daily counts with ambient traffic growth and related projects traffic added.

Table 14 – Study Roadway Segments – Future Without-Project Peak-Hour Vehicle Volumes

	Street Segments	Peak Period	# of Lanes	Capacity	Base Volumes – Existing Volumes	Existing V/C	Existing LOS	Future Pre-Project Ambient Growth	Area Projects	Volumes	V/C	LOS
A	Hillrose Street	AM	2	1,600	267	0.167	A	4.1%	0	278	0.174	A
	Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	PM			238	0.149	A	4.1%	0	248	0.155	A
B	Hillrose Street	AM	2	1,600	198	0.124	A	4.1%	0	206	0.129	A
	Between Tujunga Canyon Boulevard & Redmont Avenue	PM			109	0.068	A	4.1%	0	113	0.071	A
C	Mt. Gleason Avenue	AM	2	1,600	559	0.349	A	4.1%	0	582	0.364	A
	Between Hillrose Street & Summitrose Street	PM			454	0.284	A	4.1%	0	473	0.296	A
D	Tujunga Canyon Boulevard	AM	2	1,600	536	0.335	A	4.1%	0	558	0.349	A
	Between Hillrose Street & Summitrose Street	PM			362	0.226	A	4.1%	0	377	0.236	A
E	Redmont Avenue	AM	2	1,600	18	0.011	A	4.1%	0	19	0.012	A
	Between Hillrose Street & Summitrose Street	PM			23	0.014	A	4.1%	0	24	0.015	A
F	Summitrose Street	AM	2	1,600	323	0.202	A	4.1%	26	362	0.226	A
	Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	PM			358	0.224	A	4.1%	32	405	0.253	A
G	Tujunga Canyon Boulevard	AM	2	1,600	665	0.416	A	4.1%	0	692	0.433	A
	Between Summitrose Street & Apperson Street	PM			479	0.299	A	4.1%	0	499	0.312	A
H	Tujunga Canyon Boulevard	AM	2	1,600	675	0.422	A	4.1%	0	703	0.439	A
	Between Apperson Street & Valmont Street	PM			566	0.354	A	4.1%	0	589	0.368	A

As shown in Table 14, all of the roadway segments would continue to operate at LOS A during the pre-Project conditions.

7. Future With Project Construction Conditions

This section documents future traffic conditions at the study intersections and roadway segments with the addition of Project construction-generated traffic. Traffic volumes for the with-Project scenario were derived by adding the Project trips to the volumes defined for the future without-Project scenario.

7.1 Future With Project Intersection Levels of Service

Table 15 provides the a.m. and p.m. peak-hour results of this analysis for the study intersections.

Table 15 – Intersection Level of Service Calculations –
Future With-Project Construction Conditions

Study Intersections		AM Peak		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS
1	Mt. Gleason Avenue & Hillrose Street *	14.5	B	9.9	A
2	Tujunga Canyon Boulevard & Hillrose Street (North) *	10.9	B	8.7	A
3	Tujunga Canyon Boulevard & Hillrose Street (South) *	10.9	B	8.8	A
4	Jardine Avenue & Foothill Bouelvard *	86.7	**F**	78.2	**F**
5	Mt. Gleason Avenue & Foothill Boulevard	0.616	B	0.593	A
6	Tujunga Canyon Boulevard & Summitrose Street *	12.8	B	10.0	A
7	Redmont Avenue & Summitrose Street *	9.4	A	9.4	A
8	Tujunga Canyon Boulevard & Apperson Street *	18.3	C	11.5	B
9	Tujunga Canyon Boulevard & Valmont Street *	14.5	B	11.0	B
10	Tujunga Canyon Boulevard & Foothill Boulevard	0.839	D	0.764	C

LOS = Level of Service; V/C = Volume-to-Capacity Ratio
** Unsignalized Intersections*

Under this scenario, all intersections would continue to operate at LOS D or better during the weekday a.m. and p.m. peak hours, except for the following:

- Jardine Avenue / Foothill Boulevard– Is projected to continue operating at LOS F during the a.m. and p.m. peak hours.

The study intersection analysis worksheets for this scenario are provided in Appendix F of this report. Determination of significant impacts are provided in Section 8 of this report.

The analyzed peak-hour traffic volumes at the study intersections and roadways for this scenario are provided on Figure 13 (a.m. peak) and Figure 14 (pm. peak).

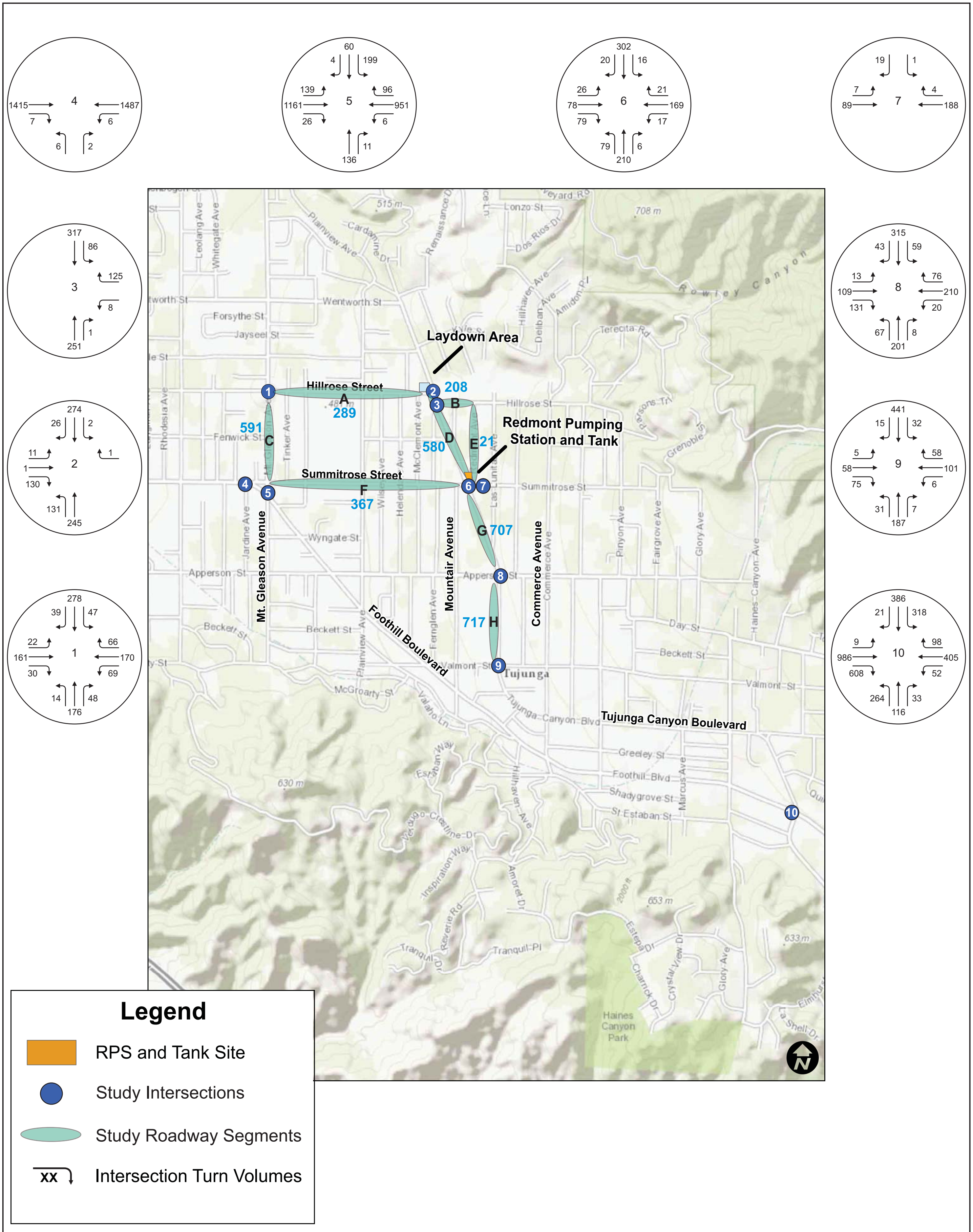

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Figure 13

Future with Project Construction - AM Peak Hour Intersection Volumes

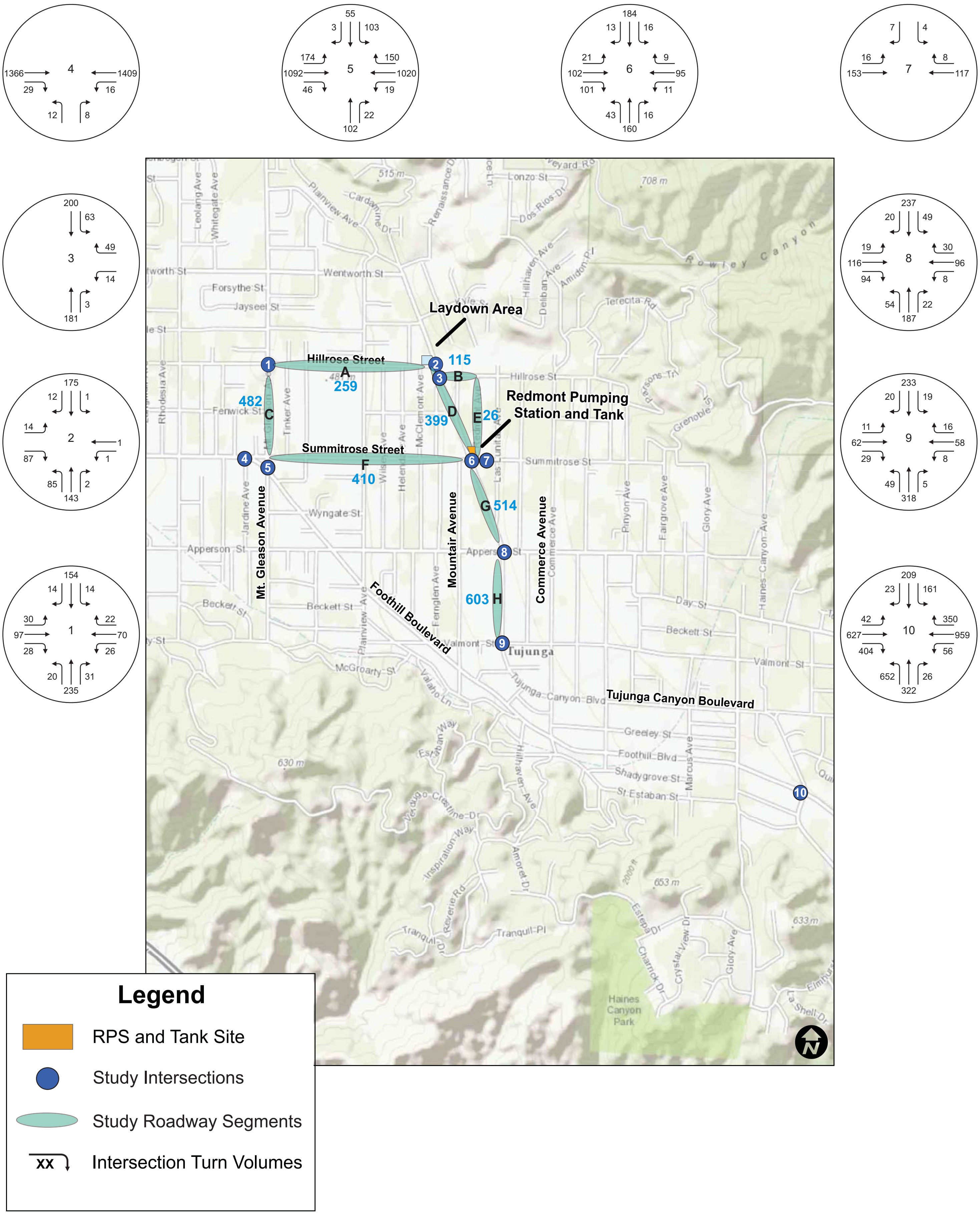

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Figure 14

Future with Project Construction - PM Peak Hour Intersection Volumes

7.2 Future With Project Study Roadway Segment Volumes

Table 16 provides the average daily traffic volumes for year-2019 with-Project conditions at the study roadway segments, based on the application of construction trips to future baseline conditions.

Table 16 – Study Roadway Segments –
Future With-Project Daily Vehicle Volumes

	Street Segments	Future with Project ADT
A	Hillrose Street Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	2,479
B	Hillrose Street Between Tujunga Canyon Boulevard & Redmont Avenue	1,218
C	Mt. Gleason Avenue Between Hillrose Street & Summitrose Street	5,558
D	Tujunga Canyon Boulevard Between Hillrose Street & Summitrose Street	4,234
E	Redmont Avenue Between Hillrose Street & Summitrose Street	218
F	Summitrose Street Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	5,327
G	Tujunga Canyon Boulevard Between Summitrose Street & Apperson Street	5,567
H	Tujunga Canyon Boulevard Between Apperson Street & Valmont Street	7,169

The highest daily vehicle volume, under this scenario, would continue to be at the roadway segment of Tujunga Canyon Boulevard between Apperson Street and Valmont Street.

Peak hour operations were analyzed at the study roadway segments. Table 17 summarizes the peak-hour volumes from the daily counts.

Table 17 – Study Roadway Segments – Future With-Project Peak-Hour Vehicle Volumes

	Street Segments	Peak Period	# of Lanes	Capacity	Base Volumes									Proposed Project			
					Existing			Future Pre-Project						Project Only	Future with Project		
					Volumes	V/C	LOS	Ambient Growth	Area Projects	Volumes	V/C	LOS			Volumes	V/C	LOS
A	Hillrose Street	AM	2	1,600	267	0.167	A	4.1%	0	278	0.174	A		11	289	0.181	A
	Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	PM			238	0.149	A	4.1%	0	248	0.155	A		11	259	0.162	A
B	Hillrose Street	AM	2	1,600	198	0.124	A	4.1%	0	206	0.129	A		2	208	0.130	A
	Between Tujunga Canyon Boulevard & Redmont Avenue	PM			109	0.068	A	4.1%	0	113	0.071	A		2	115	0.072	A
C	Mt. Gleason Avenue	AM	2	1,600	559	0.349	A	4.1%	0	582	0.364	A		9	591	0.369	A
	Between Hillrose Street & Summitrose Street	PM			454	0.284	A	4.1%	0	473	0.296	A		9	482	0.301	A
D	Tujunga Canyon Boulevard	AM	2	1,600	536	0.335	A	4.1%	0	558	0.349	A		22	580	0.363	A
	Between Hillrose Street & Summitrose Street	PM			362	0.226	A	4.1%	0	377	0.236	A		22	399	0.249	A
E	Redmont Avenue	AM	2	1,600	18	0.011	A	4.1%	0	19	0.012	A		2	21	0.013	A
	Between Hillrose Street & Summitrose Street	PM			23	0.014	A	4.1%	0	24	0.015	A		2	26	0.016	A
F	Summitrose Street	AM	2	1,600	323	0.202	A	4.1%	26	362	0.226	A		5	367	0.229	A
	Between Mt. Gleason Avenue & Tujunga Canyon Boulevard	PM			358	0.224	A	4.1%	32	405	0.253	A		5	410	0.256	A
G	Tujunga Canyon Boulevard	AM	2	1,600	665	0.416	A	4.1%	0	692	0.433	A		15	707	0.442	A
	Between Summitrose Street & Apperson Street	PM			479	0.299	A	4.1%	0	499	0.312	A		15	514	0.321	A
H	Tujunga Canyon Boulevard	AM	2	1,600	675	0.422	A	4.1%	0	703	0.439	A		14	717	0.448	A
	Between Apperson Street & Valmont Street	PM			566	0.354	A	4.1%	0	589	0.368	A		14	603	0.377	A

Note: Segment D includes one (1) water truck round trip during each peak hour between the Laydown Area and RPS site. Three daily water truck round trips are expected; two of those were assumed to occur during the peak hours.

As shown in Table 17, all of the roadway segments would continue to operate at LOS A during the With Project conditions.

8. Project Construction-Period Impacts

8.1 Significant Impact Guidelines

Traffic impacts are identified if a proposed development will result in a significant change in traffic conditions at a study intersection or roadway segment. A significant impact is typically identified if project-related traffic will cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency.

The City of Los Angeles Department of Transportation has established specific thresholds for project related increases in the volume-to-capacity ratio (V/C) of signalized study intersections. The following increases in peak-hour V/C ratios are considered significant impacts:

Level of Service	Final V/C*	Project Related v/c increase
C	> 0.700 – 0.800	Equal to or greater than 0.040
D	> 0.800 – 0.900	Equal to or greater than 0.020
E and F	0.901 or more	Equal to or greater than 0.010

Note: Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient and related project growth, and without proposed traffic impact mitigations.

Traditional incremental thresholds were not applied for this analysis, as those are developed for and only useful for the analysis of development projects.

The threshold of significance used for this analysis is the causing or worsening of LOS values to or within E or F due to Project construction at signalized study intersections and study roadways, which represents at-capacity or over-capacity conditions.

It should be noted that many agencies including LADOT and the City of Los Angeles do not have established significant impact criteria for stop-controlled intersections. For this study, significant impacts for the stop-controlled study intersections were determined by conducting analysis under the HCM unsignalized methodology, and determining if Project traffic would cause or worsen LOS values of E or F and also meet peak-hour signal warrants.

Study area traffic operations for the construction period are discussed below, along with significant impact determinations.

8.2 Project Traffic Impacts – Existing plus-Project Construction Conditions – Intersections

A summary of the existing and existing plus-Project intersection delay, V/C and LOS values is provided by Table 18.

Table 18 – Study Intersection Impacts
Existing plus-Project Construction Conditions

Study Intersections		Peak Hour	Existing (2015) Conditions		Existing (2015) + Project Construction		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
1	Mt. Gleason Avenue & Hillrose Street *	AM	13.5	B	13.6	B	0.1	No
		PM	9.6	A	9.7	A	0.1	No
2	Tujunga Canyon Boulevard & Hillrose Street (North) *	AM	10.5	B	10.6	B	0.1	No
		PM	8.5	A	8.6	A	0.1	No
3	Tujunga Canyon Boulevard & Hillrose Street (South) *	AM	10.5	B	10.5	B	0.0	No
		PM	8.6	A	8.7	A	0.1	No
4	Jardine Avenue & Foothill Bouelvard *	AM	67.9	**F**	69.3	**F**	1.4	-
		PM	58.6	**F**	59.4	**F**	0.8	-
5	Mt. Gleason Avenue & Foothill Boulevard	AM	0.578	A	0.578	A	0.000	No
		PM	0.551	A	0.551	A	0.000	No
6	Tujunga Canyon Boulevard & Summitrose Street *	AM	11.7	B	11.9	B	0.2	No
		PM	9.4	A	9.6	A	0.2	No
7	Redmont Avenue & Summitrose Street *	AM	9.2	A	9.2	A	0.0	No
		PM	9.1	A	9.2	A	0.1	No
8	Tujunga Canyon Boulevard & Apperson Street *	AM	16.1	C	16.5	C	0.4	No
		PM	10.9	B	11.1	B	0.2	No
9	Tujunga Canyon Boulevard & Valmont Street *	AM	13.3	B	13.6	B	0.3	No
		PM	10.5	B	10.7	B	0.2	No
10	Tujunga Canyon Boulevard & Foothill Boulevard	AM	0.800	C	0.806	D	0.006	No
		PM	0.718	C	0.726	C	0.008	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

** Unsignalized Intersections*

Construction of the proposed Project would worsen operations within LOS F at the unsignalized intersection of Jardine Avenue & Foothill Boulevard. A peak-hour signal warrant analysis at this location is provided in the next section to determine whether the Project construction traffic triggers a significant impact.

The Project will not trigger a significant impact at any of the other study intersections under the Future with Project construction scenario. No mitigation measures are recommended.

8.3 Project Traffic Impacts – Existing plus-Project Construction Conditions – Roadways

As was shown in Table 10 in Section 5 of this report, no roadway segment is projected to operate at LOS E or F with-Project construction traffic. The Project is not expected to trigger any significant roadway impacts.

8.4 Project Traffic Impacts – Future With Project Construction Conditions – Intersections

A summary of the future and future with-Project intersection delay, V/C and LOS values is provided by Table 19.

Table 19 – Study Intersection Impacts
Future With Project Construction Conditions

	Study Intersections	Peak Hour	Future (2019) No Project V/C or Delay	Future (2019) No Project LOS	Future (2019) With Project Construction V/C or Delay	Future (2019) With Project Construction LOS	Change in V/C or Delay	Sig Impact?
1	Mt. Gleason Avenue & Hillrose Street *	AM	14.3	B	14.5	B	0.2	No
		PM	9.8	A	9.9	A	0.1	No
2	Tujunga Canyon Boulevard & Hillrose Street (North) *	AM	10.8	B	10.9	B	0.1	No
		PM	8.6	A	8.7	A	0.1	No
3	Tujunga Canyon Boulevard & Hillrose Street (South) *	AM	10.8	B	10.9	B	0.1	No
		PM	8.7	A	8.8	A	0.1	No
4	Jardine Avenue & Foothill Bouelvard *	AM	84.8	**F**	86.7	**F**	1.9	-
		PM	77.1	**F**	78.2	**F**	1.1	-
5	Mt. Gleason Avenue & Foothill Boulevard	AM	0.616	B	0.616	B	0.000	No
		PM	0.592	A	0.593	A	0.001	No
6	Tujunga Canyon Boulevard & Summitrose Street *	AM	12.5	B	12.8	B	0.3	No
		PM	9.8	A	10.0	A	0.2	No
7	Redmont Avenue & Summitrose Street *	AM	9.3	A	9.4	A	0.1	No
		PM	9.2	A	9.4	A	0.2	No
8	Tujunga Canyon Boulevard & Apperson Street *	AM	17.7	C	18.3	C	0.6	No
		PM	11.3	B	11.5	B	0.2	No
9	Tujunga Canyon Boulevard & Valmont Street *	AM	14.2	B	14.5	B	0.3	No
		PM	10.9	B	11.0	B	0.1	No
10	Tujunga Canyon Boulevard & Foothill Boulevard	AM	0.833	D	0.839	D	0.006	No
		PM	0.757	C	0.764	C	0.007	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

** Unsignalized Intersections*

Construction of the proposed Project would worsen operations within LOS F at the unsignalized intersection of Jardine Avenue & Foothill Boulevard. A peak-hour signal warrant analysis at this location is provided in the next section to determine whether the Project construction traffic triggers a significant impact.

The Project will not trigger a significant impact at any of the other study intersections under the Future with Project construction scenario. No mitigation measures are recommended.

8.4 Project Traffic Impacts – Future With Project Construction Conditions – Roadways

As was shown in Table 17 in Section 7 of this report, no roadway segment is projected to operate at LOS E or F with Project construction traffic. The Project is not expected to create any significant roadway impacts.

8.5 Project Pedestrian and Transit Access

The area near the RPS site does not have existing pedestrian facilities or sidewalks. There are also no transit lines that operate near the RPS site. Some of the study roadways and intersections do have sidewalks and other pedestrian facilities, in addition to access to transit lines. Project construction activities and traffic are not expected to impact the existing pedestrian and transit facilities in the study area. All existing sidewalks and transit stops are expected to remain in place during Project construction.

8.6 RPS Site Roadway and Parking Impacts

The characteristics of the street segments immediately surrounding the Project site are as follows:

<u>Tujunga Canyon Boulevard, between Hillrose Street and Summitrose Street</u>
This street segment has one lane of traffic in each direction, with each lane measuring 16 feet in width and separated by a double-yellow line. No on-street parking is permitted on either side of the street. Vehicles are permitted to park adjacent to the street within private property, just outside of the public right-of-way. The speed limit is 25 mph.

<u>Redmont Avenue, between Hillrose Street and Summitrose Street</u>
This street segment has one lane of traffic in each direction, with the entire roadway measuring 25 feet in width. No on-street parking is permitted on the west side of the street, which is the side where the RPS site is located. Vehicles are permitted to park on-street on the east side of the street. The speed limit is 25 mph.

<u>Summitrose Street, between Tujunga Canyon Boulevard and Redmont Avenue</u>
This street segment has one lane of traffic in each direction, with the entire roadway measuring 30 feet in width. No on-street parking is permitted on either side of the street. Vehicles are permitted to park adjacent to the street within private property, just outside of the public right-of-way. The speed limit is 25 mph.

As mentioned in Section 2 of this report, due to the small size of the RPS site, periodic staging and work activities are expected to take place along Tujunga Canyon Boulevard and other adjacent roadway segments, as needed.

During each major phase of construction, this analysis assumes:

A. During the 10-day grading phase, in order to allow for proper site access for dump trucks, temporary lane or road closures may be needed as the trucks enter and exit the site. The frequency and length of the closures is anticipated to be minimal.

B. During the half (48-days) of the 95-days of concrete pours, a concrete pump truck and concrete trucks are anticipated to work on the public street, which will lead to temporary roadway and lane closures. If the trucks stage on Redmont Avenue, temporary on-street parking restrictions are also anticipated.

C. During large equipment deliveries, trucks staging is anticipated next to the site with cranes also on the street, unloading materials from delivery trucks. This could also cause temporary lane and road closures, yet they are anticipated to be more transitory in nature.

D. Waste hauling from demolition will also require large trucks to gain access to the RPS site and temporary lane or road closures may be needed during ingress/egress.

On-street parking impacts are anticipated only when staging or access to the RPS site occurs on Redmont Avenue, as that is the only street segment near the site with on-street parking.

Furthermore, temporary road and lane closures may restrict access for residents who travel on roads adjacent to the RPS site.

Since most of the activity outlined above is expected to take place on Tujunga Canyon Boulevard, most of the impacts from temporary road and lane closures are expected to take place that segment.

Section 11 provides recommendations and measures to mitigate the roadway issues.

8.7 Supplemental Discussion on Maximum Trucks Construction Phase

The Project construction trip analysis in this report analyzes the overall peak trip generation and traffic conditions generated by Project construction. During certain construction phases, the number of truck trips will be higher even though the overall number of vehicle trips will still be lower than what was analyzed in this report.

Under the maximum truck trip phase, there are a projected 110 daily PCE-converted truck trips, and 14 a.m. and 14 p.m. PCE-converted peak-hour truck round trips.

For comparison, under the analyzed scenario, and as stated on Table 7 of this report, there are 70 daily PCE-converted truck trips, and 10 a.m. and 10 p.m. peak-hour PCE-converted truck trips.

Although the overall impact of the maximum truck scenario on study intersections and roadway segments is expected to be less, due to the higher overall trip generation of the analyzed scenario (due to the larger number of construction personnel under the analyzed scenario versus the maximum truck scenario), it is expected that the impact on the three adjacent roadway segments will be slightly more intense due to the additional number of trucks. Mitigation measures are also provided in Section 11.

9. Peak-Hour Signal Warrant Analysis

This report section summarizes future conditions, analyzed for a traffic signal warrant analysis of the unsignalized intersection of Jardine Avenue and Foothill Boulevard. This analysis was performed to determine if Project construction traffic will trigger a significant impact at this intersection by warranting a new traffic signal.

KOA compiled new manual intersection vehicle turn movement counts and the results of the data collection effort were utilized to conduct a peak hour signal warrant analysis.

9.1 Signal Warrant Criteria

The analysis was based on the Manual on Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration and amended for use in California by Caltrans.

A peak hour traffic signal warrant analysis was conducted to review whether or not the intersection met signal warrants. The MUTCD states that engineering judgment must be used for final decisions on implementing new signalization, whether or not warrants are met.

- Warrant 3 - Peak Hour Volume – This is to determine whether, for one hour during the day, minor street traffic suffers undue delay in entering or crossing the major street. Part A, consisting of three sub-sections, examines the total volume and vehicle hours of delay on the minor approach. Part B evaluates the peak hour volumes of both approaches of the major street and the highest approach of the minor street. Warrant 3 would be met if Part A or Part B shows impact on traffic flow.

The installation of a new traffic signal should improve the overall safety and/or operation of an intersection, and should not seriously disrupt progressive traffic flow. Therefore, one warrant category must meet the defined requirements, but engineering judgment needs to be used to determine the final need for the traffic signal.

9.2 Signal Warrant Analysis Conclusions

The future conditions volumes were based on traffic growth and trips generated by area project trips, as defined within Section 6 of this report.

The following are the results of the warrant analysis for the unsignalized intersection of Jardine Avenue and Foothill Boulevard. This analysis is based on MUTCD Warrant 3 (Peak-Hour).

Jardine Avenue/Foothill Boulevard

- Existing Conditions – Not Satisfied
- Existing plus-Project – Not Satisfied
- Future Pre-Project – Not Satisfied
- Future Post-Project – Not Satisfied

Traffic signal warrants for a new potential traffic signal at this location would not be satisfied under the any analysis scenarios conditions. Therefore, Project construction will not trigger a significant impact. The signal warrant analysis calculations are provided in Appendix G.

10. Congestion Management Program (CMP) Analysis

This section demonstrates the ways in which this traffic study was prepared to be in conformance with the procedures mandated by the County of Los Angeles Congestion Management Program. The CMP program is intended to analyze the cumulative impact of new development as it occurs, and allow for improvements to the roadway system as level of service values on monitored facilities are reduced to poor levels. The CMP guidelines are analyzed here in order to illustrate project compliance.

The Congestion Management Program (CMP) was created statewide because of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (LACMTA). The CMP for Los Angeles County requires the analysis of the traffic impacts of individual development projects with potentially regional significance. A specific system of arterial roadways plus all freeways comprises the CMP system. In conformance with CMP Transportation Impact Analysis (TIA) Guidelines, a traffic impact analysis is conducted at:

- CMP arterial monitoring intersections, including freeway on-ramps or off-ramps, where the proposed project would add 50 or more vehicle trips during either morning or afternoon weekday peak hours.

- CMP mainline freeway-monitoring locations, where the project would add 150 or more trips, in either direction, during the either the morning or afternoon weekday peak hours.

Truck trips within the totals below have been adjusted by a passenger-car equivalent (PCE) factor of 2.5, as explained within the analysis. Construction employee vehicle trips have also been included.

<u>Impacts to CMP Arterials</u>

The nearest CMP monitoring location to the project study corridor is Angeles Crest Highway and I-210 WB Off-Ramp, which is located approximately 6.4 miles to the east of the RPS site. Based on the trip generation, distribution, and anticipated detour routes of the project, it is not expected that 50 or more construction project trips would be added to this nearby CMP intersection. Therefore, no further analysis of potential CMP impacts is required.

<u>Impacts to CMP Freeways</u>

The nearest CMP mainline freeway-monitoring location to the project site is on the I-210 freeway at Terra Bella Street. This location is located approximately 5.9-miles to the northwest of the site. The proposed Project is expected to add less than 150 new trips per hour, in either direction, to any freeway segment based on the project trip generation. Therefore, no further analysis of CMP freeway monitoring stations is required.

11. Summary and Mitigation Measures

This section provides major conclusions of the Project construction traffic impact analysis.

Major analysis assumptions and conclusions are as follows:

11.1 Proposed Project Assumptions and Conclusions

- Under existing analyzed conditions, 9 of the 10 study intersections are operating at LOS D or better during the a.m. and p.m. peak hours. For the analyzed roadway segments, all eight study segments are operating at LOS A during the peak hours.
- Construction of the project is scheduled to commence in 2017 and end in 2019. Typical construction hours would be Monday through Friday from 7:00 a.m. to 3:30 p.m. Construction would take place at the RPS site with staging and personnel parking at the designated Laydown Area.
- Project construction for the proposed Project would generate a daily total of 164 passenger car equivalent trips, with 34 (29 inbound and 5 outbound) trips occurring during the a.m. peak hour and 34 (5 inbound and 29 outbound) trips occurring during the p.m. peak hour.
- Under the existing plus-Project analysis, one of the 10 study intersections will operate at LOS F during peak hours.
- Under the existing plus-Project analysis, all eight study roadway segments are projected to continue operating at LOS A.
- Under the future with-Project construction analysis, one of the 10 study intersections is projected to continue operating at LOS F during peak hours.
- Under the future with-Project construction analysis, all eight study roadway segments are projected to continue operating at LOS A.
- The unsignalized intersection of Jardine Avenue and Foothill Boulevard does not meet peak-hour signal warrants under any analysis scenario. Thus, Project construction traffic will not trigger a significant impact at this location.
- The Project construction traffic is not expected to trigger any intersection or roadway significant impacts. No mitigation measures are recommended.
- Project construction truck traffic is expected to cause temporary on-street parking restrictions, road and lane closures near the Project site. Mitigation measures to address such closures and restrictions are discussed below.

11.2 General Recommendation Measures

Several roadway segments would be narrowed to a single lane of travel. These identified impacts, however, would be temporary and would only occur when work areas are active. Once those areas are restored to existing conditions and construction is completed in that area, the impacts created would be removed.

The following general measures are recommended for implementation as part of project construction planning and mobilization, in order to provide safe movement of traffic within the areas of reduced capacity once construction activities are underway:

- Prior to construction, a construction traffic control plan shall be prepared by the Los Angeles Department of Water and Power for review and approval by the Los Angeles Department of Transportation.

- The plan shall include signage within the construction corridors for traffic, in advance of the first encountered work area, warning of potential delays ahead on the route.

- The plan shall outline specific traffic controls to be used (signage, flag-persons, etc.) to mitigate traffic impacts at roadway locations where one-way-only traffic flow is created, due to the number of travel lanes being reduced from two to one.

- Adjacent properties should be notified directly in advance of any access restrictions, if needed for short duration.

- The plan should include signage to alert motorists to temporary or limited access points to adjacent properties; appropriate barricades for road closures; construction speed limit signage along the haul route; and parking restrictions during construction.

- Where lanes will be reduced to one and parking is not feasible on-street, temporary signs should be placed, indicating "park off-pavement."

- Traffic shall be controlled during construction by adhering to the guidelines contained in Standard Specifications for Public Works Construction used by many municipalities in California and Caltrans' Traffic Manual, Chapter 5, "Manual of Traffic Controls for Construction and Maintenance Work Zones" and applicable City requirements. These guidelines provide methods to minimize construction effects on traffic flow.

Project construction activities will create significant but temporary impacts at some of the analyzed study intersections and roadway segments. Application of the general measures listed above will reduce potential impacts along these segments, to the extent feasible with reduced capacity provisions.

11.3 Overall Conclusions

There are no measures that can be implemented to make all Project impacts less than significant. These impacts will be temporary in nature and will not have a lasting impact on the study roadways or the adjacent roadway systems, including monitoring stations of the Los Angeles County Congestion Management Program on area arterials and freeways. Daily roadway and peak-hour volumes have been analyzed to achieve an understanding of the magnitude of potential roadway lane closures during construction.

Once completed, the proposed Project will not create any significant impacts on the area traffic circulation system. Construction worksite traffic control and detour plans to reduce the temporary Project construction impacts will be required that incorporate the recommended mitigation measures.

The Project will not generate any new measurable and regular vehicle trips during the operations period, and long-term mitigation measures are therefore not required.

KOA CORPORATION
PLANNING & ENGINEERING

APPENDIX A1
Existing Intersection Traffic Count Data

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Mt Gleason Ave

East/West Hillrose St

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	25	12	11	7
BIKES	4	3	1	4
BUSES	4	0	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	77	7.30	115	7.45	77	7.30	115	7.45
PM PK 15 MIN	75	17.15	64	15.00	44	17.30	49	15.00
AM PK HOUR	219	7.15	349	7.00	203	7.00	292	7.15
PM PK HOUR	275	17.00	193	15.00	149	17.00	120	15.00

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	11	165	35	211	*7-8*	44	271	34	349	560	28	8	6	1
8-9	8	89	12	109	*8-9*	8	184	12	204	313	3	0	1	0
9-10	10	60	8	78	*9-10*	3	117	4	124	202	2	0	2	0
15-16	14	163	27	204	*15-16*	28	152	13	193	397	14	27	12	4
16-17	14	159	21	194	*16-17*	12	130	12	154	348	10	1	2	0
17-18	19	226	30	275	*17-18*	13	148	13	174	449	7	0	3	0
TOTAL	76	862	133	1071	TOTAL	108	1002	88	1198	2269	64	36	26	5

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	21	151	31	203	*7-8*	62	155	61	278	481	25	35	7	0
8-9	13	35	13	61	*8-9*	29	55	8	92	153	12	0	5	0
9-10	5	22	23	50	*9-10*	18	25	1	44	94	5	0	3	0
15-16	15	71	14	100	*15-16*	15	80	25	120	220	88	92	4	2
16-17	23	72	19	114	*16-17*	15	55	15	85	199	14	4	3	0
17-18	29	93	27	149	*17-18*	16	65	21	102	251	12	6	1	0
TOTAL	106	444	127	677	TOTAL	155	435	131	721	1398	156	137	23	2

ITM Peak Hour Summary

Prepared by:

NDS

Mt Gleason Ave and Hillrose St , Sunland-Tujunga

Date: 9/17/2015

Day: Thursday

Project #: 15-5575-001

City: Sunland-Tujunga

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Total Peak Hour Summary

N

Mt Gleason Ave

Hillrose St

Southbound Approach

	Right	Thru	Left	Outbound
Lanes	0	1	0	
AM	37	267	45	253
NOON	0	0	0	0
PM	13	148	13	276

Eastbound Approach

	Lanes	AM	NOON	PM
Outbound		213	0	97
Left	0	21	0	29
Thru	1	153	0	93
Right	0	29	0	27

CONTROL

4-Way Stop

Westbound Approach

	AM	NOON	PM	Lanes
Right	63	0	21	0
Thru	163	0	65	1
Left	66	0	16	0
Outbound	235	0	136	

Northbound Approach

	Outbound	Left	Thru	Right
AM	362	13	169	37
NOON	0	0	0	0
PM	191	19	226	30
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

Leg	Period	In	Out
North Leg	AM	349	253
North Leg	NOON	0	0
North Leg	PM	174	276
South Leg	AM	362	219
South Leg	NOON	0	0
South Leg	PM	191	275

West Leg	AM	NOON	PM
	213	0	97
	203	0	149

East Leg	AM	NOON	PM
	292	0	102
	235	0	136

Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	602	0	450
South Leg	581	0	466
West Leg	416	0	246
East Leg	527	0	238

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	1	17	4	4	62	4	5	15	7	9	17	1	146
7:15 AM	3	37	4	7	62	4	4	23	7	13	33	7	204
7:30 AM	3	65	9	13	65	13	8	61	8	17	40	26	328
7:45 AM	4	46	18	20	82	13	4	52	9	23	65	27	363
8:00 AM	3	21	6	5	58	7	5	17	5	13	25	3	168
8:15 AM	3	25	2	1	49	3	4	9	2	8	14	2	122
8:30 AM	1	27	3	1	44	1	3	3	3	2	11	1	100
8:45 AM	1	16	1	1	33	1	1	6	3	6	5	2	76
9:00 AM	1	16	0	0	33	2	0	8	4	3	7	0	74
9:15 AM	4	11	2	1	29	1	2	6	10	4	7	0	77
9:30 AM	3	14	3	2	28	0	0	5	7	5	6	0	73
9:45 AM	2	19	3	0	27	1	3	3	2	6	5	1	72

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	29	314	55	55	572	50	39	208	67	109	235	70	1803
APPROACH %'s :	7.29%	78.89%	13.82%	8.12%	84.49%	7.39%	12.42%	66.24%	21.34%	26.33%	56.76%	16.91%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	13	169	37	45	267	37	21	153	29	66	163	63	1063
PEAK HR FACTOR :		0.711			0.759			0.659			0.635		0.732

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 **Day:** Thursday

TOTALS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	3	55	12	14	43	7	5	29	3	4	36	9	220
3:15 PM	3	31	5	9	37	5	3	15	2	5	14	10	139
3:30 PM	2	42	6	2	38	1	4	11	5	2	17	3	133
3:45 PM	6	35	4	3	34	0	3	16	4	4	13	3	125
4:00 PM	4	36	5	3	35	2	7	18	8	5	9	3	135
4:15 PM	3	37	5	2	33	5	3	15	3	4	17	3	130
4:30 PM	4	39	8	2	27	2	6	19	4	2	12	5	130
4:45 PM	3	47	3	5	35	3	7	20	4	4	17	4	152
5:00 PM	3	61	5	3	38	6	7	24	9	5	17	6	184
5:15 PM	7	56	12	2	31	1	4	22	5	5	20	5	170
5:30 PM	3	46	7	5	37	4	13	24	7	3	10	5	164
5:45 PM	6	63	6	3	42	2	5	23	6	3	18	5	182

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	47	548	78	53	430	38	67	236	60	46	200	61	1864
APPROACH %'s :	6.98%	81.43%	11.59%	10.17%	82.53%	7.29%	18.46%	65.01%	16.53%	14.98%	65.15%	19.87%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	19	226	30	13	148	13	29	93	27	16	65	21	700
PEAK HR FACTOR :		0.917			0.926			0.847			0.850		0.951

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	1	16	4	4	62	4	5	14	7	8	16	1	142
7:15 AM	3	34	3	7	62	4	2	23	7	13	32	7	197
7:30 AM	3	62	9	13	65	12	8	61	8	16	40	26	323
7:45 AM	4	46	18	20	81	13	4	52	9	23	65	27	362
8:00 AM	3	19	6	5	56	7	4	17	5	13	24	3	162
8:15 AM	3	23	2	1	48	3	2	9	2	8	14	2	117
8:30 AM	1	22	3	1	44	1	3	3	3	2	11	1	95
8:45 AM	1	16	1	1	32	1	1	6	3	6	5	2	75
9:00 AM	1	15	0	0	33	1	0	8	4	3	7	0	72
9:15 AM	4	11	2	1	29	1	2	6	10	4	7	0	77
9:30 AM	3	13	3	2	28	0	0	5	7	5	6	0	72
9:45 AM	2	18	3	0	25	1	2	3	2	6	5	1	68

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	29	295	54	55	565	48	33	207	67	107	232	70	1762
APPROACH %'s :	7.67%	78.04%	14.29%	8.23%	84.58%	7.19%	10.75%	67.43%	21.82%	26.16%	56.72%	17.11%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	13	161	36	45	264	36	18	153	29	65	161	63	1044
PEAK HR FACTOR :		0.709			0.757			0.649			0.628		0.721

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	2	55	12	14	43	7	5	29	3	4	36	9	219
3:15 PM	3	30	4	9	37	5	3	15	2	5	14	10	137
3:30 PM	2	42	6	2	37	1	4	11	5	2	17	3	132
3:45 PM	6	35	4	3	34	0	3	16	4	4	12	3	124
4:00 PM	4	35	5	3	34	2	6	17	8	5	9	3	131
4:15 PM	3	36	4	2	33	5	3	15	3	4	17	3	128
4:30 PM	4	39	7	2	27	2	6	18	4	2	11	5	127
4:45 PM	3	47	3	5	34	3	7	20	4	4	17	4	151
5:00 PM	3	61	4	3	38	6	7	24	9	5	17	6	183
5:15 PM	7	56	11	2	31	1	4	21	5	5	20	5	168
5:30 PM	3	46	7	5	37	4	13	24	7	3	10	5	164
5:45 PM	6	63	6	3	42	2	5	23	6	3	18	5	182

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	46	545	73	53	427	38	66	233	60	46	198	61	1846
APPROACH %'s :	6.93%	82.08%	10.99%	10.23%	82.43%	7.34%	18.38%	64.90%	16.71%	15.08%	64.92%	20.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	19	226	28	13	148	13	29	92	27	16	65	21	697
PEAK HR FACTOR :		0.910			0.926			0.841			0.850		0.952

CONTROL : 4-Way Stop

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-001
N/S Street: Mt Gleason Ave
E/W Street: Hillrose St
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	2	1	0	0	3	0
7:15 AM	0	0	3	1	1	1	5	1
7:30 AM	1	3	9	3	0	1	3	5
7:45 AM	1	1	7	2	0	4	3	5
8:00 AM	0	0	0	2	0	2	3	0
8:15 AM	0	0	0	0	0	0	3	2
8:30 AM	0	1	1	0	0	0	1	1
8:45 AM	0	0	0	0	1	2	1	1
9:00 AM	1	0	1	0	0	0	0	2
9:15 AM	0	0	0	0	0	0	1	0
9:30 AM	0	1	0	0	2	0	0	0
9:45 AM	0	0	0	1	0	1	1	1
TOTALS	**3**	**6**	**23**	**10**	**4**	**11**	**24**	**18**

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	4	0	0	0	0	2
7:15 AM	0	0	1	1	0	0	15	0
7:30 AM	1	0	0	1	0	0	18	0
7:45 AM	0	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**1**	**0**	**6**	**2**	**0**	**0**	**33**	**2**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	1	0	4	2	1	0	4	61
3:15 PM	0	9	2	2	1	0	6	8
3:30 PM	2	0	1	0	0	2	3	0
3:45 PM	0	0	0	3	0	0	6	0
4:00 PM	0	1	0	2	0	0	1	1
4:15 PM	0	1	0	0	1	0	0	1
4:30 PM	0	0	1	3	2	0	0	3
4:45 PM	0	0	2	2	0	0	1	7
5:00 PM	0	0	2	3	0	0	1	4
5:15 PM	0	0	0	2	0	0	0	0
5:30 PM	0	1	0	0	1	0	1	2
5:45 PM	0	2	0	0	0	0	3	1
TOTALS	**3**	**14**	**12**	**19**	**6**	**2**	**26**	**88**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	3	0	2	16	0	2	3	57
3:15 PM	0	1	0	9	0	0	2	30
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	2	0
TOTALS	**3**	**1**	**3**	**25**	**0**	**2**	**8**	**94**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	0	0	0	0	0	0	0	1	1	1	5
APPROACH %'s :	0.00%	100.00%	0.00%							33.33%	33.33%	33.33%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	2	0	0	0	0	0	0	0	1	1	0	4
PEAK HR FACTOR :	0.500			0.000			0.000			0.500			1.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	0	0	3	0	0	1	0	0	1	0	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	2	0	0	0	0	0	1	0	3
PEAK HR FACTOR :	0.000			0.500			0.000			0.250			0.375

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	0	0	0	0	0	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%										

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	3
7:15 AM	0	3	1	0	0	0	2	0	0	0	1	0	7
7:30 AM	0	3	0	0	0	1	0	0	0	1	0	0	5
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	2	0	0	2	0	1	0	0	0	1	0	6
8:15 AM	0	2	0	0	1	0	2	0	0	0	0	0	5
8:30 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
9:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
9:45 AM	0	0	0	0	2	0	1	0	0	0	0	0	3

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	15	1	0	7	2	6	1	0	2	3	0	37
APPROACH %'s :	0.00%	93.75%	6.25%	0.00%	77.78%	22.22%	85.71%	14.29%	0.00%	40.00%	60.00%	0.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	8	1	0	3	1	3	0	0	1	2	0	19
PEAK HR FACTOR :	0.563			0.500			0.375			0.750			0.679

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-001 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Hillrose St			Hillrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	2
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	1	0	0	1	0	1	1	0	0	0	0	4
4:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	1	0	0	0	0	1	0	0	1	0	3
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	3	5	0	3	0	1	3	0	0	2	0	18
APPROACH %'s :	11.11%	33.33%	55.56%	0.00%	100.00%	0.00%	25.00%	75.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	1	0	0	0	0	3
PEAK HR FACTOR :	0.500			0.000			0.250			0.000			0.375

CONTROL : 4-Way Stop

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Tujunga Canyon Blvd

East/West Hillrose St (North)

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	16	9	6	0
BIKES	3	1	1	0
BUSES	0	0	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	139	7.30	113	7.45	60	7.45	2	8.15
PM PK 15 MIN	95	15.00	92	15.00	38	15.00	3	17.45
AM PK HOUR	349	7.15	290	7.15	137	7.15	3	8.15
PM PK HOUR	221	15.00	173	15.00	93	15.00	5	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	133	208	0	341
8-9	29	65	0	94
9-10	22	33	0	55
15-16	82	137	2	221
16-17	52	116	0	168
17-18	70	130	2	202
TOTAL	388	689	4	1081

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	1	251	28	280
8-9	2	142	19	163
9-10	1	81	9	91
15-16	1	160	12	173
16-17	0	97	8	105
17-18	2	88	7	97
TOTAL	7	819	83	909

TOTAL	**XING S/L**		**XING N/L**	
N-S	Ped	Sch	Ped	Sch
621	0	0	0	0
257	0	0	1	0
146	1	0	2	0
394	0	0	1	0
273	0	0	0	1
299	0	0	0	0
1990	1	0	4	1

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	10	0	96	106
8-9	3	1	67	71
9-10	4	0	35	39
15-16	13	0	80	93
16-17	14	1	66	81
17-18	11	1	76	88
TOTAL	55	3	420	478

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	0	1	1
8-9	0	0	3	3
9-10	1	0	0	1
15-16	1	1	0	2
16-17	1	0	0	1
17-18	0	0	5	5
TOTAL	3	1	9	13

TOTAL	**XING W/L**		**XING E/L**	
E-W	Ped	Sch	Ped	Sch
107	2	0	3	2
74	2	0	2	0
40	3	0	3	0
95	1	1	1	0
82	3	1	0	0
93	0	0	0	0
491	11	2	9	2

ITM Peak Hour Summary

Prepared by:

NDS

Tujunga Canyon Blvd and Hillrose St (North) , Sunland-Tujunga

Date: 9/17/2015

Day: Thursday

Project #: 15-5575-002

City: Sunland-Tujunga

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	300 PM

Total Peak Hour Summary

Tujunga Canyon Blvd

Hillrose St (North)

N

Southbound Approach

	Left	Thru	Right	Exit
Lanes	0	1	0	
AM	25	263	2	236
NOON	0	0	0	0
PM	12	160	1	150

Eastbound Approach

	AM	NOON	PM
Exit	150	0	95

Lanes		AM	NOON	PM
0	Left	11	0	13
1	Thru	1	0	0
0	Right	125	0	80

Westbound Approach

	AM	NOON	PM	Lanes
Right	1	0	0	0
Thru	0	0	1	1
Left	0	0	1	0
Exit	3	0	3	

CONTROL

2-Way Stop (EB/SB)

Northbound Approach

	Exit	Left	Thru	Right
AM	388	125	224	0
NOON	0	0	0	0
PM	241	82	137	2
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg

	In	Out
AM	290	236
NOON	0	0
PM	173	150

West Leg

	AM	NOON	PM
Out	150	0	95
In	137	0	93

East Leg

	AM	NOON	PM
In	1	0	2
Out	3	0	3

South Leg

	Out	In
AM	388	349
NOON	0	0
PM	241	221

Total Volume Per Leg

North Leg

AM	526
NOON	0
PM	323

West Leg

AM	NOON	PM
287	0	188

East Leg

AM	NOON	PM
4	0	5

South Leg

AM	737
NOON	0
PM	462

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002

Day: Thursday

TOTALS

City: Sunland-Tujunga

Date: 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	16	13	0	0	30	7	0	0	9	0	0	0	75
7:15 AM	24	43	0	1	49	6	2	0	10	0	0	1	136
7:30 AM	47	92	0	0	68	6	2	0	23	0	0	0	238
7:45 AM	46	60	0	0	104	9	6	0	54	0	0	0	279
8:00 AM	8	29	0	1	42	4	1	1	38	0	0	0	124
8:15 AM	10	19	0	0	42	4	0	0	11	0	0	2	88
8:30 AM	6	10	0	1	27	7	1	0	9	0	0	0	61
8:45 AM	5	7	0	0	31	4	1	0	9	0	0	1	58
9:00 AM	4	13	0	0	25	1	1	0	6	0	0	0	50
9:15 AM	6	4	0	0	20	2	2	0	14	0	0	0	48
9:30 AM	10	7	0	0	16	2	1	0	9	0	0	0	45
9:45 AM	2	9	0	1	20	4	0	0	6	1	0	0	43

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	184	306	0	4	474	56	17	1	198	1	0	4	1245
APPROACH %'s :	37.55%	62.45%	0.00%	0.75%	88.76%	10.49%	7.87%	0.46%	91.67%	20.00%	0.00%	80.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	125	224	0	2	263	25	11	1	125	0	0	1	777
PEAK HR FACTOR :		0.628			0.642			0.571			0.250		0.696

CONTROL : 2-Way Stop (EB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	39	56	0	0	87	5	2	0	36	0	1	0	226
3:15 PM	13	27	2	0	32	3	5	0	18	1	0	0	101
3:30 PM	14	23	0	1	19	2	4	0	11	0	0	0	74
3:45 PM	16	31	0	0	22	2	2	0	15	0	0	0	88
4:00 PM	8	32	0	0	27	1	3	0	18	0	0	0	89
4:15 PM	13	30	0	0	18	3	6	0	10	0	0	0	80
4:30 PM	21	31	0	0	22	1	3	1	18	1	0	0	98
4:45 PM	10	23	0	0	30	3	2	0	20	0	0	0	88
5:00 PM	15	35	1	0	26	1	2	0	18	0	0	1	99
5:15 PM	20	41	0	1	25	4	2	0	16	0	0	1	110
5:30 PM	16	26	1	0	22	0	4	1	19	0	0	0	89
5:45 PM	19	28	0	1	15	2	3	0	23	0	0	3	94

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	204	383	4	3	345	27	38	2	222	2	1	5	1236
APPROACH %'s :	34.52%	64.81%	0.68%	0.80%	92.00%	7.20%	14.50%	0.76%	84.73%	25.00%	12.50%	62.50%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	82	137	2	1	160	12	13	0	80	1	1	0	489
PEAK HR FACTOR :		0.582			0.470			0.612			0.500		0.541

CONTROL : 2-Way Stop (EB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	15	13	0	0	30	7	0	0	9	0	0	0	74
7:15 AM	22	43	0	1	49	6	2	0	10	0	0	1	134
7:30 AM	46	92	0	0	67	6	2	0	23	0	0	0	236
7:45 AM	46	59	0	0	104	9	6	0	54	0	0	0	278
8:00 AM	8	28	0	1	42	4	1	1	38	0	0	0	123
8:15 AM	9	19	0	0	41	4	0	0	11	0	0	2	86
8:30 AM	6	10	0	1	27	7	1	0	9	0	0	0	61
8:45 AM	5	7	0	0	31	4	1	0	9	0	0	1	58
9:00 AM	4	13	0	0	25	1	1	0	6	0	0	0	50
9:15 AM	6	4	0	0	20	2	2	0	14	0	0	0	48
9:30 AM	10	6	0	0	14	2	1	0	9	0	0	0	42
9:45 AM	2	8	0	1	20	4	0	0	6	1	0	0	42

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	179	302	0	4	470	56	17	1	198	1	0	4	1232
APPROACH %'s :	37.21%	62.79%	0.00%	0.75%	88.68%	10.57%	7.87%	0.46%	91.67%	20.00%	0.00%	80.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	122	222	0	2	262	25	11	1	125	0	0	1	771
PEAK HR FACTOR :		0.623			0.639			0.571			0.250		0.693

CONTROL : 2-Way Stop (EB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	39	56	0	0	86	5	2	0	36	0	1	0	225
3:15 PM	13	26	2	0	32	3	4	0	18	1	0	0	99
3:30 PM	14	22	0	1	18	2	4	0	11	0	0	0	72
3:45 PM	15	30	0	0	21	2	2	0	14	0	0	0	84
4:00 PM	8	32	0	0	27	1	3	0	18	0	0	0	89
4:15 PM	13	30	0	0	18	1	5	0	9	0	0	0	76
4:30 PM	21	31	0	0	22	1	3	1	18	1	0	0	98
4:45 PM	10	21	0	0	30	3	2	0	20	0	0	0	86
5:00 PM	15	35	1	0	26	1	2	0	18	0	0	1	99
5:15 PM	20	41	0	1	25	4	1	0	15	0	0	1	108
5:30 PM	16	25	1	0	22	0	4	1	19	0	0	0	88
5:45 PM	19	28	0	1	15	2	3	0	23	0	0	3	94
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	203	377	4	3	342	25	35	2	219	2	1	5	1218
APPROACH %'s :	34.76%	64.55%	0.68%	0.81%	92.43%	6.76%	13.67%	0.78%	85.55%	25.00%	12.50%	62.50%	
PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	81	134	2	1	157	12	12	0	79	1	1	0	480
PEAK HR FACTOR :		0.571			0.467			0.599			0.500		0.533

CONTROL : 2-Way Stop (EB/SB)

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-002
N/S Street: Tujunga Canyon Blvd
E/W Street: Hillrose St (North)
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	2	0	0	0
7:15 AM	0	0	0	0	0	1	0	0
7:30 AM	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	1	0
8:45 AM	0	0	0	0	1	1	0	0
9:00 AM	1	0	0	0	0	0	1	0
9:15 AM	1	0	0	0	0	0	2	0
9:30 AM	0	0	1	0	0	1	0	0
9:45 AM	0	0	0	0	2	0	0	0
TOTALS	**2**	**1**	**1**	**0**	**5**	**3**	**4**	**3**

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	1	0	0	0
7:15 AM	0	0	0	0	1	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	1	0	0	0	1	0	1	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**3**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	1	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 **Day:** Thursday

BIKES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	0	0	0	0	0	0	0	1
APPROACH %'s :	100.00%	0.00%	0.00%										

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.250			0.000			0.000			0.000			0.250

CONTROL : 2-Way Stop (EB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 **Day:** Thursday

BIKES

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	1	0	0	1	0	0	0	1	0	0	0	4
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%				

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.250			0.250			0.000			0.000			0.250

CONTROL : 2-Way Stop (EB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : 2-Way Stop (EB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 2-Way Stop (EB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	2
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
9:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	4	0	0	4	0	0	0	0	0	0	0	13
APPROACH %'s :	55.56%	44.44%	0.00%	0.00%	100.00%	0.00%							

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	3	2	0	0	1	0	0	0	0	0	0	0	6
PEAK HR FACTOR :	0.625			0.250			0.000			0.000			0.750

CONTROL : 2-Way Stop (EB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-002 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (North)			Hillrose St (North)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	2
3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
3:45 PM	1	1	0	0	1	0	0	0	1	0	0	0	4
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	2	1	0	1	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	2
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	6	0	0	3	2	3	0	3	0	0	0	18
APPROACH %'s :	14.29%	85.71%	0.00%	0.00%	60.00%	40.00%	50.00%	0.00%	50.00%				

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	1	3	0	0	3	0	1	0	1	0	0	0	9
PEAK HR FACTOR :	0.500			0.750			0.500			0.000			0.563

CONTROL : 2-Way Stop (EB/SB)

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Tujunga Canyon Blvd

East/West Hillrose St (South)

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	14	10	0	6
BIKES	2	2	0	1
BUSES	0	0	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	95	7.30	159	7.45	0	0.00	47	7.30
PM PK 15 MIN	71	15.00	123	15.00	0	0.00	27	15.00
AM PK HOUR	233	7.15	388	7.15	0	0.00	129	7.00
PM PK HOUR	177	15.00	242	15.00	0	0.00	60	15.00

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	0	219	1	220	*7-8*	70	277	0	347	567	3	4	0	0
8-9	0	74	1	75	*8-9*	32	178	0	210	285	3	1	1	1
9-10	0	36	2	38	*9-10*	19	100	0	119	157	0	0	1	0
15-16	0	174	3	177	*15-16*	59	183	0	242	419	0	1	1	1
16-17	1	136	3	140	*16-17*	37	127	0	164	304	0	0	1	0
17-18	0	163	2	165	*17-18*	37	127	0	164	329	6	0	2	0
TOTAL	1	802	12	815	TOTAL	254	992	0	1246	2061	12	6	6	2

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	0	0	0	0	*7-8*	7	0	122	129	129	9	4	2	0
8-9	0	0	0	0	*8-9*	8	0	21	29	29	5	1	3	1
9-10	0	0	0	0	*9-10*	10	0	17	27	27	1	0	2	0
15-16	0	0	0	0	*15-16*	13	0	47	60	60	1	2	2	3
16-17	0	0	0	0	*16-17*	11	0	28	39	39	4	3	0	0
17-18	0	0	0	0	*17-18*	9	0	39	48	48	2	0	5	2
TOTAL	0	0	0	0	TOTAL	58	0	274	332	332	22	10	14	6

ITM Peak Hour Summary

Prepared by:

NDS

Tujunga Canyon Blvd and Hillrose St (South) , Sunland-Tujunga

Date: 9/17/2015

Day: Thursday

Project #: 15-5575-102

City: Sunland-Tujunga

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	300 PM

N

Tujunga Canyon Blvd

Hillrose St (South)

Total Peak Hour Summary

Southbound Approach

	Left	Through	Right		Out
Lanes	0	1	0		
AM	0	305	83	AM	350
NOON	0	0	0	NOON	0
PM	0	183	59	PM	221

Eastbound Approach

	AM	NOON	PM
Out	0	0	0

Lanes	AM	NOON	PM
0	0	0	0
0	0	0	0
0	0	0	0

Westbound Approach

	AM	NOON	PM	Lanes
Right	118	0	47	0
Through	0	0	0	1
Left	8	0	13	0
Out	84	0	62	

CONTROL

1-Way Stop (WB)

Northbound Approach

	Out	Left	Through	Right	
AM	313	0	232	1	AM
NOON	0	0	0	0	NOON
PM	196	0	174	3	PM
		0	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg	In	Out
AM	388	350
NOON	0	0
PM	242	221

West Leg	AM	NOON	PM
Out	0	0	0
In	0	0	0

East Leg	AM	NOON	PM
In	126	0	60
Out	84	0	62

South Leg	Out	In
AM	313	233
NOON	0	0
PM	196	177

Total Volume Per Leg

North Leg	
AM	738
NOON	0
PM	463

West Leg	AM	NOON	PM
	0	0	0

East Leg	AM	NOON	PM
	210	0	122

South Leg	
AM	546
NOON	0
PM	373

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 **Day:** Thursday

TOTALS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
7:00 AM	0	16	1	1	38	0	0	0	0	2	0	13	71
7:15 AM	0	44	0	1	58	0	0	0	0	1	0	24	128
7:30 AM	0	95	0	22	68	0	0	0	0	1	0	46	232
7:45 AM	0	64	0	46	113	0	0	0	0	3	0	39	265
8:00 AM	0	29	1	14	66	0	0	0	0	3	0	9	122
8:15 AM	0	22	0	7	47	0	0	0	0	4	0	7	87
8:30 AM	0	12	0	5	31	0	0	0	0	0	0	3	51
8:45 AM	0	11	0	6	34	0	0	0	0	1	0	2	54
9:00 AM	0	14	0	2	31	0	0	0	0	1	0	2	50
9:15 AM	0	5	0	8	25	0	0	0	0	4	0	5	47
9:30 AM	0	9	0	3	23	0	0	0	0	1	0	8	44
9:45 AM	0	8	2	6	21	0	0	0	0	4	0	2	43
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	329	4	121	555	0	0	0	0	25	0	160	1194
APPROACH %'s :	0.00%	98.80%	1.20%	17.90%	82.10%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	13.51%	0.00%	86.49%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	232	1	83	305	0	0	0	0	8	0	118	747
PEAK HR FACTOR :		0.613			0.610			0.000			0.670		0.705

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 **Day:** Thursday

TOTALS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
3:00 PM	0	70	1	26	97	0	0	0	0	3	0	24	221
3:15 PM	0	35	1	19	34	0	0	0	0	1	0	8	98
3:30 PM	0	29	0	5	25	0	0	0	0	2	0	7	68
3:45 PM	0	40	1	9	27	0	0	0	0	7	0	8	92
4:00 PM	0	29	2	11	33	0	0	0	0	4	0	9	88
4:15 PM	0	35	1	7	23	0	0	0	0	3	0	8	77
4:30 PM	1	45	0	10	31	0	0	0	0	1	0	7	95
4:45 PM	0	27	0	9	40	0	0	0	0	3	0	4	83
5:00 PM	0	40	0	8	36	0	0	0	0	2	0	13	99
5:15 PM	0	45	1	9	32	0	0	0	0	3	0	14	104
5:30 PM	0	38	0	11	30	0	0	0	0	4	0	7	90
5:45 PM	0	40	1	9	29	0	0	0	0	0	0	5	84

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	473	8	133	437	0	0	0	0	33	0	114	1199
APPROACH %'s :	0.21%	98.13%	1.66%	23.33%	76.67%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	22.45%	0.00%	77.55%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	174	3	59	183	0	0	0	0	13	0	47	479
PEAK HR FACTOR :		0.623			0.492			0.000			0.556		0.542

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
7:00 AM	0	15	1	1	38	0	0	0	0	2	0	13	70
7:15 AM	0	42	0	1	58	0	0	0	0	1	0	24	126
7:30 AM	0	94	0	22	67	0	0	0	0	1	0	46	230
7:45 AM	0	63	0	46	113	0	0	0	0	3	0	39	264
8:00 AM	0	28	1	14	66	0	0	0	0	2	0	9	120
8:15 AM	0	21	0	7	46	0	0	0	0	4	0	7	85
8:30 AM	0	12	0	5	31	0	0	0	0	0	0	3	51
8:45 AM	0	11	0	6	34	0	0	0	0	1	0	2	54
9:00 AM	0	14	0	2	31	0	0	0	0	1	0	2	50
9:15 AM	0	5	0	8	25	0	0	0	0	4	0	5	47
9:30 AM	0	8	0	3	21	0	0	0	0	1	0	8	41
9:45 AM	0	7	2	6	21	0	0	0	0	4	0	2	42

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	320	4	121	551	0	0	0	0	24	0	160	1180
APPROACH %'s :	0.00%	98.77%	1.23%	18.01%	81.99%	0.00%				13.04%	0.00%	86.96%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	227	1	83	304	0	0	0	0	7	0	118	740
PEAK HR FACTOR :		0.606			0.608			0.000			0.665		0.701

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
3:00 PM	0	70	1	26	96	0	0	0	0	2	0	24	219
3:15 PM	0	34	1	19	34	0	0	0	0	1	0	8	97
3:30 PM	0	28	0	5	24	0	0	0	0	2	0	7	66
3:45 PM	0	40	1	9	25	0	0	0	0	6	0	6	87
4:00 PM	0	29	2	11	33	0	0	0	0	4	0	9	88
4:15 PM	0	35	1	7	22	0	0	0	0	3	0	8	76
4:30 PM	1	45	0	10	31	0	0	0	0	0	0	7	94
4:45 PM	0	25	0	9	40	0	0	0	0	3	0	4	81
5:00 PM	0	40	0	8	36	0	0	0	0	2	0	13	99
5:15 PM	0	45	1	8	32	0	0	0	0	3	0	14	103
5:30 PM	0	37	0	11	30	0	0	0	0	4	0	7	89
5:45 PM	0	40	1	9	29	0	0	0	0	0	0	5	84

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	468	8	132	432	0	0	0	0	30	0	112	1183
APPROACH %'s :	0.21%	98.11%	1.68%	23.40%	76.60%	0.00%				21.13%	0.00%	78.87%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	172	3	59	179	0	0	0	0	11	0	45	469
PEAK HR FACTOR :		0.616			0.488			0.000			0.538		0.535

CONTROL : 1-Way Stop (WB)

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-102
N/S Street: Tujunga Canyon Blvd
E/W Street: Hillrose St (South)
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	1	0	0	2
7:15 AM	0	0	0	0	0	1	0	1
7:30 AM	0	0	1	2	0	0	3	2
7:45 AM	0	0	0	0	0	0	1	0
8:00 AM	1	0	0	1	0	0	2	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	1	0	0	1	1	0
8:45 AM	0	0	1	0	1	1	1	1
9:00 AM	1	0	0	0	0	0	1	0
9:15 AM	0	0	0	0	1	0	0	0
9:30 AM	0	0	0	0	0	1	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**2**	**0**	**3**	**3**	**3**	**4**	**9**	**6**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	4	0	0	4	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	1	0	0	1	0	1	1	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**1**	**0**	**0**	**5**	**0**	**1**	**5**	**0**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	1
3:15 PM	1	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	1	1	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	2
4:45 PM	1	0	0	0	0	0	0	0
5:00 PM	0	2	1	0	1	0	0	0
5:15 PM	0	0	2	0	1	0	0	2
5:30 PM	0	0	1	1	1	1	0	0
5:45 PM	0	0	0	1	0	1	0	0
TOTALS	**2**	**2**	**4**	**2**	**4**	**3**	**1**	**6**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	2	0	0	0
3:15 PM	1	0	1	0	0	1	0	2
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	1	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**1**	**0**	**1**	**0**	**3**	**2**	**0**	**5**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102

Day: Thursday

BIKES

City: Sunland-Tujunga

Date: 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	0	0	0	0	0	0	1
APPROACH %'s :	0.00%	100.00%	0.00%										

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.250			0.000			0.000			0.000			0.250

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 **Day:** Thursday

BIKES

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	1	1	0	0	0	0	0	0	1	4
APPROACH %'s :	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%				0.00%	0.00%	100.00%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.250			0.250			0.000			0.000			0.250

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	2
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
9:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	9	0	0	4	0	0	0	0	1	0	0	14
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%				100.00%	0.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	5	0	0	1	0	0	0	0	1	0	0	7
PEAK HR FACTOR :		0.625			0.250			0.000			0.250		0.875

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-102 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Hillrose St (South)			Hillrose St (South)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
3:00 PM	0	0	0	0	1	0	0	0	0	1	0	0	2
3:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
3:45 PM	0	0	0	0	2	0	0	0	0	1	0	2	5
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5	0	1	5	0	0	0	0	3	0	2	16
APPROACH %'s :	0.00%	100.00%	0.00%	16.67%	83.33%	0.00%				60.00%	0.00%	40.00%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	2	0	0	4	0	0	0	0	2	0	2	10
PEAK HR FACTOR :		0.500			0.500			0.000			0.333		0.500

CONTROL : 1-Way Stop (WB)

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Jardin Ave

East/West Foothill Blvd

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	1	0	146	140
BIKES	0	0	8	16
BUSES	0	0	32	45

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	4	9.45	0	0.00	408	7.45	368	7.45
PM PK 15 MIN	10	15.45	0	0.00	347	17.45	349	15.15
AM PK HOUR	8	7.15	0	0.00	1324	7.15	1399	7.15
PM PK HOUR	31	15.30	0	0.00	1297	17.00	1315	17.00

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	4	0	3	7	*7-8*	0	0	0	0	7	12	5	20	0
8-9	6	0	2	8	*8-9*	0	0	0	0	8	4	1	4	0
9-10	3	0	5	8	*9-10*	0	0	0	0	8	12	0	3	0
15-16	10	0	13	23	*15-16*	0	0	0	0	23	37	11	15	0
16-17	9	0	13	22	*16-17*	0	0	0	0	22	18	2	9	0
17-18	12	0	8	20	*17-18*	0	0	0	0	20	5	1	6	0
TOTAL	44	0	44	88	TOTAL	0	0	0	0	88	88	20	57	0

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	0	1232	5	1237	*7-8*	5	1350	0	1355	2592	0	0	0	0
8-9	0	1014	8	1022	*8-9*	7	1090	0	1097	2119	1	0	0	0
9-10	0	724	6	730	*9-10*	11	864	0	875	1605	0	0	4	0
15-16	0	1077	23	1100	*15-16*	17	1134	0	1151	2251	1	0	0	0
16-17	0	1124	20	1144	*16-17*	16	1121	0	1137	2281	1	0	0	0
17-18	0	1269	28	1297	*17-18*	15	1300	0	1315	2612	0	0	0	1
TOTAL	0	6440	90	6530	TOTAL	71	6859	0	6930	13460	3	0	4	1

ITM Peak Hour Summary

Prepared by:

NDS

Jardin Ave and Foothill Blvd , Sunland-Tujunga

Date:	9/17/2015
Day:	Thursday
Project #:	15-5575-003
City:	Sunland-Tujunga

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Total Peak Hour Summary

N

Jardin Ave

Foothill Blvd

Southbound Approach

	Left	Through	Right	Northbound departures
Lanes	0	0	0	
AM	0	0	0	0
NOON	0	0	0	0
PM	0	0	0	0

Eastbound Approach

	Lanes	AM	NOON	PM
Westbound departures		1399	0	1312
Left	0	0	0	0
Through	2	1317	0	1269
Right	0	7	0	28

Westbound Approach

	AM	NOON	PM	Lanes
Right	0	0	0	0
Through	1393	0	1300	2
Left	6	0	15	1
Eastbound departures	1319	0	1277	

CONTROL

1-Way Stop (NB)

Northbound Approach

	Southbound departures	Left	Through	Right
AM	13	6	0	2
NOON	0	0	0	0
PM	43	12	0	8
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg

AM	0	0
NOON	0	0
PM	0	0

West Leg

	AM	NOON	PM
	1399	0	1312
	1324	0	1297

East Leg

	AM	NOON	PM
	1399	0	1315
	1319	0	1277

South Leg

AM	13	8
NOON	0	0
PM	43	20

Total Volume Per Leg

	North Leg	West Leg	East Leg	South Leg
AM	0	2723	2718	21
NOON	0	0	0	0
PM	0	2609	2592	63

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 **Day:** Thursday

TOTALS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
7:00 AM	1	0	1	0	0	0	0	211	0	0	302	0	515
7:15 AM	2	0	1	0	0	0	0	272	1	0	328	0	604
7:30 AM	0	0	0	0	0	0	0	343	2	3	354	0	702
7:45 AM	1	0	1	0	0	0	0	406	2	2	366	0	778
8:00 AM	3	0	0	0	0	0	0	296	2	1	345	0	647
8:15 AM	2	0	0	0	0	0	0	255	4	3	279	0	543
8:30 AM	0	0	1	0	0	0	0	240	1	2	241	0	485
8:45 AM	1	0	1	0	0	0	0	223	1	1	225	0	452
9:00 AM	0	0	0	0	0	0	0	202	2	3	209	0	416
9:15 AM	0	0	2	0	0	0	0	171	2	5	224	0	404
9:30 AM	2	0	0	0	0	0	0	182	1	2	219	0	406
9:45 AM	1	0	3	0	0	0	0	169	1	1	212	0	387

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	13	0	10	0	0	0	0	2970	19	23	3304	0	6339
APPROACH %'s :	56.52%	0.00%	43.48%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.36%	0.64%	0.69%	99.31%	0.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	6	0	2	0	0	0	0	1317	7	6	1393	0	2731
PEAK HR FACTOR :		0.667			0.000			0.811			0.950		0.878

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 **Day:** Thursday

TOTALS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
3:00 PM	0	0	3	0	0	0	0	279	6	7	276	0	571
3:15 PM	2	0	1	0	0	0	0	277	4	3	346	0	633
3:30 PM	3	0	4	0	0	0	0	249	7	5	256	0	524
3:45 PM	5	0	5	0	0	0	0	272	6	2	256	0	546
4:00 PM	4	0	3	0	0	0	0	259	9	7	281	0	563
4:15 PM	3	0	4	0	0	0	0	263	4	3	277	0	554
4:30 PM	0	0	1	0	0	0	0	281	5	3	276	0	566
4:45 PM	2	0	5	0	0	0	0	321	2	3	287	0	620
5:00 PM	2	0	0	0	0	0	0	288	6	3	341	0	640
5:15 PM	1	0	1	0	0	0	0	324	5	4	311	0	646
5:30 PM	4	0	5	0	0	0	0	321	6	4	317	0	657
5:45 PM	5	0	2	0	0	0	0	336	11	4	331	0	689

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	31	0	34	0	0	0	0	3470	71	48	3555	0	7209
APPROACH %'s :	47.69%	0.00%	52.31%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	97.99%	2.01%	1.33%	98.67%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	12	0	8	0	0	0	0	1269	28	15	1300	0	2632
PEAK HR FACTOR :		0.556			0.000			0.934			0.956		0.955

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
7:00 AM	1	0	1	0	0	0	0	197	0	0	297	0	496
7:15 AM	2	0	1	0	0	0	0	264	1	0	318	0	586
7:30 AM	0	0	0	0	0	0	0	330	2	3	345	0	680
7:45 AM	1	0	1	0	0	0	0	402	1	2	355	0	762
8:00 AM	3	0	0	0	0	0	0	277	2	1	329	0	612
8:15 AM	2	0	0	0	0	0	0	245	4	3	273	0	527
8:30 AM	0	0	1	0	0	0	0	229	1	2	234	0	467
8:45 AM	1	0	1	0	0	0	0	215	1	1	215	0	434
9:00 AM	0	0	0	0	0	0	0	192	2	3	200	0	397
9:15 AM	0	0	2	0	0	0	0	164	2	5	219	0	392
9:30 AM	1	0	0	0	0	0	0	177	0	2	208	0	388
9:45 AM	1	0	3	0	0	0	0	163	1	1	204	0	373

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	12	0	10	0	0	0	0	2855	17	23	3197	0	6114
APPROACH %'s :	54.55%	0.00%	45.45%				0.00%	99.41%	0.59%	0.71%	99.29%	0.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	6	0	2	0	0	0	0	1273	6	6	1347	0	2640
PEAK HR FACTOR :	0.667			0.000			0.793			0.947			0.866

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
3:00 PM	0	0	3	0	0	0	0	271	6	7	269	0	556
3:15 PM	2	0	1	0	0	0	0	270	4	3	331	0	611
3:30 PM	3	0	4	0	0	0	0	244	7	5	252	0	515
3:45 PM	5	0	5	0	0	0	0	265	6	2	251	0	534
4:00 PM	4	0	3	0	0	0	0	253	8	7	277	0	552
4:15 PM	3	0	4	0	0	0	0	257	4	3	265	0	536
4:30 PM	0	0	1	0	0	0	0	275	5	3	268	0	552
4:45 PM	2	0	5	0	0	0	0	318	2	3	283	0	613
5:00 PM	2	0	0	0	0	0	0	284	5	3	338	0	632
5:15 PM	1	0	1	0	0	0	0	322	5	4	305	0	638
5:30 PM	4	0	5	0	0	0	0	317	6	4	312	0	648
5:45 PM	5	0	2	0	0	0	0	335	11	4	326	0	683

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	31	0	34	0	0	0	0	3411	69	48	3477	0	7070
APPROACH %'s :	47.69%	0.00%	52.31%				0.00%	98.02%	1.98%	1.36%	98.64%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	12	0	8	0	0	0	0	1258	27	15	1281	0	2601
PEAK HR FACTOR :		0.556			0.000			0.928			0.950		0.952

CONTROL : 1-Way Stop (NB)

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-003
N/S Street: Jardin Ave
E/W Street: Foothill Blvd
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	2	1	1	1	0	0	0	0
7:15 AM	4	0	6	2	0	0	0	0
7:30 AM	6	3	1	0	0	0	0	0
7:45 AM	3	1	1	0	0	0	0	0
8:00 AM	0	1	0	1	0	0	0	0
8:15 AM	1	1	1	0	0	0	0	0
8:30 AM	0	0	0	1	0	0	0	1
8:45 AM	0	1	1	0	0	0	0	0
9:00 AM	1	0	0	0	1	1	0	0
9:15 AM	1	1	2	0	0	0	0	0
9:30 AM	0	0	2	3	0	1	0	0
9:45 AM	0	0	4	1	0	1	0	0
TOTALS	**18**	**9**	**19**	**9**	**1**	**3**	**0**	**1**

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	1	0	0	0	0	0
7:15 AM	0	0	2	0	0	0	0	0
7:30 AM	0	0	2	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	2	1	2	0	0	0	0
3:15 PM	0	4	0	12	0	0	0	0
3:30 PM	1	5	3	8	0	0	0	0
3:45 PM	0	3	2	9	0	0	0	1
4:00 PM	1	3	2	1	0	0	0	0
4:15 PM	0	2	2	0	0	0	1	0
4:30 PM	0	0	0	3	0	0	0	0
4:45 PM	0	3	5	5	0	0	0	0
5:00 PM	0	0	1	0	0	0	0	0
5:15 PM	2	0	0	1	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	2	2	1	2	0	0	0	0
TOTALS	**6**	**24**	**17**	**43**	**0**	**0**	**1**	**1**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	1	9	0	0	0	0
3:30 PM	0	0	0	1	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	1	1	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	1	0	1	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**2**	**12**	**0**	**1**	**0**	**0**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	4	0	0	3	0	7
APPROACH %'s :							0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	1	0	1
PEAK HR FACTOR :	0.000			0.000			0.000			0.250			0.250

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
3:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	1	1	0	3	0	5
3:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
3:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	3	1	0	13	0	17
APPROACH %'s :							0.00%	75.00%	25.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	0	4	0	0	2	0	6
7:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
7:30 AM	0	0	0	0	0	0	0	3	0	0	1	0	4
7:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
8:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
9:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
9:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
9:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	16	0	0	18	0	34
APPROACH %'s :							0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	6	0	0	7	0	13
PEAK HR FACTOR :	0.000			0.000			0.500			0.875			0.813

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
3:00 PM	0	0	0	0	0	0	0	4	0	0	2	0	6
3:15 PM	0	0	0	0	0	0	0	1	0	0	4	0	5
3:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
3:45 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
4:30 PM	0	0	0	0	0	0	0	2	0	0	4	0	6
4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
5:00 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
5:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	3

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	16	0	0	27	0	43
APPROACH %'s :							0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	3	0	0	9	0	12
PEAK HR FACTOR :		0.000			0.000			0.750			0.750		0.750

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	0	10	0	0	3	0	13
7:15 AM	0	0	0	0	0	0	0	7	0	0	8	0	15
7:30 AM	0	0	0	0	0	0	0	10	0	0	8	0	18
7:45 AM	0	0	0	0	0	0	0	3	1	0	9	0	13
8:00 AM	0	0	0	0	0	0	0	18	0	0	14	0	32
8:15 AM	0	0	0	0	0	0	0	9	0	0	5	0	14
8:30 AM	0	0	0	0	0	0	0	9	0	0	7	0	16
8:45 AM	0	0	0	0	0	0	0	8	0	0	7	0	15
9:00 AM	0	0	0	0	0	0	0	9	0	0	8	0	17
9:15 AM	0	0	0	0	0	0	0	7	0	0	3	0	10
9:30 AM	1	0	0	0	0	0	0	4	1	0	10	0	16
9:45 AM	0	0	0	0	0	0	0	5	0	0	7	0	12

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	0	0	99	2	0	89	0	191
APPROACH %'s :	100.00%	0.00%	0.00%				0.00%	98.02%	1.98%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	38	1	0	39	0	78
PEAK HR FACTOR :	0.000			0.000			0.542			0.696			0.609

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-003 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Jardin Ave			Jardin Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	1	2	0	
3:00 PM	0	0	0	0	0	0	0	4	0	0	5	0	9
3:15 PM	0	0	0	0	0	0	0	6	0	0	11	0	17
3:30 PM	0	0	0	0	0	0	0	4	0	0	2	0	6
3:45 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
4:00 PM	0	0	0	0	0	0	0	5	1	0	4	0	10
4:15 PM	0	0	0	0	0	0	0	4	0	0	10	0	14
4:30 PM	0	0	0	0	0	0	0	4	0	0	4	0	8
4:45 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
5:00 PM	0	0	0	0	0	0	0	3	1	0	0	0	4
5:15 PM	0	0	0	0	0	0	0	1	0	0	5	0	6
5:30 PM	0	0	0	0	0	0	0	3	0	0	3	0	6
5:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	43	2	0	51	0	96
APPROACH %'s :							0.00%	95.56%	4.44%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	1	0	10	0	19
PEAK HR FACTOR :	0.000			0.000			0.563			0.500			0.792

CONTROL : 1-Way Stop (NB)

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Mt Gleason Ave

East/West Foothill Blvd

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	8	5	140	104
BIKES	6	0	5	5
BUSES	0	0	32	39

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	46	7.30	77	7.45	406	7.45	275	7.30
PM PK 15 MIN	29	17.15	42	17.00	337	17.45	309	17.45
AM PK HOUR	120	7.15	233	7.15	1275	7.15	1012	7.15
PM PK HOUR	93	17.00	138	15.00	1260	17.00	1142	17.00

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	7	95	11	113	*7-8*	194	29	3	226	339	9	0	2	0
8-9	6	43	8	57	*8-9*	143	18	2	163	220	10	0	6	0
9-10	6	27	13	46	*9-10*	100	9	4	113	159	5	0	2	0
15-16	9	48	15	72	*15-16*	99	36	3	138	210	13	2	11	0
16-17	10	45	8	63	*16-17*	97	21	6	124	187	8	1	6	0
17-18	6	66	21	93	*17-18*	99	26	3	128	221	7	0	5	0
TOTAL	44	324	76	444	TOTAL	732	139	21	892	1336	52	3	32	0

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	126	1030	26	1182	*7-8*	7	883	84	974	2156	48	0	25	7
8-9	103	892	13	1008	*8-9*	7	758	57	822	1830	14	0	7	0
9-10	91	623	14	728	*9-10*	15	625	55	695	1423	17	0	10	0
15-16	149	865	34	1048	*15-16*	23	824	118	965	2013	37	40	17	10
16-17	163	889	31	1083	*16-17*	17	862	117	996	2079	16	0	18	0
17-18	167	1049	44	1260	*17-18*	18	980	144	1142	2402	20	0	18	1
TOTAL	799	5348	162	6309	TOTAL	87	4932	575	5594	11903	152	40	95	18

ITM Peak Hour Summary

Prepared by:

NDS

Mt Gleason Ave and Foothill Blvd , Sunland-Tujunga

Date:	9/17/2015
Day:	Thursday

Project #:	15-5575-004
City:	Sunland-Tujunga

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

N

Mt Gleason Ave

Foothill Blvd

Total Peak Hour Summary

Southbound Approach

	Lanes 0	Lanes 1	Lanes 0		
AM	4	38	191	328	AM
NOON	0	0	0	0	NOON
PM	3	26	99	377	PM

Eastbound Approach

	AM	NOON	PM
	925	0	989

Lanes	AM	NOON	PM
1	134	0	167
2	1116	0	1049
0	25	0	44

Westbound Approach

AM	NOON	PM	Lanes
92	0	144	0
914	0	980	2
6	0	18	1

AM	NOON	PM
1318	0	1169

CONTROL

Signalized

Northbound Approach

AM	69	7	102	11	AM
NOON	0	0	0	0	NOON
PM	88	6	66	21	PM
		0	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg

233	328	AM
0	0	NOON
128	377	PM

West Leg

AM	NOON	PM
925	0	989
1275	0	1260

East Leg

1012	0	1142
1318	0	1169
AM	NOON	PM

South Leg

AM	69	120
NOON	0	0
PM	88	93

Total Volume Per Leg

North Leg

561	AM
0	NOON
505	PM

West Leg

AM	NOON	PM
2200	0	2249

East Leg

2330	0	2311
AM	NOON	PM

South Leg

AM	189
NOON	0
PM	181

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 **Day:** Thursday

TOTALS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	1	9	3	46	1	0	25	168	5	1	192	10	461
7:15 AM	0	14	2	50	4	0	34	229	8	0	223	21	585
7:30 AM	0	42	4	43	4	1	31	270	6	1	238	36	676
7:45 AM	6	30	2	55	20	2	36	363	7	5	230	17	773
8:00 AM	1	16	3	43	10	1	33	254	4	0	223	18	606
8:15 AM	3	8	3	37	4	1	28	226	4	4	204	16	538
8:30 AM	0	8	1	34	3	0	26	216	2	2	169	10	471
8:45 AM	2	11	1	29	1	0	16	196	3	1	162	13	435
9:00 AM	0	9	1	26	1	1	26	177	2	2	150	7	402
9:15 AM	2	2	3	30	2	1	15	148	4	3	169	14	393
9:30 AM	3	10	6	25	2	0	24	159	5	5	152	17	408
9:45 AM	1	6	3	19	4	2	26	139	3	5	154	17	379

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	19	165	32	437	56	9	320	2545	53	29	2266	196	6127
APPROACH %'s :	8.80%	76.39%	14.81%	87.05%	11.16%	1.79%	10.97%	87.22%	1.82%	1.16%	90.97%	7.87%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	7	102	11	191	38	4	134	1116	25	6	914	92	2640
PEAK HR FACTOR :		0.652			0.756			0.785			0.920		0.854

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
3:00 PM	2	16	5	23	13	0	42	213	8	6	207	23	558
3:15 PM	3	9	2	25	9	0	29	232	8	2	251	25	595
3:30 PM	2	12	4	25	8	2	40	203	5	7	186	30	524
3:45 PM	2	11	4	26	6	1	38	217	13	8	180	40	546
4:00 PM	4	13	3	26	7	1	40	199	10	4	218	26	551
4:15 PM	3	11	1	28	3	2	49	193	9	2	206	29	536
4:30 PM	1	8	1	20	5	0	36	227	6	6	220	30	560
4:45 PM	2	13	3	23	6	3	38	270	6	5	218	32	619
5:00 PM	2	12	4	32	7	3	34	247	10	6	241	41	639
5:15 PM	1	23	5	22	9	0	45	251	18	4	236	34	648
5:30 PM	2	18	3	22	7	0	45	261	12	7	237	27	641
5:45 PM	1	13	9	23	3	0	43	290	4	1	266	42	695

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	25	159	44	295	83	12	479	2803	109	58	2666	379	7112
APPROACH %'s :	10.96%	69.74%	19.30%	75.64%	21.28%	3.08%	14.13%	82.66%	3.21%	1.87%	85.92%	12.21%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	6	66	21	99	26	3	167	1049	44	18	980	144	2623
PEAK HR FACTOR :		0.802			0.762			0.935			0.924		0.944

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	1	9	3	46	1	0	22	158	4	1	187	10	442
7:15 AM	0	14	2	49	4	0	30	224	8	0	215	19	565
7:30 AM	0	39	4	43	4	1	30	259	6	1	233	36	656
7:45 AM	5	30	2	55	19	2	35	360	7	5	225	17	762
8:00 AM	1	15	3	43	9	1	31	244	4	0	213	16	580
8:15 AM	3	8	3	36	4	1	26	214	4	4	198	16	517
8:30 AM	0	8	1	34	3	0	21	209	2	2	163	10	453
8:45 AM	2	11	1	29	1	0	16	190	3	1	153	12	419
9:00 AM	0	8	1	26	1	1	26	168	1	2	140	7	381
9:15 AM	2	2	3	30	2	1	15	142	3	3	164	14	381
9:30 AM	2	10	6	25	2	0	22	154	5	5	144	17	392
9:45 AM	1	6	3	19	3	2	25	134	3	5	149	17	367

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	17	160	32	435	53	9	299	2456	50	29	2184	191	5915
APPROACH %'s :	8.13%	76.56%	15.31%	87.53%	10.66%	1.81%	10.66%	87.56%	1.78%	1.21%	90.85%	7.95%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	6	98	11	190	36	4	126	1087	25	6	886	88	2563
PEAK HR FACTOR :		0.669			0.757			0.770			0.907		0.841

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
3:00 PM	2	16	5	23	13	0	41	210	8	6	201	23	548
3:15 PM	3	9	2	25	9	0	28	223	8	2	241	25	575
3:30 PM	2	12	4	25	8	2	40	199	5	6	182	30	515
3:45 PM	2	11	4	26	6	1	37	211	13	8	176	40	535
4:00 PM	4	13	3	26	7	1	38	194	10	4	215	24	539
4:15 PM	3	10	1	28	3	2	47	191	9	2	198	29	523
4:30 PM	1	8	1	20	5	0	33	223	6	6	215	30	548
4:45 PM	2	13	3	23	6	3	38	266	6	5	217	32	614
5:00 PM	2	12	4	32	7	3	33	244	10	6	237	41	631
5:15 PM	1	23	5	22	9	0	45	249	18	4	233	34	643
5:30 PM	2	18	3	22	7	0	44	258	12	7	234	27	634
5:45 PM	1	13	9	23	3	0	42	289	4	1	264	42	691

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	25	158	44	295	83	12	466	2757	109	57	2613	377	6996
APPROACH %'s :	11.01%	69.60%	19.38%	75.64%	21.28%	3.08%	13.99%	82.74%	3.27%	1.87%	85.76%	12.37%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	6	66	21	99	26	3	164	1040	44	18	968	144	2599
PEAK HR FACTOR :		0.802			0.762			0.931			0.920		0.940

CONTROL : Signalized

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-004
N/S Street: Mt Gleason Ave
E/W Street: Foothill Blvd
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	1	0	1	0	0	0	7	3
7:15 AM	0	0	2	1	2	2	11	2
7:30 AM	0	1	4	0	14	2	21	1
7:45 AM	0	0	0	1	5	0	3	0
8:00 AM	0	0	0	1	0	1	3	2
8:15 AM	0	1	1	1	0	1	0	1
8:30 AM	1	0	4	3	3	1	0	4
8:45 AM	0	4	0	0	1	0	1	3
9:00 AM	0	0	1	0	1	0	0	1
9:15 AM	0	0	0	1	1	1	2	6
9:30 AM	0	0	1	0	3	1	1	2
9:45 AM	0	2	0	2	1	2	1	4
TOTALS	**2**	**8**	**14**	**10**	**31**	**11**	**50**	**29**

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	2	0	0	0
7:30 AM	0	0	0	0	3	0	0	0
7:45 AM	0	0	0	0	2	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	4	0	1	2	1	6	0	6
3:15 PM	0	2	4	3	1	4	2	12
3:30 PM	0	5	2	0	0	1	2	8
3:45 PM	0	0	1	0	1	3	2	5
4:00 PM	1	1	1	2	2	4	2	2
4:15 PM	0	1	0	1	0	3	0	0
4:30 PM	0	2	0	1	2	3	1	5
4:45 PM	0	1	2	1	2	2	1	5
5:00 PM	0	0	3	2	1	5	3	1
5:15 PM	2	1	1	0	3	4	3	4
5:30 PM	1	0	0	0	2	1	1	4
5:45 PM	0	1	1	0	0	2	2	2
TOTALS	**8**	**14**	**16**	**12**	**15**	**38**	**19**	**54**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	2	0	0	0
3:15 PM	0	0	0	2	0	8	0	25
3:30 PM	0	0	0	0	0	0	0	10
3:45 PM	0	0	0	0	0	0	0	5
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	1	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**3**	**3**	**8**	**0**	**40**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	0	4	0	0	2	0	7
APPROACH %'s :	0.00%	100.00%	0.00%				0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.250			0.000			0.000			0.000			0.250

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	1	0	0	0	0	0	0	0	0	0	0	1	2
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	2	2	0	0	0	0	1	0	0	2	1	9
APPROACH %'s :	20.00%	40.00%	40.00%				0.00%	100.00%	0.00%	0.00%	66.67%	33.33%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.250			0.000			0.000			0.000			0.250

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	1	3	0	0	3	0	7
7:15 AM	0	0	0	0	0	0	1	0	0	0	2	0	3
7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
7:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
8:00 AM	0	0	0	0	0	0	1	0	0	0	2	0	3
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
9:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
9:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
9:45 AM	0	0	0	0	0	0	1	0	0	0	1	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	5	10	0	0	19	0	34
APPROACH %'s :							33.33%	66.67%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	2	3	0	0	7	0	12
PEAK HR FACTOR :	0.000			0.000			0.625			0.875			1.000

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
3:00 PM	0	0	0	0	0	0	1	1	0	0	2	0	4
3:15 PM	0	0	0	0	0	0	1	2	0	0	4	0	7
3:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
3:45 PM	0	0	0	0	0	0	1	1	0	0	1	0	3
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	1	1	0	0	2	0	4
4:30 PM	0	0	0	0	0	0	1	1	0	0	1	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
5:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:30 PM	0	0	0	0	0	0	1	1	0	0	2	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	7	10	0	0	20	0	37
APPROACH %'s :							41.18%	58.82%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	3	0	0	8	0	12
PEAK HR FACTOR :	0.000			0.000			0.500			0.667			0.750

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004

Day: Thursday

HEAVY TRUCKS

City: Sunland-Tujunga

Date: 9/17/2015

AM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	2	7	1	0	2	0	12
7:15 AM	0	0	0	1	0	0	3	5	0	0	6	2	17
7:30 AM	0	3	0	0	0	0	1	9	0	0	4	0	17
7:45 AM	1	0	0	0	1	0	1	2	0	0	3	0	8
8:00 AM	0	1	0	0	1	0	1	10	0	0	8	2	23
8:15 AM	0	0	0	1	0	0	2	11	0	0	5	0	19
8:30 AM	0	0	0	0	0	0	4	6	0	0	6	0	16
8:45 AM	0	0	0	0	0	0	0	6	0	0	6	1	13
9:00 AM	0	1	0	0	0	0	0	8	1	0	9	0	19
9:15 AM	0	0	0	0	0	0	0	6	1	0	3	0	10
9:30 AM	1	0	0	0	0	0	2	4	0	0	7	0	14
9:45 AM	0	0	0	0	1	0	0	5	0	0	4	0	10

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	5	0	2	3	0	16	79	3	0	63	5	178
APPROACH %'s :	28.57%	71.43%	0.00%	40.00%	60.00%	0.00%	16.33%	80.61%	3.06%	0.00%	92.65%	7.35%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	1	4	0	1	2	0	6	26	0	0	21	4	65
PEAK HR FACTOR :	0.417			0.750			0.727			0.625			0.707

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-004 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Mt Gleason Ave			Mt Gleason Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
3:00 PM	0	0	0	0	0	0	0	2	0	0	4	0	6
3:15 PM	0	0	0	0	0	0	0	7	0	0	6	0	13
3:30 PM	0	0	0	0	0	0	0	3	0	1	3	0	7
3:45 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
4:00 PM	0	0	0	0	0	0	1	5	0	0	3	2	11
4:15 PM	0	1	0	0	0	0	1	1	0	0	6	0	9
4:30 PM	0	0	0	0	0	0	2	3	0	0	4	0	9
4:45 PM	0	0	0	0	0	0	0	4	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	1	2	0	0	1	0	4
5:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
5:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
5:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	6	36	0	1	33	2	79
APPROACH %'s :	0.00%	100.00%	0.00%				14.29%	85.71%	0.00%	2.78%	91.67%	5.56%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	2	6	0	0	4	0	12
PEAK HR FACTOR :	0.000			0.000			0.667			0.500			0.750

CONTROL : Signalized

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Tujunga Canyon Blvd

East/West Summitrose St

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	15	13	13	6
BIKES	2	2	1	0
BUSES	0	0	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	104	7.30	121	7.45	50	8.00	57	7.30
PM PK 15 MIN	76	15.00	95	15.00	61	17.15	36	17.30
AM PK HOUR	273	7.15	319	7.15	173	7.30	188	7.00
PM PK HOUR	246	17.00	190	15.00	199	15.00	103	16.45

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	68	180	4	252	*7-8*	12	265	14	291	543	1	2	2	3
8-9	29	70	7	106	*8-9*	5	177	8	190	296	1	2	2	0
9-10	24	33	5	62	*9-10*	4	106	11	121	183	2	0	1	1
15-16	41	150	15	206	*15-16*	15	166	9	190	396	1	0	1	0
16-17	53	124	6	183	*16-17*	7	129	14	150	333	5	0	1	0
17-18	58	175	13	246	*17-18*	14	116	7	137	383	3	0	0	0
TOTAL	273	732	50	1055	TOTAL	57	959	63	1079	2134	13	4	7	4

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	19	49	67	135	*7-8*	14	154	20	188	323	6	3	1	0
8-9	10	52	70	132	*8-9*	12	91	1	104	236	2	0	1	0
9-10	4	44	39	87	*9-10*	9	76	2	87	174	1	0	1	1
15-16	19	83	97	199	*15-16*	11	76	9	96	295	4	0	0	0
16-17	14	98	56	168	*16-17*	1	66	10	77	245	1	2	0	0
17-18	13	116	70	199	*17-18*	5	85	8	98	297	1	0	1	0
TOTAL	79	442	399	920	TOTAL	52	548	50	650	1570	15	5	4	1

ITM Peak Hour Summary

Prepared by:

NDS

Tujunga Canyon Blvd and Summitrose St , Sunland-Tujunga

Date:	9/17/2015
Day:	Thursday
Project #:	15-5575-005
City:	Sunland-Tujunga

N

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	300 PM

Total Peak Hour Summary

Tujunga Canyon Blvd

Summitrose St

Southbound Approach

	Left	Through	Right	Departing
Lanes	0	1	0	
AM	18	286	15	232
NOON	0	0	0	0
PM	9	166	15	178

Eastbound Approach

	AM	NOON	PM
Departing	243	0	126

Lanes		AM	NOON	PM
0	Left	21	0	19
1	Through	63	0	83
0	Right	76	0	97

Westbound Approach

	AM	NOON	PM	Lanes
Right	20	0	9	0
Through	149	0	76	1
Left	16	0	11	0
Departing	84	0	113	

CONTROL

4-Way Stop

Northbound Approach

	Departing	Left	Through	Right
AM	378	76	191	6
NOON	0	0	0	0
PM	274	41	150	15
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg

	In	Out
AM	319	232
NOON	0	0
PM	190	178

East Leg

	AM	NOON	PM
In	185	0	96
Out	84	0	113

West Leg

	AM	NOON	PM
Out	243	0	126
In	160	0	199

South Leg

	Out	In
AM	378	273
NOON	0	0
PM	274	206

Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	551	0	368
East Leg	269	0	209
West Leg	403	0	325
South Leg	651	0	480

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	3	15	2	0	41	0	3	7	15	4	32	0	122
7:15 AM	10	41	0	1	58	5	1	7	13	1	42	7	186
7:30 AM	24	79	1	2	61	2	7	15	18	4	46	7	266
7:45 AM	31	45	1	9	105	7	8	20	21	5	34	6	292
8:00 AM	11	26	4	3	62	4	5	21	24	6	27	0	193
8:15 AM	7	22	1	1	47	3	2	16	16	3	18	0	136
8:30 AM	5	11	1	1	35	1	3	5	13	3	25	1	104
8:45 AM	6	11	1	0	33	0	0	10	17	0	21	0	99
9:00 AM	5	13	1	1	36	2	1	12	10	3	20	1	105
9:15 AM	8	6	1	1	25	3	1	10	8	2	24	0	89
9:30 AM	6	6	0	1	23	4	1	11	9	3	20	1	85
9:45 AM	5	8	3	1	22	2	1	11	12	1	12	0	78

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	121	283	16	21	548	33	33	145	176	35	321	23	1755
APPROACH %'s :	28.81%	67.38%	3.81%	3.49%	91.03%	5.48%	9.32%	40.96%	49.72%	9.23%	84.70%	6.07%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	76	191	6	15	286	18	21	63	76	16	149	20	937
PEAK HR FACTOR :		0.656			0.659			0.800			0.811		0.802

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	12	60	4	9	82	4	7	24	26	4	20	3	255
3:15 PM	16	29	5	3	36	1	4	20	28	2	17	1	162
3:30 PM	7	25	3	1	25	0	5	21	21	3	20	1	132
3:45 PM	6	36	3	2	23	4	3	18	22	2	19	4	142
4:00 PM	12	22	3	1	32	4	4	18	12	1	14	4	127
4:15 PM	13	35	2	1	24	4	7	33	13	0	14	0	146
4:30 PM	12	44	0	2	32	3	2	20	20	0	17	5	157
4:45 PM	16	23	1	3	41	3	1	27	11	0	21	1	148
5:00 PM	18	39	3	1	35	1	3	25	21	1	22	3	172
5:15 PM	15	47	5	3	31	3	3	40	18	2	16	1	184
5:30 PM	8	42	3	8	25	0	4	28	15	2	30	4	169
5:45 PM	17	47	2	2	25	3	3	23	16	0	17	0	155

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	152	449	34	36	411	30	46	297	223	17	227	27	1949
APPROACH %'s :	23.94%	70.71%	5.35%	7.55%	86.16%	6.29%	8.13%	52.47%	39.40%	6.27%	83.76%	9.96%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	41	150	15	15	166	9	19	83	97	11	76	9	691
PEAK HR FACTOR :		0.678			0.500			0.873			0.889		0.677

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	3	14	2	0	41	0	3	7	14	4	32	0	120
7:15 AM	10	38	0	1	58	5	1	7	13	1	40	7	181
7:30 AM	24	79	1	2	60	2	7	15	17	4	46	7	264
7:45 AM	31	44	1	9	105	7	8	20	21	5	34	6	291
8:00 AM	11	24	4	3	62	3	5	19	24	6	27	0	188
8:15 AM	7	22	0	1	46	3	2	16	15	3	18	0	133
8:30 AM	5	11	1	1	35	1	3	5	13	3	25	1	104
8:45 AM	6	11	1	0	33	0	0	9	17	0	21	0	98
9:00 AM	5	13	1	1	36	2	1	11	10	3	20	1	104
9:15 AM	8	6	1	1	25	3	1	10	8	2	24	0	89
9:30 AM	5	6	0	1	21	4	0	11	9	3	19	1	80
9:45 AM	5	8	3	1	22	2	0	11	10	1	12	0	75

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	120	276	15	21	544	32	31	141	171	35	318	23	1727
APPROACH %'s :	29.20%	67.15%	3.65%	3.52%	91.12%	5.36%	9.04%	41.11%	49.85%	9.31%	84.57%	6.12%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	76	185	6	15	285	17	21	61	75	16	147	20	924
PEAK HR FACTOR :		0.642			0.655			0.801			0.803		0.794

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	12	60	4	9	79	4	7	24	26	3	20	3	251
3:15 PM	16	28	4	3	36	1	4	20	28	1	17	1	159
3:30 PM	7	24	3	1	24	0	5	21	21	3	20	1	130
3:45 PM	6	36	3	2	22	3	3	18	21	2	19	4	139
4:00 PM	12	22	3	1	32	4	4	18	12	1	14	4	127
4:15 PM	13	35	2	1	23	4	7	33	13	0	14	0	145
4:30 PM	12	42	0	2	31	3	2	20	20	0	17	5	154
4:45 PM	16	23	1	3	41	3	1	27	11	0	21	1	148
5:00 PM	18	39	3	1	35	1	3	25	20	0	22	3	170
5:15 PM	15	47	5	3	31	3	3	40	18	2	16	1	184
5:30 PM	8	41	3	8	25	0	4	28	15	2	30	4	168
5:45 PM	17	47	2	2	25	3	3	23	16	0	17	0	155

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	152	444	33	36	404	29	46	297	221	14	227	27	1930
APPROACH %'s :	24.17%	70.59%	5.25%	7.68%	86.14%	6.18%	8.16%	52.66%	39.18%	5.22%	84.70%	10.07%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	41	148	14	15	161	8	19	83	96	9	76	9	679
PEAK HR FACTOR :		0.668			0.500			0.868			0.904		0.676

CONTROL : 4-Way Stop

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-005
N/S Street: Tujunga Canyon Blvd
E/W Street: Summitrose St
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	1	0	1	2	0
7:30 AM	0	0	0	0	0	0	2	0
7:45 AM	0	1	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	1	0
8:15 AM	0	0	1	0	0	0	0	0
8:30 AM	1	0	0	0	0	0	1	0
8:45 AM	1	0	0	0	1	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	1	0	1	1	0	0	1
9:30 AM	0	0	0	1	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**2**	**3**	**1**	**3**	**2**	**1**	**8**	**1**

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	1	0	0	3	0
7:45 AM	0	2	0	1	0	0	0	0
8:00 AM	0	0	0	1	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	1	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	1	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**4**	**1**	**3**	**0**	**1**	**3**	**0**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	2	1
3:15 PM	1	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	0	0	0
4:00 PM	0	0	1	3	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	1	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	3	0	0	1	0	0
TOTALS	**2**	**0**	**6**	**3**	**0**	**1**	**2**	**4**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	1	0	0	0	0	0	0	0	2
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%							

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.250			0.000			0.000			0.000			0.250

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005

Day: Thursday

BIKES

City: Sunland-Tujunga

Date: 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	1	0	0	1	0	0	1	0	0	0	0	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	1	0	0	1	0	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%				

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	1	0	0	0	0	3
PEAK HR FACTOR :	0.250			0.250			0.250			0.000			0.250

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	1	0	0	0	0	0	0	1	0	0	0	2
7:15 AM	0	3	0	0	0	0	0	0	0	0	2	0	5
7:30 AM	0	0	0	0	1	0	0	0	1	0	0	0	2
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	2	0	0	0	1	0	2	0	0	0	0	5
8:15 AM	0	0	1	0	1	0	0	0	1	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	1	0	0	0	2	0	1	0	0	0	1	0	5
9:45 AM	0	0	0	0	0	0	1	0	2	0	0	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	7	1	0	4	1	2	4	5	0	3	0	28
APPROACH %'s :	11.11%	77.78%	11.11%	0.00%	80.00%	20.00%	18.18%	36.36%	45.45%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	6	0	0	1	1	0	2	1	0	2	0	13
PEAK HR FACTOR :	0.500			0.500			0.375			0.250			0.650

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-005 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	3	0	0	0	0	1	0	0	4
3:15 PM	0	1	1	0	0	0	0	0	0	1	0	0	3
3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
3:45 PM	0	0	0	0	1	1	0	0	1	0	0	0	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5	1	0	7	1	0	0	2	3	0	0	19
APPROACH %'s :	0.00%	83.33%	16.67%	0.00%	87.50%	12.50%	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	2	1	0	5	1	0	0	1	2	0	0	12
PEAK HR FACTOR :	0.375			0.500			0.250			0.500			0.750

CONTROL : 4-Way Stop

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Redmont Ave

East/West Summitrose St

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	0	1	6	6
BIKES	0	0	1	0
BUSES	0	0	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	0	0.00	7	8.15	33	7.45	57	7.30
PM PK 15 MIN	0	0.00	4	15.45	46	17.15	37	17.30
AM PK HOUR	0	0.00	22	7.30	89	7.30	175	7.00
PM PK HOUR	0	0.00	11	15.45	147	16.45	105	16.45

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	0	0	0	0	*7-8*	1	0	18	19	19	3	1	5	0
8-9	0	0	0	0	*8-9*	4	0	14	18	18	3	0	1	0
9-10	0	0	0	0	*9-10*	2	0	4	6	6	1	0	0	0
15-16	0	0	0	0	*15-16*	1	0	5	6	6	0	1	1	0
16-17	0	0	0	0	*16-17*	2	0	5	7	7	4	0	0	1
17-18	0	0	0	0	*17-18*	2	0	8	10	10	2	0	1	0
TOTAL	0	0	0	0	TOTAL	12	0	54	66	66	13	2	8	1

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	6	58	0	64	*7-8*	0	173	2	175	239	0	0	0	0
8-9	8	57	0	65	*8-9*	0	87	2	89	154	0	0	0	0
9-10	2	51	0	53	*9-10*	0	83	0	83	136	0	0	0	0
15-16	16	97	0	113	*15-16*	0	93	1	94	207	0	1	0	0
16-17	8	102	0	110	*16-17*	0	73	3	76	186	1	0	0	0
17-18	15	129	0	144	*17-18*	0	87	8	95	239	0	0	0	0
TOTAL	55	494	0	549	TOTAL	0	596	16	612	1161	1	1	0	0

ITM Peak Hour Summary

Prepared by:

NDS

Redmont Ave and Summitrose St , Sunland-Tujunga

Date: 9/17/2015

Day: Thursday

Project #: 15-5575-006

City: Sunland-Tujunga

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

N

Redmont Ave

Summitrose St

Total Peak Hour Summary

CONTROL

1-Way Stop (SB)

Southbound Approach

Lanes	0	1	0	
AM	18	0	1	9
NOON	0	0	0	0
PM	7	0	2	23

Eastbound Approach

	AM	NOON	PM
	185	0	104

Lanes	AM	NOON	PM
0	7	0	15
1	74	0	132
0	0	0	0

Westbound Approach

AM	NOON	PM	Lanes
2	0	8	0
167	0	97	1
0	0	0	0

AM	NOON	PM
75	0	134

Northbound Approach

AM	0	0	0	0
NOON	0	0	0	0
PM	0	0	0	0
Lanes		0	0	0

Total Ins & Outs

North Leg

AM	19	9
NOON	0	0
PM	9	23

West Leg

AM	NOON	PM
185	0	104
81	0	147

East Leg

AM	NOON	PM
169	0	105
75	0	134

South Leg

AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

North Leg

AM	28
NOON	0
PM	32

West Leg

AM	NOON	PM
266	0	251

East Leg

AM	NOON	PM
244	0	239

South Leg

AM	0
NOON	0
PM	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	1	0	5	1	8	0	0	31	0	46
7:15 AM	0	0	0	0	0	4	1	10	0	0	41	0	56
7:30 AM	0	0	0	0	0	5	1	10	0	0	57	0	73
7:45 AM	0	0	0	0	0	4	3	30	0	0	44	2	83
8:00 AM	0	0	0	1	0	5	2	24	0	0	25	0	57
8:15 AM	0	0	0	3	0	4	4	15	0	0	17	0	43
8:30 AM	0	0	0	0	0	3	1	7	0	0	26	0	37
8:45 AM	0	0	0	0	0	2	1	11	0	0	19	2	35
9:00 AM	0	0	0	0	0	1	0	14	0	0	25	0	40
9:15 AM	0	0	0	1	0	1	0	12	0	0	25	0	39
9:30 AM	0	0	0	1	0	2	1	11	0	0	19	0	34
9:45 AM	0	0	0	0	0	0	1	14	0	0	14	0	29

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	7	0	36	16	166	0	0	343	4	572
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	16.28%	0.00%	83.72%	8.79%	91.21%	0.00%	0.00%	98.85%	1.15%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	1	0	18	7	74	0	0	167	2	269
PEAK HR FACTOR :	0.000			0.792			0.614			0.741			0.810

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	1	5	31	0	0	25	0	62
3:15 PM	0	0	0	0	0	1	4	25	0	0	21	1	52
3:30 PM	0	0	0	0	0	0	3	24	0	0	22	0	49
3:45 PM	0	0	0	1	0	3	4	17	0	0	25	0	50
4:00 PM	0	0	0	2	0	2	2	22	0	0	16	1	45
4:15 PM	0	0	0	0	0	2	2	32	0	0	11	0	47
4:30 PM	0	0	0	0	0	1	2	22	0	0	21	2	48
4:45 PM	0	0	0	0	0	0	2	26	0	0	25	0	53
5:00 PM	0	0	0	0	0	3	3	29	0	0	23	1	59
5:15 PM	0	0	0	1	0	3	7	39	0	0	18	1	69
5:30 PM	0	0	0	1	0	1	3	38	0	0	31	6	80
5:45 PM	0	0	0	0	0	1	2	23	0	0	15	0	41

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	5	0	18	39	328	0	0	253	12	655
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	21.74%	0.00%	78.26%	10.63%	89.37%	0.00%	0.00%	95.47%	4.53%	

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	2	0	7	15	132	0	0	97	8	261
PEAK HR FACTOR :	0.000			0.563			0.799			0.709			0.816

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	1	0	5	1	8	0	0	31	0	46
7:15 AM	0	0	0	0	0	4	1	10	0	0	40	0	55
7:30 AM	0	0	0	0	0	5	1	10	0	0	57	0	73
7:45 AM	0	0	0	0	0	4	3	30	0	0	44	2	83
8:00 AM	0	0	0	1	0	5	2	23	0	0	25	0	56
8:15 AM	0	0	0	3	0	4	4	13	0	0	17	0	41
8:30 AM	0	0	0	0	0	3	1	7	0	0	26	0	37
8:45 AM	0	0	0	0	0	2	1	10	0	0	19	2	34
9:00 AM	0	0	0	0	0	1	0	13	0	0	25	0	39
9:15 AM	0	0	0	1	0	1	0	12	0	0	25	0	39
9:30 AM	0	0	0	1	0	2	1	11	0	0	17	0	32
9:45 AM	0	0	0	0	0	0	1	14	0	0	14	0	29

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	7	0	36	16	161	0	0	340	4	564
APPROACH %'s :				16.28%	0.00%	83.72%	9.04%	90.96%	0.00%	0.00%	98.84%	1.16%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	1	0	18	7	73	0	0	166	2	267
PEAK HR FACTOR :	0.000			0.792			0.606			0.737			0.804

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	1	5	31	0	0	24	0	61
3:15 PM	0	0	0	0	0	1	4	24	0	0	20	1	50
3:30 PM	0	0	0	0	0	0	3	24	0	0	22	0	49
3:45 PM	0	0	0	0	0	3	4	17	0	0	25	0	49
4:00 PM	0	0	0	2	0	2	2	22	0	0	16	1	45
4:15 PM	0	0	0	0	0	2	2	32	0	0	11	0	47
4:30 PM	0	0	0	0	0	1	2	22	0	0	21	2	48
4:45 PM	0	0	0	0	0	0	2	26	0	0	25	0	53
5:00 PM	0	0	0	0	0	3	3	29	0	0	23	1	59
5:15 PM	0	0	0	1	0	3	7	39	0	0	18	1	69
5:30 PM	0	0	0	1	0	1	3	38	0	0	31	6	80
5:45 PM	0	0	0	0	0	1	2	23	0	0	14	0	40

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	4	0	18	39	327	0	0	250	12	650
APPROACH %'s :				18.18%	0.00%	81.82%	10.66%	89.34%	0.00%	0.00%	95.42%	4.58%	

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	2	0	7	15	132	0	0	97	8	261
PEAK HR FACTOR :		0.000			0.563			0.799			0.709		0.816

CONTROL : 1-Way Stop (SB)

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-006
N/S Street: Redmont Ave
E/W Street: Summitrose St
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	1	0	0	0	0	0
7:15 AM	0	1	0	1	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0
7:45 AM	0	3	0	1	0	0	0	0
8:00 AM	0	0	0	1	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0
8:30 AM	1	0	0	1	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	1	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**1**	**5**	**2**	**5**	**0**	**0**	**0**	**0**

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	1	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	1	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	1	3	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	1	2	0	0	0	0	0
TOTALS	**1**	**1**	**3**	**3**	**0**	**0**	**1**	**0**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	0	1	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	1	0	0	0	0	1
APPROACH %'s :							0.00%	100.00%	0.00%				

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	5	0	0	3	0	8
APPROACH %'s :							0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1	0	0	1	0	2
PEAK HR FACTOR :		0.000			0.000			0.250			0.250		0.500

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-006 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Redmont Ave			Redmont Ave			Summitrose St			Summitrose St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	1	0	0	0	1	0	0	3	0	5
APPROACH %'s :				100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 1-Way Stop (SB)

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Tujunga Canyon Blvd

East/West Apperson St

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	18	21	14	8
BIKES	2	1	2	1
BUSES	0	0	1	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	85	7.45	129	7.45	83	7.45	94	7.30
PM PK 15 MIN	79	15.00	93	15.15	68	15.15	40	17.45
AM PK HOUR	256	7.15	399	7.30	245	7.30	294	7.15
PM PK HOUR	288	17.00	283	15.00	233	17.00	129	15.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	62	169	4	235
8-9	46	73	11	130
9-10	36	49	8	93
15-16	52	176	21	249
16-17	55	161	12	228
17-18	49	221	18	288
TOTAL	300	849	74	1223

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	44	275	38	357
8-9	35	242	14	291
9-10	19	143	11	173
15-16	47	218	18	283
16-17	37	153	11	201
17-18	35	164	13	212
TOTAL	217	1195	105	1517

Hours	**TOTAL** N-S	**XING S/L** Ped	Sch	**XING N/L** Ped	Sch
7-8	592	10	2	8	1
8-9	421	4	0	3	0
9-10	266	6	0	2	0
15-16	532	6	1	4	1
16-17	429	4	0	0	0
17-18	500	1	0	0	0
TOTAL	2740	31	3	17	2

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	8	80	103	191
8-9	11	73	93	177
9-10	2	48	47	97
15-16	18	111	90	219
16-17	8	124	73	205
17-18	11	143	79	233
TOTAL	58	579	485	1122

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	22	197	65	284
8-9	9	113	22	144
9-10	10	70	10	90
15-16	8	92	29	129
16-17	15	72	20	107
17-18	15	82	31	128
TOTAL	79	626	177	882

Hours	**TOTAL** E-W	**XING W/L** Ped	Sch	**XING E/L** Ped	Sch
7-8	475	11	1	7	1
8-9	321	3	0	6	0
9-10	187	1	0	10	0
15-16	348	10	18	1	0
16-17	312	3	2	2	0
17-18	361	1	1	3	0
TOTAL	2004	29	22	29	1

ITM Peak Hour Summary

Prepared by:

NDS

Tujunga Canyon Blvd and Apperson St , Sunland-Tujunga

Date: 9/17/2015
Day: Thursday

Project #: 15-5575-007
City: Sunland-Tujunga

Total Peak Hour Summary

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	300 PM

CONTROL: 4-Way Stop

N

Tujunga Canyon Blvd

Apperson St

Southbound Approach

	Right	Through	Left	Out (departing north)
Lanes	0	1	0	
AM	41	299	57	269
NOON	0	0	0	0
PM	18	218	47	223

Eastbound Approach

	Lanes	AM	NOON	PM
Out (departing west)		307	0	162
Left	0	12	0	18
Through	1	105	0	111
Right	0	126	0	90

Westbound Approach

	AM	NOON	PM	Lanes
Right	73	0	29	0
Through	202	0	92	1
Left	19	0	8	0
Out (departing east)	170	0	179	

Northbound Approach

	Out (departing south)	Left	Through	Right
AM	444	64	184	8
NOON	0	0	0	0
PM	316	52	176	21
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

Leg	Period	In	Out
North Leg	AM	397	269
North Leg	NOON	0	0
North Leg	PM	283	223
South Leg	AM	444	256
South Leg	NOON	0	0
South Leg	PM	316	249

West Leg	AM	NOON	PM
	307	0	162
	243	0	219

East Leg	AM	NOON	PM
	294	0	129
	170	0	179

Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	666	0	506
South Leg	700	0	565
West Leg	550	0	381
East Leg	464	0	308

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	11	14	0	3	53	3	2	7	15	5	35	2	150
7:15 AM	18	32	1	4	66	3	2	16	19	4	48	8	221
7:30 AM	12	62	0	19	65	12	3	20	24	3	57	34	311
7:45 AM	21	61	3	18	91	20	1	37	45	10	57	21	385
8:00 AM	13	29	4	16	77	6	6	32	38	2	40	10	273
8:15 AM	14	18	4	7	63	5	3	19	17	3	19	4	176
8:30 AM	9	15	2	8	58	0	2	8	22	3	34	4	165
8:45 AM	10	11	1	4	44	3	0	14	16	1	20	4	128
9:00 AM	14	15	0	5	49	4	1	17	12	1	18	3	139
9:15 AM	3	14	6	4	35	1	0	10	14	4	19	3	113
9:30 AM	8	8	0	3	35	4	1	9	11	2	19	2	102
9:45 AM	11	12	2	7	24	2	0	12	10	3	14	2	99

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	144	291	23	98	660	63	21	201	243	41	380	97	2262
APPROACH %'s :	31.44%	63.54%	5.02%	11.94%	80.39%	7.67%	4.52%	43.23%	52.26%	7.92%	73.36%	18.73%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	64	184	8	57	299	41	12	105	126	19	202	73	1190
PEAK HR FACTOR :		0.753			0.769			0.732			0.782		0.773

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	19	54	6	14	63	7	8	28	24	3	20	14	260
3:15 PM	13	43	4	19	67	7	5	35	28	1	28	9	259
3:30 PM	13	38	5	8	46	2	3	27	20	2	19	2	185
3:45 PM	7	41	6	6	42	2	2	21	18	2	25	4	176
4:00 PM	14	40	2	11	36	6	0	35	21	5	21	3	194
4:15 PM	10	40	1	6	36	1	3	29	16	4	23	6	175
4:30 PM	18	43	3	12	33	3	1	26	21	3	13	8	184
4:45 PM	13	38	6	8	48	1	4	34	15	3	15	3	188
5:00 PM	15	48	4	11	38	6	2	27	25	3	7	11	197
5:15 PM	11	63	3	10	41	3	1	41	18	3	26	7	227
5:30 PM	15	49	8	5	47	1	2	37	15	5	21	5	210
5:45 PM	8	61	3	9	38	3	6	38	21	4	28	8	227

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	156	558	51	119	535	42	37	378	242	38	246	80	2482
APPROACH %'s :	20.39%	72.94%	6.67%	17.10%	76.87%	6.03%	5.63%	57.53%	36.83%	10.44%	67.58%	21.98%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	52	176	21	47	218	18	18	111	90	8	92	29	880
PEAK HR FACTOR :		0.788			0.761			0.805			0.849		0.846

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	10	13	0	3	52	3	2	6	15	5	35	2	146
7:15 AM	17	31	1	4	66	3	2	16	19	4	48	8	219
7:30 AM	12	61	0	19	63	12	3	20	24	3	57	34	308
7:45 AM	21	60	3	18	91	20	1	37	44	10	57	21	383
8:00 AM	13	27	3	16	77	6	6	32	38	2	38	10	268
8:15 AM	14	18	4	7	62	5	2	18	17	3	19	4	173
8:30 AM	9	14	2	8	58	0	2	7	22	3	34	4	163
8:45 AM	9	11	1	4	44	3	0	14	16	1	20	4	127
9:00 AM	14	15	0	5	49	4	1	17	12	1	18	3	139
9:15 AM	3	14	6	4	35	1	0	10	14	4	19	3	113
9:30 AM	8	8	0	3	33	3	0	8	11	2	18	2	96
9:45 AM	11	12	1	6	23	2	0	12	10	3	14	2	96

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	141	284	21	97	653	62	19	197	242	41	377	97	2231
APPROACH %'s :	31.61%	63.68%	4.71%	11.95%	80.42%	7.64%	4.15%	43.01%	52.84%	7.96%	73.20%	18.83%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	63	179	7	57	297	41	12	105	125	19	200	73	1178
PEAK HR FACTOR :		0.741			0.766			0.738			0.777		0.769

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	19	54	6	14	59	7	8	27	24	3	20	13	254
3:15 PM	13	42	4	19	66	7	5	35	27	1	27	9	255
3:30 PM	13	37	5	8	44	2	3	26	20	2	19	2	181
3:45 PM	7	41	6	6	41	2	2	21	18	2	25	4	175
4:00 PM	14	40	1	10	35	6	0	33	20	5	20	3	187
4:15 PM	10	40	1	6	36	1	3	28	15	3	23	6	172
4:30 PM	18	43	3	12	32	3	1	26	21	3	13	8	183
4:45 PM	13	37	6	8	48	1	4	34	15	3	15	3	187
5:00 PM	15	47	4	11	38	6	2	27	25	3	7	11	196
5:15 PM	11	63	3	10	40	3	1	41	18	3	26	7	226
5:30 PM	15	48	8	5	47	1	2	37	15	5	21	5	209
5:45 PM	8	61	3	9	38	3	6	38	21	4	28	7	226

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	156	553	50	118	524	42	37	373	239	37	244	78	2451
APPROACH %'s :	20.55%	72.86%	6.59%	17.25%	76.61%	6.14%	5.70%	57.47%	36.83%	10.31%	67.97%	21.73%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	52	174	21	47	210	18	18	109	89	8	91	28	865
PEAK HR FACTOR :		0.782			0.747			0.806			0.858		0.848

CONTROL : 4-Way Stop

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-007
N/S Street: Tujunga Canyon Blvd
E/W Street: Apperson St
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	1
7:15 AM	0	3	0	1	2	1	2	0
7:30 AM	0	5	1	6	2	0	7	0
7:45 AM	0	0	0	2	1	1	1	0
8:00 AM	0	0	1	0	1	0	1	0
8:15 AM	1	2	1	0	1	0	1	0
8:30 AM	0	0	1	0	1	1	0	0
8:45 AM	0	0	1	0	2	0	0	1
9:00 AM	0	1	0	1	1	0	0	0
9:15 AM	0	0	1	1	1	1	0	0
9:30 AM	1	0	0	0	2	3	1	0
9:45 AM	0	0	3	0	1	1	0	0
TOTALS	**2**	**11**	**9**	**11**	**15**	**8**	**13**	**2**

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0
7:45 AM	0	1	0	2	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**0**	**2**	**1**	**0**	**0**	**1**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	1	1	0	0	0	2	3
3:15 PM	1	0	0	1	0	0	0	1
3:30 PM	1	0	1	3	0	0	2	0
3:45 PM	1	0	0	0	1	0	0	2
4:00 PM	0	0	0	1	2	0	0	0
4:15 PM	0	0	1	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	1	0
4:45 PM	0	0	2	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	2	1	0	0
5:30 PM	0	0	0	1	0	0	1	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**3**	**1**	**5**	**6**	**5**	**1**	**6**	**8**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	1	0	0	0	15	0
3:15 PM	0	0	0	0	0	0	0	2
3:30 PM	1	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**1**	**0**	**1**	**0**	**0**	**0**	**16**	**5**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 **Day:** Thursday

BIKES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	1	0	0	0	0	0	1	0	2
APPROACH %'s :				0.00%	100.00%	0.00%				0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	1	0	1
PEAK HR FACTOR :	0.000			0.000			0.000			0.250			0.250

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007

Day: Thursday

BIKES

City: Sunland-Tujunga

Date: 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	0	0	0	0	0	2	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%				0.00%	100.00%	0.00%				

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.250			0.000			0.000			0.000			0.250

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	1	0	0	0	0	1
APPROACH %'s :							0.00%	100.00%	0.00%				

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	1	1	0	0	1	0	0	1	0	0	0	0	4
7:15 AM	1	1	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
7:45 AM	0	1	0	0	0	0	0	0	1	0	0	0	2
8:00 AM	0	2	1	0	0	0	0	0	0	0	2	0	5
8:15 AM	0	0	0	0	1	0	1	1	0	0	0	0	3
8:30 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
8:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	2	1	1	1	0	0	1	0	6
9:45 AM	0	0	1	1	1	0	0	0	0	0	0	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	3	7	2	1	7	1	2	4	1	0	3	0	31
APPROACH %'s :	25.00%	58.33%	16.67%	11.11%	77.78%	11.11%	28.57%	57.14%	14.29%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	1	5	1	0	2	0	0	0	1	0	2	0	12
PEAK HR FACTOR :	0.583			0.250			0.250			0.250			0.600

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-007 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Apperson St			Apperson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	4	0	0	1	0	0	0	1	6
3:15 PM	0	1	0	0	1	0	0	0	1	0	1	0	4
3:30 PM	0	1	0	0	2	0	0	1	0	0	0	0	4
3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:00 PM	0	0	1	1	1	0	0	1	1	0	1	0	6
4:15 PM	0	0	0	0	0	0	0	1	1	1	0	0	3
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5	1	1	11	0	0	4	3	1	2	2	30
APPROACH %'s :	0.00%	83.33%	16.67%	8.33%	91.67%	0.00%	0.00%	57.14%	42.86%	20.00%	40.00%	40.00%	

PEAK HR START TIME :	300 PM												TOTAL
PEAK HR VOL :	0	2	0	0	8	0	0	2	1	0	1	1	15
PEAK HR FACTOR :	0.500			0.500			0.750			0.500			0.625

CONTROL : 4-Way Stop

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Tujunga Canyon Blvd

East/West Valmont St

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	20	22	7	10
BIKES	3	2	2	2
BUSES	0	0	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	70	7.45	133	7.45	46	7.45	46	7.45
PM PK 15 MIN	99	17.45	101	15.15	38	16.45	33	15.00
AM PK HOUR	212	7.30	465	7.15	138	7.30	159	7.15
PM PK HOUR	354	17.00	307	15.00	126	16.15	98	15.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	22	152	5	179
8-9	27	93	7	127
9-10	21	72	6	99
15-16	35	239	8	282
16-17	40	221	19	280
17-18	47	302	5	354
TOTAL	192	1079	50	1321

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	24	379	13	416
8-9	21	331	14	366
9-10	14	206	5	225
15-16	26	258	23	307
16-17	19	208	19	246
17-18	18	214	19	251
TOTAL	122	1596	93	1811

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	595	4	1	4	0
8-9	493	2	0	1	0
9-10	324	3	0	0	0
15-16	589	2	3	1	0
16-17	526	1	1	3	0
17-18	605	6	0	4	0
TOTAL	3132	18	5	13	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	5	43	67	115
8-9	5	45	53	103
9-10	3	20	27	50
15-16	7	52	29	88
16-17	11	67	37	115
17-18	11	60	28	99
TOTAL	42	287	241	570

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	6	93	54	153
8-9	9	71	15	95
9-10	19	34	8	61
15-16	19	59	20	98
16-17	9	73	16	98
17-18	8	56	15	79
TOTAL	70	386	128	584

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	268	2	1	4	0
8-9	198	3	0	4	2
9-10	111	4	0	3	1
15-16	186	0	1	2	2
16-17	213	5	0	0	0
17-18	178	5	3	0	0
TOTAL	1154	19	5	13	5

ITM Peak Hour Summary

Prepared by:

NDS

Tujunga Canyon Blvd and Valmont St , Sunland-Tujunga

Date: 9/17/2015

Day: Thursday

Project #: 15-5575-008

City: Sunland-Tujunga

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Total Peak Hour Summary

Southbound Approach (Tujunga Canyon Blvd)

	Left	Through	Right	Northbound Exit
Lanes	0	1	0	
AM	14	420	31	231
NOON	0	0	0	0
PM	19	214	18	328

Eastbound Approach (Valmont St)

	Lanes	AM	NOON	PM
Westbound Exit		141	0	122
Left	0	5	0	11
Through	1	56	0	60
Right	0	72	0	28

Westbound Approach

	AM	NOON	PM	Lanes
Right	56	0	15	0
Through	97	0	56	1
Left	6	0	8	0
Eastbound Exit	94	0	83	

CONTROL

4-Way Stop

Northbound Approach

	Southbound Exit	Left	Through	Right
AM	498	30	170	7
NOON	0	0	0	0
PM	250	47	302	5
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg	In	Out
AM	465	231
NOON	0	0
PM	251	328

West Leg	AM	NOON	PM
Out	141	0	122
In	133	0	99

East Leg	AM	NOON	PM
In	159	0	79
Out	94	0	83

South Leg	Out	In
AM	498	207
NOON	0	0
PM	250	354

Total Volume Per Leg

	North Leg	South Leg
AM	696	705
NOON	0	0
PM	579	604

	AM	NOON	PM
West Leg	274	0	221
East Leg	253	0	162

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 **Day:** Thursday

TOTALS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	2	20	1	0	78	2	1	7	14	1	24	2	152
7:15 AM	4	26	1	6	86	7	1	4	11	1	21	15	183
7:30 AM	6	47	2	10	93	1	1	12	18	0	23	20	233
7:45 AM	10	59	1	8	122	3	2	20	24	4	25	17	295
8:00 AM	10	38	3	7	119	3	1	20	19	1	28	4	253
8:15 AM	8	27	1	5	81	7	0	11	10	4	21	4	179
8:30 AM	5	14	1	5	67	1	3	8	15	2	12	4	137
8:45 AM	4	14	2	4	64	3	1	6	9	2	10	3	122
9:00 AM	6	24	3	6	60	3	1	6	9	5	9	1	133
9:15 AM	4	19	3	4	55	1	1	6	7	7	10	2	119
9:30 AM	5	11	0	4	48	1	1	5	3	2	7	2	89
9:45 AM	6	18	0	0	43	0	0	3	8	5	8	3	94

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	70	317	18	59	916	32	13	108	147	34	198	77	1989
APPROACH %'s :	17.28%	78.27%	4.44%	5.86%	90.96%	3.18%	4.85%	40.30%	54.85%	11.00%	64.08%	24.92%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	30	170	7	31	420	14	5	56	72	6	97	56	964
PEAK HR FACTOR :		0.739			0.874			0.723			0.864		0.817

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	11	76	3	4	72	6	2	11	7	2	25	6	225
3:15 PM	9	55	1	10	80	11	0	16	11	8	10	5	216
3:30 PM	9	53	1	9	53	3	2	12	3	5	11	5	166
3:45 PM	6	55	3	3	53	3	3	13	8	4	13	4	168
4:00 PM	15	56	7	5	50	5	1	11	6	4	21	1	182
4:15 PM	11	52	6	5	52	8	3	21	7	1	15	3	184
4:30 PM	5	60	5	4	45	5	3	16	9	2	18	9	181
4:45 PM	9	53	1	5	61	1	4	19	15	2	19	3	192
5:00 PM	11	66	3	4	61	4	0	17	12	2	9	4	193
5:15 PM	9	81	1	3	47	4	2	9	6	2	17	5	186
5:30 PM	8	76	0	6	54	8	6	14	4	3	13	2	194
5:45 PM	19	79	1	5	52	3	3	20	6	1	17	4	210
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	122	762	32	63	680	61	29	179	94	36	188	51	2297
APPROACH %'s :	13.32%	83.19%	3.49%	7.84%	84.58%	7.59%	9.60%	59.27%	31.13%	13.09%	68.36%	18.55%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	47	302	5	18	214	19	11	60	28	8	56	15	783
PEAK HR FACTOR :		0.894			0.909			0.853			0.823		0.932

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008

Day: Thursday

CARS

City: Sunland-Tujunga

Date: 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	2	17	1	0	77	2	1	7	13	0	24	2	146
7:15 AM	4	25	1	6	86	7	1	4	11	1	20	15	181
7:30 AM	6	47	2	9	91	1	1	12	17	0	23	19	228
7:45 AM	9	59	1	8	121	3	2	20	24	4	25	16	292
8:00 AM	9	35	2	7	119	3	1	20	19	1	27	4	247
8:15 AM	8	27	0	5	80	7	0	10	10	4	20	4	175
8:30 AM	5	14	1	5	67	1	2	8	15	2	12	4	136
8:45 AM	4	14	2	4	64	3	1	6	9	2	9	3	121
9:00 AM	6	24	3	6	60	3	1	6	9	5	9	1	133
9:15 AM	4	19	3	4	55	1	1	6	6	7	10	2	118
9:30 AM	5	11	0	4	47	1	1	5	2	2	7	2	87
9:45 AM	6	17	0	0	42	0	0	3	8	5	8	3	92
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	68	309	16	58	909	32	12	107	143	33	194	75	1956
APPROACH %'s :	17.30%	78.63%	4.07%	5.81%	90.99%	3.20%	4.58%	40.84%	54.58%	10.93%	64.24%	24.83%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	28	166	6	30	417	14	5	56	71	6	95	54	948
PEAK HR FACTOR :		0.725			0.873			0.717			0.861		0.812

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	10	76	3	4	69	5	2	11	7	2	25	6	220
3:15 PM	9	54	1	10	80	11	0	16	11	8	10	5	215
3:30 PM	9	52	1	9	53	3	2	12	3	5	10	5	164
3:45 PM	6	55	3	2	50	3	3	13	8	4	13	4	164
4:00 PM	15	56	6	5	49	5	1	10	6	4	20	1	178
4:15 PM	11	52	6	5	51	7	3	21	7	1	14	3	181
4:30 PM	5	60	5	4	45	5	3	16	9	2	18	9	181
4:45 PM	9	51	1	5	60	1	4	19	15	2	19	3	189
5:00 PM	10	66	3	4	61	4	0	17	12	2	9	4	192
5:15 PM	9	81	1	3	47	4	2	9	6	2	17	5	186
5:30 PM	8	75	0	6	54	8	6	14	4	3	13	2	193
5:45 PM	19	79	1	4	51	3	3	20	6	1	17	4	208

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	120	757	31	61	670	59	29	178	94	36	185	51	2271
APPROACH %'s :	13.22%	83.37%	3.41%	7.72%	84.81%	7.47%	9.63%	59.14%	31.23%	13.24%	68.01%	18.75%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	46	301	5	17	213	19	11	60	28	8	56	15	779
PEAK HR FACTOR :		0.889			0.902			0.853			0.823		0.936

CONTROL : 4-Way Stop

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-008
N/S Street: Tujunga Canyon Blvd
E/W Street: Valmont St
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	1	0	1	0	0	0	1
7:15 AM	0	1	0	1	1	2	0	0
7:30 AM	0	0	2	0	0	1	0	0
7:45 AM	1	1	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	1	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	1	0	0
8:45 AM	0	0	1	1	1	2	0	2
9:00 AM	0	0	1	0	0	0	0	1
9:15 AM	0	0	0	1	0	1	0	1
9:30 AM	0	0	1	0	1	0	1	0
9:45 AM	0	0	0	0	0	1	0	1
TOTALS	**1**	**4**	**5**	**4**	**3**	**8**	**3**	**6**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	2	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	1	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**1**	**0**	**0**	**3**	**1**	**0**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	2	0	1	0	0	0
3:30 PM	1	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	1	0	0	0
4:00 PM	2	1	0	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	2	0
4:30 PM	0	0	0	1	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	0
5:00 PM	0	2	0	1	0	0	2	0
5:15 PM	0	0	3	0	0	0	1	0
5:30 PM	0	1	0	1	0	0	0	0
5:45 PM	1	0	1	0	0	0	0	2
TOTALS	**4**	**4**	**6**	**3**	**2**	**0**	**7**	**3**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	2	0	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	2	0	0	0	0	1
3:45 PM	0	0	0	1	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	1	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0
5:45 PM	0	0	0	0	0	0	0	2
TOTALS	**0**	**0**	**2**	**2**	**2**	**0**	**1**	**3**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 **Day:** Thursday

BIKES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	1	0	0	0	0	0	0	0	0	0	1	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	1	0	0	0	1	0	0	0	2
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	0	2	0	0	0	1	0	1	1	6
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	50.00%	50.00%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	0	0	1	2
PEAK HR FACTOR :	0.000			0.250			0.000			0.250			0.500

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	1	0	0	0	0	0	0	1	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	0	0	0	0	0	0	1	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%				0.00%	0.00%	100.00%				
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.250			0.000			0.000			0.000			0.250

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 **Day:** Thursday

BUSES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :													

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	3	0	0	1	0	0	0	1	1	0	0	6
7:15 AM	0	1	0	0	0	0	0	0	0	0	1	0	2
7:30 AM	0	0	0	1	2	0	0	0	1	0	0	1	5
7:45 AM	1	0	0	0	1	0	0	0	0	0	0	1	3
8:00 AM	1	3	1	0	0	0	0	0	0	0	1	0	6
8:15 AM	0	0	1	0	1	0	0	1	0	0	1	0	4
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
9:30 AM	0	0	0	0	1	0	0	0	1	0	0	0	2
9:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	8	2	1	7	0	1	1	4	1	4	2	33
APPROACH %'s :	16.67%	66.67%	16.67%	12.50%	87.50%	0.00%	16.67%	16.67%	66.67%	14.29%	57.14%	28.57%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	2	4	1	1	3	0	0	0	1	0	2	2	16
PEAK HR FACTOR :		0.350			0.333			0.250			1.000		0.667

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-008 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Valmont St			Valmont St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	1	0	0	0	3	1	0	0	0	0	0	0	5
3:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	1	0	0	0	0	0	0	0	0	1	0	2
3:45 PM	0	0	0	1	3	0	0	0	0	0	0	0	4
4:00 PM	0	0	1	0	1	0	0	1	0	0	1	0	4
4:15 PM	0	0	0	0	1	1	0	0	0	0	1	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	5	1	2	10	2	0	1	0	0	3	0	26
APPROACH %'s :	25.00%	62.50%	12.50%	14.29%	71.43%	14.29%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	1	1	0	1	1	0	0	0	0	0	0	0	4
PEAK HR FACTOR :		0.500			0.250			0.000			0.000		0.500

CONTROL : 4-Way Stop

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Tujunga Canyon Blvd

East/West Foothill Blvd

Day: Thursday Date: September 17, 2015 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	24	12	88	56
BIKES	3	2	12	10
BUSES	0	0	20	19

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	105	9.45	216	7.30	446	7.45	160	8.15
PM PK 15 MIN	252	17.00	104	16.15	261	17.00	371	17.45
AM PK HOUR	388	7.30	721	7.15	1593	7.15	546	7.45
PM PK HOUR	958	17.00	386	16.15	1005	17.00	1286	17.00

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	200	91	26	317	*7-8*	304	353	15	672	989	8	5	8	2
8-9	244	89	24	357	*8-9*	269	353	18	640	997	8	0	9	0
9-10	231	103	23	357	*9-10*	173	264	19	456	813	10	1	13	0
15-16	462	248	24	734	*15-16*	163	157	26	346	1080	10	0	8	0
16-17	549	260	29	838	*16-17*	179	183	20	382	1220	25	0	17	0
17-18	627	306	25	958	*17-18*	155	191	22	368	1326	8	0	10	0
TOTAL	2313	1097	151	3561	TOTAL	1243	1501	120	2864	6425	69	6	65	2

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	12	933	612	1557	*7-8*	33	232	71	336	1893	0	0	12	5
8-9	15	779	574	1368	*8-9*	53	397	90	540	1908	0	0	14	3
9-10	30	619	411	1060	*9-10*	56	391	75	522	1582	2	0	18	5
15-16	29	530	329	888	*15-16*	37	670	233	940	1828	0	0	11	0
16-17	53	525	298	876	*16-17*	40	766	247	1053	1929	1	0	17	0
17-18	40	577	388	1005	*17-18*	54	896	336	1286	2291	0	0	14	0
TOTAL	179	3963	2612	6754	TOTAL	273	3352	1052	4677	11431	3	0	86	13

ITM Peak Hour Summary

Prepared by:

NDS

Tujunga Canyon Blvd and Foothill Blvd , Sunland-Tujunga

Date: 9/17/2015
Day: Thursday

Project #: 15-5575-009
City: Sunland-Tujunga

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Total Peak Hour Summary

Tujunga Canyon Blvd

Foothill Blvd

N

Southbound Approach

Lanes	1	1	1		
AM	20	367	306	205	AM
NOON	0	0	0	0	NOON
PM	22	191	155	682	PM

Eastbound Approach

	AM	NOON	PM
	641	0	1545

Lanes	AM	NOON	PM
1	9	0	40
2	928	0	577
0	584	0	388

Westbound Approach

AM	NOON	PM	Lanes
94	0	336	0
367	0	896	2
50	0	54	1

AM	NOON	PM
1266	0	757

CONTROL

Signalized

Northbound Approach

AM	1001	254	102	32	AM
NOON	0	0	0	0	NOON
PM	633	627	306	25	PM
		2	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg

693	205	AM
0	0	NOON
368	682	PM

West Leg

AM	NOON	PM
641	0	1545
1521	0	1005

East Leg

511	0	1286
1266	0	757
AM	NOON	PM

South Leg

AM	1001	388
NOON	0	0
PM	633	958

Total Volume Per Leg

North Leg

898	AM
0	NOON
1050	PM

West Leg

AM	NOON	PM
2162	0	2550

East Leg

1777	0	2043
AM	NOON	PM

South Leg

AM	1389
NOON	0
PM	1591

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 | **Day:** Thursday

TOTALS

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
7:00 AM	38	20	3	59	99	2	0	152	171	7	36	3	590
7:15 AM	45	19	5	78	82	2	5	252	161	9	58	18	734
7:30 AM	54	26	8	97	112	7	4	244	122	7	51	22	754
7:45 AM	63	26	10	70	60	4	3	285	158	10	87	28	804
8:00 AM	66	25	10	83	119	7	1	201	157	19	113	14	815
8:15 AM	71	25	4	56	76	2	1	198	147	14	116	30	740
8:30 AM	53	17	4	81	99	3	8	192	152	10	77	28	724
8:45 AM	54	22	6	49	59	6	5	188	118	10	91	18	626
9:00 AM	50	26	8	48	80	4	5	155	112	10	97	25	620
9:15 AM	57	22	5	40	47	7	9	159	100	15	94	14	569
9:30 AM	58	24	2	46	79	3	5	149	110	16	103	17	612
9:45 AM	66	31	8	39	58	5	11	156	89	15	97	19	594

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	675	283	73	746	970	52	57	2331	1597	142	1020	236	8182
APPROACH %'s :	65.47%	27.45%	7.08%	42.19%	54.86%	2.94%	1.43%	58.49%	40.08%	10.16%	72.96%	16.88%	

PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	254	102	32	306	367	20	9	928	584	50	367	94	3113
PEAK HR FACTOR :		0.960			0.802			0.853			0.798		0.955

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 **Day:** Thursday

TOTALS

City: Sunland-Tujunga **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
3:00 PM	86	58	10	36	41	4	8	123	82	6	155	62	671
3:15 PM	131	66	6	38	34	7	8	144	89	7	176	53	759
3:30 PM	119	67	4	41	47	4	10	119	86	13	170	60	740
3:45 PM	126	57	4	48	35	11	3	144	72	11	169	58	738
4:00 PM	119	52	7	46	38	6	11	132	88	12	182	51	744
4:15 PM	141	70	12	47	50	7	14	151	83	11	201	60	847
4:30 PM	159	71	7	38	48	4	13	129	58	6	183	65	781
4:45 PM	130	67	3	48	47	3	15	113	69	11	200	71	777
5:00 PM	168	78	6	46	46	2	15	145	101	10	218	76	911
5:15 PM	160	72	10	43	47	7	9	135	94	14	197	75	863
5:30 PM	145	77	6	25	51	7	9	132	104	13	232	80	881
5:45 PM	154	79	3	41	47	6	7	165	89	17	249	105	962

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1638	814	78	497	531	68	122	1632	1015	131	2332	816	9674
APPROACH %'s :	64.74%	32.17%	3.08%	45.35%	48.45%	6.20%	4.41%	58.94%	36.66%	4.00%	71.12%	24.89%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	627	306	25	155	191	22	40	577	388	54	896	336	3617
PEAK HR FACTOR :		0.950			0.948			0.963			0.867		0.940

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 **Day:** Thursday

CARS

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
7:00 AM	38	19	2	59	98	2	0	151	169	7	35	2	582
7:15 AM	44	19	5	78	82	2	5	245	160	9	52	17	718
7:30 AM	54	26	8	97	112	7	4	239	122	7	50	22	748
7:45 AM	63	26	9	69	59	4	3	279	156	10	84	28	790
8:00 AM	65	25	10	83	119	7	1	198	156	19	109	14	806
8:15 AM	71	25	4	56	75	2	1	194	147	14	111	30	730
8:30 AM	53	17	4	80	99	3	8	186	152	10	75	27	714
8:45 AM	54	22	4	49	58	6	5	182	117	8	87	18	610
9:00 AM	47	26	7	48	79	4	5	150	111	10	93	25	605
9:15 AM	56	22	5	40	47	7	9	152	100	14	90	14	556
9:30 AM	57	24	2	46	79	3	5	145	110	16	101	16	604
9:45 AM	66	31	7	39	58	5	11	154	87	15	95	19	587
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	668	282	67	744	965	52	57	2275	1587	139	982	232	8050
APPROACH %'s :	65.68%	27.73%	6.59%	42.25%	54.80%	2.95%	1.45%	58.05%	40.50%	10.27%	72.58%	17.15%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	253	102	31	305	365	20	9	910	581	50	354	94	3074
PEAK HR FACTOR :		0.965			0.799			0.856			0.803		0.953

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 | **Day:** Thursday

CARS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
3:00 PM	85	57	10	36	41	4	7	122	81	6	153	62	664
3:15 PM	129	65	6	37	34	7	7	139	88	7	174	51	744
3:30 PM	118	67	4	41	47	4	10	115	86	13	169	60	734
3:45 PM	126	57	4	47	34	11	3	141	71	11	168	58	731
4:00 PM	118	52	7	46	38	5	11	131	86	12	180	51	737
4:15 PM	140	70	12	46	50	7	14	148	83	11	200	60	841
4:30 PM	159	71	7	38	48	4	13	126	58	6	181	65	776
4:45 PM	130	67	3	48	47	3	15	109	69	11	198	71	771
5:00 PM	168	77	6	46	46	2	15	143	100	10	214	76	903
5:15 PM	159	72	10	43	47	7	9	132	93	14	192	75	853
5:30 PM	145	77	6	25	51	7	9	131	104	13	229	80	877
5:45 PM	154	79	3	41	47	6	7	162	89	17	246	105	956

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1631	811	78	494	530	67	120	1599	1008	131	2304	814	9587
APPROACH %'s :	64.72%	32.18%	3.10%	45.28%	48.58%	6.14%	4.40%	58.64%	36.96%	4.03%	70.91%	25.05%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	626	305	25	155	191	22	40	568	386	54	881	336	3589
PEAK HR FACTOR :		0.952			0.948			0.963			0.863		0.939

CONTROL : Signalized

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5575-009
N/S Street: Tujunga Canyon Blvd
E/W Street: Foothill Blvd
DATE: 9/17/2015 DAY: Thursday
CITY: Sunland-Tujunga

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	2	2	0	2	1	0	0
7:15 AM	0	1	0	1	0	2	0	0
7:30 AM	2	0	3	1	1	2	0	0
7:45 AM	1	2	1	0	1	3	0	0
8:00 AM	0	3	1	0	1	2	0	0
8:15 AM	1	1	2	3	4	3	0	0
8:30 AM	0	0	0	1	1	1	0	0
8:45 AM	2	2	1	0	2	0	0	0
9:00 AM	4	0	0	0	2	3	0	0
9:15 AM	5	2	2	1	3	4	0	0
9:30 AM	0	0	1	3	1	3	1	1
9:45 AM	0	2	1	2	1	1	0	0
TOTALS	**15**	**15**	**14**	**12**	**19**	**25**	**1**	**1**

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	2	3	0	2	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	2	0	2	1	0	0
8:00 AM	0	0	0	0	1	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	1	0	0
8:45 AM	0	0	0	0	0	1	0	0
9:00 AM	0	0	0	0	2	1	0	0
9:15 AM	0	0	0	0	1	0	0	0
9:30 AM	0	0	0	1	0	1	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**5**	**1**	**8**	**5**	**0**	**0**

P M

Adult Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	1	2	2	0	3	2	0	0
3:15 PM	1	1	4	1	2	2	0	0
3:30 PM	0	1	1	0	1	0	0	0
3:45 PM	1	1	1	1	1	0	0	0
4:00 PM	1	2	2	2	2	1	0	0
4:15 PM	2	4	4	4	2	2	0	0
4:30 PM	3	3	4	5	5	1	0	0
4:45 PM	0	2	3	1	3	1	0	1
5:00 PM	2	1	2	1	1	1	0	0
5:15 PM	1	2	0	1	0	4	0	0
5:30 PM	1	2	0	0	1	1	0	0
5:45 PM	1	0	2	2	4	2	0	0
TOTALS	**14**	**21**	**25**	**18**	**25**	**17**	**0**	**1**

School-Aged Pedestrians

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 **Day:** Thursday

BIKES

City: Sunland-Tujunga **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
9:15 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	1	0	0	0	0	4	0	0	3	1	9
APPROACH %'s :	0.00%	0.00%	100.00%				0.00%	100.00%	0.00%	0.00%	75.00%	25.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.250

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 | **Day:** Thursday

BIKES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
3:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:30 PM	1	0	0	0	0	0	0	0	0	0	1	0	2
3:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:45 PM	0	0	1	0	0	0	1	1	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	1	2	0	0	1	7	0	1	4	1	18
APPROACH %'s :	50.00%	0.00%	50.00%	100.00%	0.00%	0.00%	12.50%	87.50%	0.00%	16.67%	66.67%	16.67%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	1	0	0	0	4	0	0	0	0	5
PEAK HR FACTOR :	0.000			0.250			0.333			0.000			0.417

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	3	0	0	1	0	4
7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
9:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	11	0	0	10	0	21
APPROACH %'s :							0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	4	0	0	4	0	8
PEAK HR FACTOR :	0.000			0.000			0.500			1.000			0.667

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 | **Day:** Thursday

BUSES

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
3:00 PM	0	0	0	0	0	0	0	1	1	0	1	0	3
3:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	8	1	0	9	0	18
APPROACH %'s :							0.00%	88.89%	11.11%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	2	0	0	4	0	6
PEAK HR FACTOR :		0.000			0.000			0.500			0.500		0.750

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009

Day: Thursday

HEAVY TRUCKS

City: Sunland-Tujunga

Date: 9/17/2015

AM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
7:00 AM	0	1	1	0	1	0	0	0	2	0	1	1	7
7:15 AM	1	0	0	0	0	0	0	4	1	0	5	1	12
7:30 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
7:45 AM	0	0	1	1	1	0	0	6	2	0	2	0	13
8:00 AM	1	0	0	0	0	0	0	2	1	0	3	0	7
8:15 AM	0	0	0	0	1	0	0	3	0	0	4	0	8
8:30 AM	0	0	0	1	0	0	0	6	0	0	1	1	9
8:45 AM	0	0	2	0	1	0	0	5	1	2	3	0	14
9:00 AM	3	0	1	0	1	0	0	5	1	0	4	0	15
9:15 AM	1	0	0	0	0	0	0	6	0	1	2	0	10
9:30 AM	1	0	0	0	0	0	0	3	0	0	1	1	6
9:45 AM	0	0	1	0	0	0	0	2	2	0	2	0	7
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	7	1	6	2	5	0	0	45	10	3	28	4	111
APPROACH %'s :	50.00%	7.14%	42.86%	28.57%	71.43%	0.00%	0.00%	81.82%	18.18%	8.57%	80.00%	11.43%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	1	0	1	1	2	0	0	14	3	0	9	0	31
PEAK HR FACTOR :	0.500			0.375			0.531			0.563			0.596

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5575-009 | **Day:** Thursday

HEAVY TRUCKS

City: Sunland-Tujunga | **Date:** 9/17/2015

PM

NS/EW Streets:	Tujunga Canyon Blvd			Tujunga Canyon Blvd			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	0	1	2	0	
3:00 PM	1	1	0	0	0	0	1	0	0	0	1	0	4
3:15 PM	2	1	0	1	0	0	1	3	1	0	1	2	12
3:30 PM	1	0	0	0	0	0	0	4	0	0	1	0	6
3:45 PM	0	0	0	1	1	0	0	2	1	0	0	0	5
4:00 PM	1	0	0	0	0	1	0	1	2	0	2	0	7
4:15 PM	1	0	0	1	0	0	0	3	0	0	1	0	6
4:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
4:45 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
5:00 PM	0	1	0	0	0	0	0	2	1	0	2	0	6
5:15 PM	1	0	0	0	0	0	0	2	1	0	4	0	8
5:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
5:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	7	3	0	3	1	1	2	25	6	0	19	2	69
APPROACH %'s :	70.00%	30.00%	0.00%	60.00%	20.00%	20.00%	6.06%	75.76%	18.18%	0.00%	90.48%	9.52%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	1	1	0	0	0	0	0	7	2	0	11	0	22
PEAK HR FACTOR :	0.500			0.000			0.750			0.688			0.688

CONTROL : Signalized

APPENDIX A2
Existing Roadway Segment Traffic Count Data

Prepared by NDS/ATD

VOLUME

Hillrose St Bet. Mt Gleason Ave & Tujunga Canyon Blvd

Day: Thursday
Date: 9/17/2015

City: Sunland-Tujunga
Project #: CA15_5576_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,228	1,102	2,330

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		0		1		12:00			17		10		27	
00:15			1		2		3		12:15			9		7		16	
00:30			1		1		2		12:30			19		13		32	
00:45			2	5	1	4	3	9	12:45			7	52	12	42	19	94
01:00			1		0		1		13:00			15		14		29	
01:15			2		0		2		13:15			16		6		22	
01:30			1		0		1		13:30			29		27		56	
01:45			0	4	0		0	4	13:45			37	97	27	74	64	171
02:00			1		0		1		14:00			27		19		46	
02:15			2		0		2		14:15			12		18		30	
02:30			2		0		2		14:30			15		15		30	
02:45			1	6	0		1	6	14:45			25	79	11	63	36	142
03:00			0		0		0		15:00			43		38		81	
03:15			0		1		1		15:15			31		32		63	
03:30			1		1		2		15:30			26		22		48	
03:45			0	1	3	5	3	6	15:45			27	127	19	111	46	238
04:00			2		1		3		16:00			18		14		32	
04:15			0		2		2		16:15			23		14		37	
04:30			0		1		1		16:30			25		13		38	
04:45			2	4	3	7	5	11	16:45			29	95	21	62	50	157
05:00			1		3		4		17:00			32		14		46	
05:15			2		3		5		17:15			29		26		55	
05:30			0		4		4		17:30			27		16		43	
05:45			1	4	11	21	12	25	17:45			26	114	22	78	48	192
06:00			10		11		21		18:00			23		19		42	
06:15			4		14		18		18:15			28		16		44	
06:30			1		6		7		18:30			19		20		39	
06:45			7	22	23	54	30	76	18:45			35	105	9	64	44	169
07:00			11		21		32		19:00			19		15		34	
07:15			11		24		35		19:15			21		15		36	
07:30			23		28		51		19:30			12		9		21	
07:45			25	70	25	98	50	168	19:45			18	70	6	45	24	115
08:00			16		20		36		20:00			15		9		24	
08:15			17		32		49		20:15			16		7		23	
08:30			38		43		81		20:30			8		4		12	
08:45			25	96	50	145	75	241	20:45			12	51	7	27	19	78
09:00			28		34		62		21:00			12		4		16	
09:15			8		6		14		21:15			12		3		15	
09:30			11		13		24		21:30			5		5		10	
09:45			10	57	10	63	20	120	21:45			3	32	3	15	6	47
10:00			8		12		20		22:00			10		7		17	
10:15			9		14		23		22:15			10		3		13	
10:30			8		10		18		22:30			5		8		13	
10:45			10	35	7	43	17	78	22:45			3	28	6	24	9	52
11:00			9		14		23		23:00			7		7		14	
11:15			25		11		36		23:15			4		1		5	
11:30			16		12		28		23:30			2		4		6	
11:45			11	61	8	45	19	106	23:45			0	13	0	12	0	25
TOTALS				365		485		**850**	**TOTALS**				863		617		**1480**
SPLIT %				42.9%		57.1%		**36.5%**	**SPLIT %**				58.3%		41.7%		**63.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,228	1,102	2,330

	NB	SB	EB	WB	Total		NB	SB	EB	WB	Total
AM Peak Hour			08:15	08:15	**08:15**	**PM Peak Hour**			15:00	15:00	**15:00**
AM Pk Volume			108	159	**267**	**PM Pk Volume**			127	111	**238**
Pk Hr Factor			0.711	0.795	**0.824**	**Pk Hr Factor**			0.738	0.730	**0.735**
7 - 9 Volume	0	0	166	243	**409**	**4 - 6 Volume**	0	0	209	140	**349**
7 - 9 Peak Hour			07:45	08:00	**08:00**	**4 - 6 Peak Hour**			16:45	17:00	**16:45**
7 - 9 Pk Volume	0	0	96	145	**241**	**4 - 6 Pk Volume**	0	0	117	78	**194**
Pk Hr Factor	0.000	0.000	0.632	0.725	**0.744**	**Pk Hr Factor**	0.000	0.000	0.914	0.750	**0.882**

Prepared by NDS/ATD

VOLUME

Hillrose St Bet. Tujunga Canyon Blvd & Redmont Ave

Day: Thursday
Date: 9/17/2015

City: Sunland-Tujunga
Project #: CA15_5576_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	533	627	1,160

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		1		2		12:00			6		5		11	
00:15			0		0		0		12:15			5		6		11	
00:30			0		0		0		12:30			6		10		16	
00:45			0	1	0	1	0	2	12:45			6	23	9	30	15	53
01:00			1		0		1		13:00			4		14		18	
01:15			1		1		2		13:15			7		12		19	
01:30			0		0		0		13:30			24		20		44	
01:45			0	2	0	1	0	3	13:45			19	54	6	52	25	106
02:00			0		0		0		14:00			11		10		21	
02:15			0		0		0		14:15			8		8		16	
02:30			1		0		1		14:30			8		8		16	
02:45			0	1	0		0	1	14:45			6	33	6	32	12	65
03:00			0		0		0		15:00			25		21		46	
03:15			0		0		0		15:15			14		11		25	
03:30			0		0		0		15:30			10		4		14	
03:45			1	1	1	1	2	2	15:45			7	56	17	53	24	109
04:00			1		1		2		16:00			16		10		26	
04:15			0		1		1		16:15			8		11		19	
04:30			0		2		2		16:30			7		8		15	
04:45			0	1	2	6	2	7	16:45			10	41	8	37	18	78
05:00			1		1		2		17:00			7		12		19	
05:15			0		2		2		17:15			11		19		30	
05:30			1		4		5		17:30			9		10		19	
05:45			1	3	4	11	5	14	17:45			12	39	8	49	20	88
06:00			0		5		5		18:00			7		8		15	
06:15			0		9		9		18:15			11		7		18	
06:30			4		6		10		18:30			6		15		21	
06:45			1	5	6	26	7	31	18:45			11	35	7	37	18	72
07:00			2		10		12		19:00			5		7		12	
07:15			3		27		30		19:15			9		11		20	
07:30			17		42		59		19:30			10		6		16	
07:45			40	62	43	122	83	184	19:45			6	30	4	28	10	58
08:00			16		10		26		20:00			6		5		11	
08:15			7		12		19		20:15			11		3		14	
08:30			3		3		6		20:30			3		1		4	
08:45			10	36	11	36	21	72	20:45			0	20	3	12	3	32
09:00			5		3		8		21:00			2		0		2	
09:15			2		6		8		21:15			5		3		8	
09:30			5		8		13		21:30			3		2		5	
09:45			3	15	8	25	11	40	21:45			3	13	1	6	4	19
10:00			2		10		12		22:00			4		1		5	
10:15			7		9		16		22:15			6		3		9	
10:30			7		6		13		22:30			2		2		4	
10:45			4	20	5	30	9	50	22:45			2	14	2	8	4	22
11:00			4		5		9		23:00			3		2		5	
11:15			6		3		9		23:15			1		1		2	
11:30			6		6		12		23:30			1		1		2	
11:45			5	21	5	19	10	40	23:45			2	7	1	5	3	12
TOTALS				168		278		**446**	**TOTALS**				365		349		**714**
SPLIT %				37.7%		62.3%		**38.4%**	**SPLIT %**				51.1%		48.9%		**61.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	533	627	1,160

	NB	SB	EB	WB	Total		NB	SB	EB	WB	Total
AM Peak Hour			07:30	07:00	**07:15**	**PM Peak Hour**			13:30	12:45	**13:15**
AM Pk Volume			80	122	**198**	**PM Pk Volume**			62	55	**109**
Pk Hr Factor			0.500	0.709	**0.596**	**Pk Hr Factor**			0.646	0.688	**0.619**
7 - 9 Volume	0	0	98	158	**256**	**4 - 6 Volume**	0	0	80	86	**166**
7 - 9 Peak Hour			07:30	07:00	**07:15**	**4 - 6 Peak Hour**			16:00	16:45	**17:00**
7 - 9 Pk Volume	0	0	80	122	**198**	**4 - 6 Pk Volume**	0	0	41	49	**88**
Pk Hr Factor	0.000	0.000	0.500	0.709	**0.596**	**Pk Hr Factor**	0.000	0.000	0.641	0.645	**0.733**

Prepared by NDS/ATD

VOLUME

Mt Gleason Ave Bet. Hillrose St & Summitrose St

Day: Thursday
Date: 9/17/2015

City: Sunland-Tujunga
Project #: CA15_5576_003

DAILY TOTALS	NB	SB	EB	WB	Total
	2,556	2,742	0	0	5,298

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	10		4				14		12:00	21		44				65	
00:15	9		1				10		12:15	29		26				55	
00:30	6		2				8		12:30	35		27				62	
00:45	4	29	3	10			7	39	12:45	24	109	23	120			47	229
01:00	2		5				7		13:00	38		31				69	
01:15	0		2				2		13:15	67		28				95	
01:30	3		0				3		13:30	48		62				110	
01:45	0	5	0	7			0	12	13:45	26	179	63	184			89	363
02:00	7		2				9		14:00	39		27				66	
02:15	1		1				2		14:15	33		42				75	
02:30	2		0				2		14:30	31		35				66	
02:45	2	12	2	5			4	17	14:45	39	142	37	141			76	283
03:00	1		2				3		15:00	68		49				117	
03:15	1		4				5		15:15	43		44				87	
03:30	0		1				1		15:30	45		42				87	
03:45	4	6	6	13			10	19	15:45	46	202	46	181			92	383
04:00	0		4				4		16:00	44		42				86	
04:15	1		4				5		16:15	45		42				87	
04:30	1		5				6		16:30	51		32				83	
04:45	2	4	7	20			9	24	16:45	55	195	45	161			100	356
05:00	2		11				13		17:00	62		43				105	
05:15	5		17				22		17:15	80		45				125	
05:30	0		24				24		17:30	49		40				89	
05:45	5	12	25	77			30	89	17:45	82	273	53	181			135	454
06:00	13		39				52		18:00	40		37				77	
06:15	7		45				52		18:15	45		45				90	
06:30	13		57				70		18:30	46		30				76	
06:45	14	47	50	191			64	238	18:45	48	179	37	149			85	328
07:00	27		63				90		19:00	59		25				84	
07:15	39		86				125		19:15	58		27				85	
07:30	79		84				163		19:30	47		33				80	
07:45	61	206	91	324			152	530	19:45	43	207	16	101			59	308
08:00	38		81				119		20:00	38		19				57	
08:15	21		55				76		20:15	46		12				58	
08:30	25		57				82		20:30	29		16				45	
08:45	23	107	40	233			63	340	20:45	30	143	20	67			50	210
09:00	25		50				75		21:00	33		11				44	
09:15	15		38				53		21:15	33		17				50	
09:30	22		47				69		21:30	27		7				34	
09:45	20	82	30	165			50	247	21:45	34	127	8	43			42	170
10:00	20		38				58		22:00	23		16				39	
10:15	11		41				52		22:15	20		8				28	
10:30	18		41				59		22:30	17		13				30	
10:45	17	66	36	156			53	222	22:45	14	74	14	51			28	125
11:00	17		36				53		23:00	19		13				32	
11:15	34		18				52		23:15	16		9				25	
11:30	24		42				66		23:30	12		11				23	
11:45	18	93	29	125			47	218	23:45	10	57	4	37			14	94
TOTALS		669		1326				**1995**	**TOTALS**		1887		1416				**3303**
SPLIT %		33.5%		66.5%				**37.7%**	**SPLIT %**		57.1%		42.9%				**62.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	2,556	2,742	0	0	5,298

	NB	SB	EB	WB	TOTAL		NB	SB	EB	WB	TOTAL
AM Peak Hour	07:15	07:15			**07:15**	**PM Peak Hour**	17:00	13:30			**17:00**
AM Pk Volume	217	342			**559**	**PM Pk Volume**	273	194			**454**
Pk Hr Factor	0.687	0.940			**0.857**	**Pk Hr Factor**	0.832	0.770			**0.841**
7 - 9 Volume	313	557	0	0	**870**	**4 - 6 Volume**	468	342	0	0	**810**
7 - 9 Peak Hour	07:15	07:15			**07:15**	**4 - 6 Peak Hour**	17:00	17:00			**17:00**
7 - 9 Pk Volume	217	342	0	0	**559**	**4 - 6 Pk Volume**	273	181	0	0	**454**
Pk Hr Factor	0.687	0.940	0.000	0.000	**0.857**	**Pk Hr Factor**	0.832	0.854	0.000	0.000	**0.841**

Prepared by NDS/ATD

VOLUME

Tujunga Canyon Blvd Bet. Hillrose St & Summitrose St

Day: Thursday
Date: 9/17/2015

City: Sunland-Tujunga
Project #: CA15_5576_004

DAILY TOTALS	NB	SB	EB	WB	Total
	1,792	2,173	0	0	3,965

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	5		1				6		12:00	13		30				43	
00:15	2		4				6		12:15	23		38				61	
00:30	2		3				5		12:30	20		20				40	
00:45	3	12	1	9			4	21	12:45	16	72	27	115			43	187
01:00	5		0				5		13:00	28		26				54	
01:15	2		1				3		13:15	54		23				77	
01:30	4		1				5		13:30	58		79				137	
01:45	1	12	2	4			3	16	13:45	27	167	67	195			94	362
02:00	1		2				3		14:00	19		24				43	
02:15	1		0				1		14:15	24		21				45	
02:30	1		3				4		14:30	25		21				46	
02:45	0	3	0	5			0	8	14:45	25	93	26	92			51	185
03:00	1		0				1		15:00	69		89				158	
03:15	0		1				1		15:15	35		36				71	
03:30	0		3				3		15:30	30		28				58	
03:45	0	1	3	7			3	8	15:45	43	177	30	183			73	360
04:00	0		1				1		16:00	31		37				68	
04:15	0		2				2		16:15	35		29				64	
04:30	1		2				3		16:30	49		35				84	
04:45	0	1	3	8			3	9	16:45	26	141	46	147			72	288
05:00	1		2				3		17:00	42		39				81	
05:15	1		14				15		17:15	45		36				81	
05:30	0		11				11		17:30	43		34				77	
05:45	0	2	11	38			11	40	17:45	45	175	30	139			75	314
06:00	2		18				20		18:00	35		33				68	
06:15	2		27				29		18:15	28		31				59	
06:30	3		19				22		18:30	41		26				67	
06:45	7	14	33	97			40	111	18:45	44	148	30	120			74	268
07:00	16		38				54		19:00	33		29				62	
07:15	47		62				109		19:15	30		26				56	
07:30	94		67				161		19:30	31		21				52	
07:45	63	220	117	284			180	504	19:45	20	114	19	95			39	209
08:00	18		68				86		20:00	19		16				35	
08:15	31		51				82		20:15	18		12				30	
08:30	32		33				65		20:30	20		20				40	
08:45	18	99	36	188			54	287	20:45	17	74	10	58			27	132
09:00	2		34				36		21:00	12		16				28	
09:15	9		29				38		21:15	12		8				20	
09:30	2		25				27		21:30	13		14				27	
09:45	13	26	27	115			40	141	21:45	15	52	5	43			20	95
10:00	11		25				36		22:00	13		9				22	
10:15	16		28				44		22:15	13		7				20	
10:30	14		23				37		22:30	16		2				18	
10:45	12	53	16	92			28	145	22:45	10	52	9	27			19	79
11:00	25		20				45		23:00	10		3				13	
11:15	21		26				47		23:15	1		4				5	
11:30	13		28				41		23:30	6		5				11	
11:45	7	66	22	96			29	162	23:45	1	18	4	16			5	34
TOTALS		509		943				**1452**	**TOTALS**		1283		1230				**2513**
SPLIT %		35.1%		64.9%				**36.6%**	**SPLIT %**		51.1%		48.9%				**63.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	1,792	2,173	0	0	3,965

	NB	SB	EB	WB	TOTAL		NB	SB	EB	WB	TOTAL
AM Peak Hour	07:15	07:15			**07:15**	**PM Peak Hour**	15:00	13:00			**13:00**
AM Pk Volume	222	314			**536**	**PM Pk Volume**	177	195			**362**
Pk Hr Factor	0.590	0.671			**0.744**	**Pk Hr Factor**	0.641	0.617			**0.661**
7 - 9 Volume	319	472	0	0	**791**	**4 - 6 Volume**	316	286	0	0	**602**
7 - 9 Peak Hour	07:15	07:15			**07:15**	**4 - 6 Peak Hour**	17:00	16:30			**16:30**
7 - 9 Pk Volume	222	314	0	0	**536**	**4 - 6 Pk Volume**	175	156	0	0	**318**
Pk Hr Factor	0.590	0.671	0.000	0.000	**0.744**	**Pk Hr Factor**	0.972	0.848	0.000	0.000	**0.946**

Prepared by NDS/ATD

VOLUME

Redmont Ave Bet. Hillrose St & Summitrose St

Day: Thursday
Date: 9/17/2015

City: Sunland-Tujunga
Project #: CA15_5576_005

DAILY TOTALS	NB	SB	EB	WB	Total
	118	82	0	0	200

AM Period	NB		SB		EB	WB	TOTAL	
00:00	0		0				0	
00:15	0		0				0	
00:30	0		0				0	
00:45	0		0				0	
01:00	0		0				0	
01:15	0		1				1	
01:30	0		0				0	
01:45	0		0	1			0	1
02:00	1		0				1	
02:15	0		0				0	
02:30	0		0				0	
02:45	0	1	0				0	1
03:00	0		0				0	
03:15	0		0				0	
03:30	0		0				0	
03:45	0		0				0	
04:00	0		0				0	
04:15	0		0				0	
04:30	1		1				2	
04:45	1	2	2	3			3	5
05:00	0		0				0	
05:15	1		1				2	
05:30	0		1				1	
05:45	0	1	0	2			0	3
06:00	0		3				3	
06:15	0		1				1	
06:30	1		2				3	
06:45	0	1	3	9			3	10
07:00	0		0				0	
07:15	1		2				3	
07:30	3		2				5	
07:45	5	9	2	6			7	15
08:00	2		1				3	
08:15	2		1				3	
08:30	1		2				3	
08:45	4	9	1	5			5	14
09:00	0		1				1	
09:15	1		1				2	
09:30	2		1				3	
09:45	0	3	1	4			1	7
10:00	1		0				1	
10:15	0		2				2	
10:30	1		0				1	
10:45	0	2	2	4			2	6
11:00	0		0				0	
11:15	0		0				0	
11:30	1		2				3	
11:45	1	2	0	2			1	4
TOTALS	30		36				**66**	
SPLIT %	45.5%		54.5%				**33.0%**	

PM Period	NB		SB		EB	WB	TOTAL	
12:00	2		0				2	
12:15	3		1				4	
12:30	1		2				3	
12:45	0	6	0	3			0	9
13:00	0		1				1	
13:15	2		2				4	
13:30	2		1				3	
13:45	2	6	1	5			3	11
14:00	2		2				4	
14:15	0		1				1	
14:30	2		3				5	
14:45	2	6	0	6			2	12
15:00	2		1				3	
15:15	6		0				6	
15:30	0		0				0	
15:45	2	10	2	3			4	13
16:00	0		4				4	
16:15	1		2				3	
16:30	1		1				2	
16:45	1	3	0	7			1	10
17:00	1		6				7	
17:15	3		0				3	
17:30	6		1				7	
17:45	4	14	2	9			6	23
18:00	4		1				5	
18:15	1		2				3	
18:30	7		2				9	
18:45	3	15	1	6			4	21
19:00	1		1				2	
19:15	2		0				2	
19:30	2		1				3	
19:45	0	5	0	2			0	7
20:00	4		1				5	
20:15	2		0				2	
20:30	1		1				2	
20:45	3	10	0	2			3	12
21:00	4		0				4	
21:15	0		0				0	
21:30	1		1				2	
21:45	1	6	0	1			1	7
22:00	2		0				2	
22:15	0		0				0	
22:30	2		1				3	
22:45	0	4	0	1			0	5
23:00	0		1				1	
23:15	2		0				2	
23:30	0		0				0	
23:45	1	3	0	1			1	4
TOTALS	88		46				**134**	
SPLIT %	65.7%		34.3%				**67.0%**	

DAILY TOTALS	NB	SB	EB	WB	Total
	118	82	0	0	200

	NB	SB	EB	WB	Total		NB	SB	EB	WB	Total
AM Peak Hour	07:30	06:00			**07:15**	**PM Peak Hour**	17:15	15:45			**17:00**
AM Pk Volume	12	9			**18**	**PM Pk Volume**	17	9			**23**
Pk Hr Factor	0.600	0.750			**0.643**	**Pk Hr Factor**	0.708	0.563			**0.821**
7 - 9 Volume	18	11	0	0	**29**	**4 - 6 Volume**	17	16	0	0	**33**
7 - 9 Peak Hour	07:30	07:15			**07:15**	**4 - 6 Peak Hour**	17:00	16:15			**17:00**
7 - 9 Pk Volume	12	7	0	0	**18**	**4 - 6 Pk Volume**	14	9	0	0	**23**
Pk Hr Factor	0.600	0.875	0.000	0.000	**0.643**	**Pk Hr Factor**	0.583	0.375	0.000	0.000	**0.821**

Prepared by NDS/ATD

VOLUME

Summitrose St Bet. Mt Gleason Ave & Tujunga Canyon Blvd

Day: Thursday
Date: 9/17/2015

City: Sunland-Tujunga
Project #: CA15_5576_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,337	2,108	4,445

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					16		3		19		12:00					22		18		40	
00:15					8		0		8		12:15					24		22		46	
00:30					6		5		11		12:30					30		26		56	
00:45					3	33	1	9	4	42	12:45					34	110	23	89	57	199
01:00					2		1		3		13:00					28		34		62	
01:15					4		0		4		13:15					36		17		53	
01:30					2		4		6		13:30					29		33		62	
01:45					3	11	2	7	5	18	13:45					52	145	21	105	73	250
02:00					5		2		7		14:00					41		36		77	
02:15					4		1		5		14:15					33		22		55	
02:30					7		2		9		14:30					31		20		51	
02:45					3	19	2	7	5	26	14:45					30	135	39	117	69	252
03:00					1		0		1		15:00					48		42		90	
03:15					2		2		4		15:15					63		30		93	
03:30					1		3		4		15:30					37		29		66	
03:45					1	5	3	8	4	13	15:45					56	204	31	132	87	336
04:00					2		5		7		16:00					30		28		58	
04:15					3		7		10		16:15					57		25		82	
04:30					1		4		5		16:30					42		29		71	
04:45					6	12	8	24	14	36	16:45					44	173	33	115	77	288
05:00					0		6		6		17:00					51		45		96	
05:15					4		20		24		17:15					58		32		90	
05:30					3		17		20		17:30					54		41		95	
05:45					1	8	23	66	24	74	17:45					48	211	28	146	76	357
06:00					4		30		34		18:00					51		35		86	
06:15					6		30		36		18:15					59		23		82	
06:30					10		35		45		18:30					58		37		95	
06:45					4	24	39	134	43	158	18:45					51	219	24	119	75	338
07:00					18		46		64		19:00					45		30		75	
07:15					8		47		55		19:15					47		36		83	
07:30					26		64		90		19:30					50		27		77	
07:45					33	85	65	222	98	307	19:45					40	182	23	116	63	298
08:00					32		47		79		20:00					41		23		64	
08:15					28		28		56		20:15					33		22		55	
08:30					34		45		79		20:30					29		16		45	
08:45					40	134	43	163	83	297	20:45					36	139	12	73	48	212
09:00					29		36		65		21:00					19		16		35	
09:15					20		32		52		21:15					33		17		50	
09:30					19		35		54		21:30					31		14		45	
09:45					23	91	17	120	40	211	21:45					24	107	6	53	30	160
10:00					21		27		48		22:00					24		9		33	
10:15					26		30		56		22:15					28		4		32	
10:30					23		26		49		22:30					20		7		27	
10:45					15	85	29	112	44	197	22:45					12	84	10	30	22	114
11:00					19		28		47		23:00					15		8		23	
11:15					17		27		44		23:15					5		6		11	
11:30					24		31		55		23:30					9		8		17	
11:45					22	82	28	114	50	196	23:45					10	39	5	27	15	66
TOTALS						589		986		**1575**	**TOTALS**						1748		1122		**2870**
SPLIT %						37.4%		62.6%		**35.4%**	**SPLIT %**						60.9%		39.1%		**64.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,337	2,108	4,445

	NB	SB	EB	WB	Total		NB	SB	EB	WB	Total
AM Peak Hour			08:00	07:15	**07:30**	**PM Peak Hour**			18:00	16:45	**16:45**
AM Pk Volume			134	223	**323**	**PM Pk Volume**			219	151	**358**
Pk Hr Factor			0.838	0.858	**0.824**	**Pk Hr Factor**			0.928	0.839	**0.932**
7 - 9 Volume	0	0	219	385	**604**	**4 - 6 Volume**	0	0	384	261	**645**
7 - 9 Peak Hour			08:00	07:15	**07:30**	**4 - 6 Peak Hour**			17:00	16:45	**16:45**
7 - 9 Pk Volume	0	0	134	223	**323**	**4 - 6 Pk Volume**	0	0	211	151	**358**
Pk Hr Factor	0.000	0.000	0.838	0.858	**0.824**	**Pk Hr Factor**	0.000	0.000	0.909	0.839	**0.932**

Prepared by NDS/ATD

VOLUME

Tujunga Canyon Blvd Bet. Summitrose St & Apperson St

Day: Thursday
Date: 9/17/2015

City: Sunland-Tujunga
Project #: CA15_5576_007

DAILY TOTALS	NB	SB	EB	WB	Total
	2,332	2,947	0	0	5,279

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	6		3				9		12:00	17		35				52	
00:15	5		4				9		12:15	27		41				68	
00:30	4		1				5		12:30	26		37				63	
00:45	3	18	2	10			5	28	12:45	26	96	30	143			56	239
01:00	5		2				7		13:00	39		33				72	
01:15	1		3				4		13:15	65		38				103	
01:30	3		0				3		13:30	59		75				134	
01:45	2	11	1	6			3	17	13:45	37	200	93	239			130	439
02:00	3		1				4		14:00	27		41				68	
02:15	2		0				2		14:15	32		33				65	
02:30	0		1				1		14:30	32		29				61	
02:45	1	6	1	3			2	9	14:45	38	129	45	148			83	277
03:00	0		0				0		15:00	73		104				177	
03:15	0		2				2		15:15	50		75				125	
03:30	0		3				3		15:30	43		49				92	
03:45	0		1	6			1	6	15:45	38	204	47	275			85	479
04:00	0		3				3		16:00	39		43				82	
04:15	0		1				1		16:15	47		42				89	
04:30	1		1				2		16:30	55		45				100	
04:45	0	1	6	11			6	12	16:45	43	184	56	186			99	370
05:00	0		5				5		17:00	59		55				114	
05:15	3		15				18		17:15	68		53				121	
05:30	0		16				16		17:30	52		47				99	
05:45	1	4	15	51			16	55	17:45	69	248	45	200			114	448
06:00	3		25				28		18:00	40		43				83	
06:15	4		36				40		18:15	47		44				91	
06:30	4		38				42		18:30	53		45				98	
06:45	9	20	47	146			56	166	18:45	59	199	42	174			101	373
07:00	16		58				74		19:00	48		38				86	
07:15	49		72				121		19:15	46		31				77	
07:30	103		91				194		19:30	40		31				71	
07:45	81	249	130	351			211	600	19:45	36	170	19	119			55	289
08:00	34		95				129		20:00	29		17				46	
08:15	25		60				85		20:15	28		20				48	
08:30	20		60				80		20:30	25		23				48	
08:45	14	93	51	266			65	359	20:45	22	104	13	73			35	177
09:00	22		51				73		21:00	16		17				33	
09:15	11		37				48		21:15	21		14				35	
09:30	10		32				42		21:30	20		18				38	
09:45	14	57	39	159			53	216	21:45	21	78	11	60			32	138
10:00	19		38				57		22:00	26		10				36	
10:15	15		34				49		22:15	16		8				24	
10:30	17		34				51		22:30	18		5				23	
10:45	18	69	29	135			47	204	22:45	14	74	8	31			22	105
11:00	30		29				59		23:00	12		8				20	
11:15	27		34				61		23:15	5		5				10	
11:30	18		36				54		23:30	12		2				14	
11:45	11	86	34	133			45	219	23:45	3	32	7	22			10	54
TOTALS		614		1277				**1891**	**TOTALS**		1718		1670				**3388**
SPLIT %		32.5%		67.5%				**35.8%**	**SPLIT %**		50.7%		49.3%				**64.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	2,332	2,947	0	0	5,279

	NB	SB	EB	WB	TOTAL		NB	SB	EB	WB	TOTAL
AM Peak Hour	07:15	07:15			**07:15**	**PM Peak Hour**	17:00	15:00			**15:00**
AM Pk Volume	267	388			**655**	**PM Pk Volume**	248	275			**479**
Pk Hr Factor	0.648	0.746			**0.776**	**Pk Hr Factor**	0.899	0.661			**0.677**
7 - 9 Volume	342	617	0	0	**959**	**4 - 6 Volume**	432	386	0	0	**818**
7 - 9 Peak Hour	07:15	07:15			**07:15**	**4 - 6 Peak Hour**	17:00	16:45			**17:00**
7 - 9 Pk Volume	267	388	0	0	**655**	**4 - 6 Pk Volume**	248	211	0	0	**448**
Pk Hr Factor	0.648	0.746	0.000	0.000	**0.776**	**Pk Hr Factor**	0.899	0.942	0.000	0.000	**0.926**

Prepared by NDS/ATD

VOLUME

Tujunga Canyon Blvd Bet. Apperson St & Valmont St

Day: Thursday
Date: 9/17/2015

City: Sunland-Tujunga
Project #: CA15_5576_008

DAILY TOTALS	NB	SB	EB	WB	Total
	3,025	3,797	0	0	6,822

AM Period	NB		SB		EB	WB	TOTAL	
00:00	8		8				16	
00:15	10		6				16	
00:30	4		2				6	
00:45	8	30	3	19			11	49
01:00	5		6				11	
01:15	4		2				6	
01:30	6		1				7	
01:45	0	15	1	10			1	25
02:00	3		1				4	
02:15	2		0				2	
02:30	2		1				3	
02:45	1	8	3	5			4	13
03:00	1		0				1	
03:15	2		1				3	
03:30	0		3				3	
03:45	1	4	2	6			3	10
04:00	2		3				5	
04:15	2		1				3	
04:30	4		1				5	
04:45	1	9	8	13			9	22
05:00	3		7				10	
05:15	4		17				21	
05:30	1		24				25	
05:45	5	13	21	69			26	82
06:00	9		39				48	
06:15	10		46				56	
06:30	9		55				64	
06:45	16	44	57	197			73	241
07:00	24		78				102	
07:15	44		83				127	
07:30	65		103				168	
07:45	83	216	137	401			220	617
08:00	35		125				160	
08:15	36		76				112	
08:30	22		85				107	
08:45	19	112	67	353			86	465
09:00	28		66				94	
09:15	30		66				96	
09:30	16		47				63	
09:45	19	93	41	220			60	313
10:00	27		53				80	
10:15	27		52				79	
10:30	30		46				76	
10:45	23	107	48	199			71	306
11:00	32		46				78	
11:15	35		37				72	
11:30	24		51				75	
11:45	25	116	56	190			81	306
TOTALS		767		1682				2449
SPLIT %		31.3%		68.7%				35.9%

PM Period	NB		SB		EB	WB	TOTAL	
12:00	31		47				78	
12:15	45		54				99	
12:30	40		44				84	
12:45	35	151	43	188			78	339
13:00	54		50				104	
13:15	76		45				121	
13:30	61		71				132	
13:45	52	243	85	251			137	494
14:00	46		58				104	
14:15	40		52				92	
14:30	39		45				84	
14:45	51	176	61	216			112	392
15:00	75		87				162	
15:15	60		98				158	
15:30	57		65				122	
15:45	66	258	58	308			124	566
16:00	57		61				118	
16:15	57		63				120	
16:30	73		55				128	
16:45	59	246	65	244			124	490
17:00	69		67				136	
17:15	70		59				129	
17:30	78		67				145	
17:45	68	285	62	255			130	540
18:00	72		38				110	
18:15	60		48				108	
18:30	71		55				126	
18:45	74	277	55	196			129	473
19:00	67		57				124	
19:15	49		45				94	
19:30	55		45				100	
19:45	49	220	28	175			77	395
20:00	38		25				63	
20:15	43		25				68	
20:30	41		37				78	
20:45	33	155	22	109			55	264
21:00	23		20				43	
21:15	33		24				57	
21:30	29		29				58	
21:45	25	110	17	90			42	200
22:00	28		16				44	
22:15	24		9				33	
22:30	21		12				33	
22:45	20	93	15	52			35	145
23:00	13		10				23	
23:15	12		8				20	
23:30	12		4				16	
23:45	7	44	9	31			16	75
TOTALS		2258		2115				4373
SPLIT %		51.6%		48.4%				64.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,025	3,797	0	0	6,822

	NB	SB	EB	WB	TOTAL
AM Peak Hour	07:15	07:15			07:15
AM Pk Volume	227	448			675
Pk Hr Factor	0.684	0.818			0.767
7 - 9 Volume	328	754	0	0	1082
7 - 9 Peak Hour	07:15	07:15			07:15
7 - 9 Pk Volume	227	448	0	0	675
Pk Hr Factor	0.684	0.818	0.000	0.000	0.767

	NB	SB	EB	WB	TOTAL
PM Peak Hour	17:15	14:45			15:00
PM Pk Volume	288	311			566
Pk Hr Factor	0.923	0.793			0.873
4 - 6 Volume	531	499	0	0	1030
4 - 6 Peak Hour	17:00	16:45			17:00
4 - 6 Pk Volume	285	258	0	0	540
Pk Hr Factor	0.913	0.963	0.000	0.000	0.931

APPENDIX B
LOS Operations Worksheets – Existing Conditions

LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Mt. Gleason Avenue / Hillrose Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.577
Loss Time (sec):	0	Average Delay (sec/veh):	13.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Mt. Gleason Avenue						Hillrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	13	169	37	45	267	37	21	153	29	66	163	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	169	37	45	267	37	21	153	29	66	163	63
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	169	37	45	267	37	21	153	29	66	163	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	169	37	45	267	37	21	153	29	66	163	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	169	37	45	267	37	21	153	29	66	163	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	169	37	45	267	37	21	153	29	66	163	63
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.77	0.17	0.13	0.76	0.11	0.10	0.76	0.14	0.23	0.56	0.21
Final Sat.:	34	437	96	78	463	64	57	415	79	132	326	126
Capacity Analysis Module:												
Vol/Sat:	0.39	0.39	0.39	0.58	0.58	0.58	0.37	0.37	0.37	0.50	0.50	0.50
Crit Moves:			****	****			****				****	
Delay/Veh:	12.0	12.0	12.0	15.2	15.2	15.2	11.9	11.9	11.9	13.7	13.7	13.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.0	12.0	12.0	15.2	15.2	15.2	11.9	11.9	11.9	13.7	13.7	13.7
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B
ApproachDel:		12.0			15.2			11.9			13.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.0			15.2			11.9			13.7	
LOS by Appr:		B			C			B			B	
AllWayAvgQ:	0.5	0.5	0.5	1.1	1.1	1.1	0.5	0.5	0.5	0.8	0.8	0.8

LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to KOA CORP, MONTEREY PK

```
LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour
------------------------------------------------------------------------------------------
Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)
******************************************************************************************
Intersection #2 Tujunga Canyon Blvd. / Hillrose Street (North)
******************************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):        0.458
Loss Time (sec):        0              Average Delay (sec/veh):       10.5
Optimal Cycle:          0              Level Of Service:                 B
******************************************************************************************
Street Name:     Tujunga Canyon Boulevard            Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  1  0  0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     125  224    0      2  263   25     11    1  125      0    0    1
Growth Adj:  1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
Initial Bse:  125  224    0      2  263   25     11    1  125      0    0    1
Added Vol:      0    0    0      0    0    0      0    0    0      0    0    0
PasserByVol:    0    0    0      0    0    0      0    0    0      0    0    0
Initial Fut:  125  224    0      2  263   25     11    1  125      0    0    1
User Adj:    1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
PHF Volume:   125  224    0      2  263   25     11    1  125      0    0    1
Reduct Vol:     0    0    0      0    0    0      0    0    0      0    0    0
Reduced Vol:  125  224    0      2  263   25     11    1  125      0    0    1
PCE Adj:     1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
FinalVolume:  125  224    0      2  263   25     11    1  125      0    0    1
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
Lanes:       0.36 0.64 0.00   0.01 0.91 0.08   0.08 0.01 0.91   0.00 0.00 1.00
Final Sat.:   273  489    0      5  696   66     55    5  629      0    0  634
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.46 0.46 xxxx   0.38 0.38 0.38   0.20 0.20 0.20   xxxx xxxx 0.00
Crit Moves:       ****             ****             ****                  ****
Delay/Veh:   11.3 11.3  0.0   10.2 10.2 10.2    8.8  8.8  8.8    0.0  0.0  7.9
Delay Adj:   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
AdjDel/Veh:  11.3 11.3  0.0   10.2 10.2 10.2    8.8  8.8  8.8    0.0  0.0  7.9
LOS by Move:    B    B    *      B    B    B      A    A    A      *    *    A
ApproachDel:      11.3             10.2              8.8              7.9
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       11.3             10.2              8.8              7.9
LOS by Appr:         B                B                A                A
AllWayAvgQ:   0.8  0.8  0.8    0.6  0.6  0.6    0.2  0.2  0.2    0.0  0.0  0.0
******************************************************************************************
```



```
LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour
------------------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
******************************************************************************************
```

```
-------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                             Existing Conditions
                                AM Peak Hour
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
*******************************************************************************
Intersection #3 Tujunga Canyon Blvd. / Hillrose Street (South)
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):        0.493
Loss Time (sec):       0              Average Delay (sec/veh):       10.5
Optimal Cycle:         0              Level Of Service:                 B
*******************************************************************************
Street Name:     Tujunga Canyon Boulevard            Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       0  0  0  1  0    0  1  0  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0   232     1    83   305     0     0     0     0     8     0   118
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0   232     1    83   305     0     0     0     0     8     0   118
Added Vol:     0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   0   232     1    83   305     0     0     0     0     8     0   118
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0   232     1    83   305     0     0     0     0     8     0   118
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   0   232     1    83   305     0     0     0     0     8     0   118
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0   232     1    83   305     0     0     0     0     8     0   118
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.99  0.01  0.21 0.79  0.00  0.00 0.00  0.00  0.06 0.00  0.94
Final Sat.:    0   756     3   168   618     0     0     0     0    45     0   659
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx 0.31  0.31  0.49 0.49  xxxx  xxxx xxxx  xxxx  0.18 xxxx  0.18
Crit Moves:       ****              ****                          ****
Delay/Veh:    0.0  9.6   9.6  11.6 11.6   0.0   0.0  0.0   0.0   8.6  0.0   8.6
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  9.6   9.6  11.6 11.6   0.0   0.0  0.0   0.0   8.6  0.0   8.6
LOS by Move:   *    A     A     B    B     *     *    *     *     A    *     A
ApproachDel:       9.6              11.6             xxxxxx              8.6
Delay Adj:        1.00              1.00              xxxxx             1.00
ApprAdjDel:        9.6              11.6             xxxxxx              8.6
LOS by Appr:        A                 B                 *                 A
AllWayAvgQ:   0.4  0.4   0.4   0.9  0.9   0.9   0.0  0.0   0.0   0.2  0.2   0.2
*******************************************************************************
```



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-------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                             Existing Conditions
                                AM Peak Hour
-------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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---------------------------------------------------------------------------------
                 LADWP Redmont Pumping Station and Tank
                          Existing Conditions
                             AM Peak Hour
---------------------------------------------------------------------------------

                   Level Of Service Computation Report
        2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #4 Jardine Avenue / Foothill Boulevard
*********************************************************************************
Average Delay (sec/veh):      0.2      Worst Case Level Of Service: F[ 67.9]
*********************************************************************************
Street Name:           Jardine Avenue                  Foothill Boulevard
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  2  0  1    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        6    0     2     0    0     0     0 1317     7     6 1393     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     6    0     2     0    0     0     0 1317     7     6 1393     0
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     6    0     2     0    0     0     0 1317     7     6 1393     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      6    0     2     0    0     0     0 1317     7     6 1393     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     6    0     2     0    0     0     0 1317     7     6 1393     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 2026 2722   659  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1324 xxxx xxxxx
Potent Cap.:   51   21   411  xxxx xxxx xxxxx  xxxx xxxx xxxxx   528 xxxx xxxxx
Move Cap.:     51   21   411  xxxx xxxx xxxxx  xxxx xxxx xxxxx   528 xxxx xxxxx
Volume/Cap:  0.12 0.00  0.00  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  11.9 xxxx xxxxx
LOS by Move:     *    *     *     *    *     *     *    *     *     B    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx   65 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 67.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    F     *     *    *     *     *    *     *     *    *     *
ApproachDel:        67.9           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:          F                *                *                *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
```



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---------------------------------------------------------------------------------
                 LADWP Redmont Pumping Station and Tank
                          Existing Conditions
                             AM Peak Hour
---------------------------------------------------------------------------------

                   Level Of Service Computation Report
        Circular 212 Planning Method (Future Volume Alternative)
*********************************************************************************
Intersection #5 Mt. Gleason Avenue / Foothill Boulevard
*********************************************************************************
Cycle (sec):           100               Critical Vol./Cap.(X):         0.578
Loss Time (sec):         0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:          44               Level Of Service:                  A
*********************************************************************************
Street Name:           Mt. Gleason Avenue               Foothill Boulevard
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:      0    0     0     0    0     0     0    0     0     0    0     0
Y+R:           4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        0  0  0  1  0    0  0  1! 0  0    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  109    11   191   38     4   134 1116    25     6  914    92
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  109    11   191   38     4   134 1116    25     6  914    92
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0  109    11   191   38     4   134 1116    25     6  914    92
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      0  109    11   191   38     4   134 1116    25     6  914    92
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:     0  109    11   191   38     4   134 1116    25     6  914    92
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:     0  109    11   191   38     4   134 1116    25     6  914    92
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.91  0.09  0.82 0.16  0.02  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:     0 1294   131  1168  232    24  1425 2850  1425  1425 2850  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.08  0.08  0.16 0.16  0.16  0.09 0.39  0.02  0.00 0.32  0.06
Crit Volume:    0                     233          134                  457
Crit Moves:  ****                    ****         ****                 ****
*********************************************************************************
```

LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 Tujunga Canyon Boulevard / Summitrose Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.485
Loss Time (sec):	0	Average Delay (sec/veh):	11.7
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard						Summitrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	76	191	6	15	286	18	21	63	76	16	149	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	76	191	6	15	286	18	21	63	76	16	149	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	76	191	6	15	286	18	21	63	76	16	149	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	76	191	6	15	286	18	21	63	76	16	149	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	76	191	6	15	286	18	21	63	76	16	149	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	76	191	6	15	286	18	21	63	76	16	149	20
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.28	0.70	0.02	0.05	0.90	0.05	0.13	0.39	0.48	0.09	0.80	0.11
Final Sat.:	178	446	14	31	590	37	78	234	282	51	471	63
Capacity Analysis Module:												
Vol/Sat:	0.43	0.43	0.43	0.48	0.48	0.48	0.27	0.27	0.27	0.32	0.32	0.32
Crit Moves:		****			****		****				****	
Delay/Veh:	11.9	11.9	11.9	12.6	12.6	12.6	10.2	10.2	10.2	10.9	10.9	10.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.9	11.9	11.9	12.6	12.6	12.6	10.2	10.2	10.2	10.9	10.9	10.9
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
ApproachDel:		11.9			12.6			10.2			10.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		11.9			12.6			10.2			10.9	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.6	0.6	0.6	0.8	0.8	0.8	0.3	0.3	0.3	0.4	0.4	0.4

LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour

Note: Queue reported is the number of cars per lane.

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--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing Conditions
                                 AM Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Redmont Avenue / Summitrose Street
********************************************************************************
Average Delay (sec/veh):      0.8      Worst Case Level Of Service: A[  9.2]
********************************************************************************
Street Name:            Redmont Avenue                 Summitrose Street
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0   0  0  1! 0  0   0  1  0  0  0   0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0    0     1    0   18     7   74    0     0  167    2
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    0    0    0     1    0   18     7   74    0     0  167    2
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:    0    0    0     1    0   18     7   74    0     0  167    2
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:     0    0    0     1    0   18     7   74    0     0  167    2
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
FinalVolume:    0    0    0     1    0   18     7   74    0     0  167    2
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   256  256   168   169 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   737  651   881  1421 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   734  648   881  1421 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.00 0.00  0.02  0.00 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *    *     *    *    *     A    *    *     *    *    *
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  872 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.2 xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *    *     *    A    *     A    *    *     *    *    *
ApproachDel:     xxxxxx             9.2            xxxxxx           xxxxxx
ApproachLOS:        *                A                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```



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--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing Conditions
                                 AM Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Tujunga Canyon Boulevard / Apperson Street
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.689
Loss Time (sec):        0                Average Delay (sec/veh):        16.1
Optimal Cycle:          0                Level Of Service:                  C
********************************************************************************
Street Name:     Tujunga Canyon Boulevard            Apperson Street
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      64  184    8    57  299   41    12  105  126    19  202   73
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:   64  184    8    57  299   41    12  105  126    19  202   73
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   64  184    8    57  299   41    12  105  126    19  202   73
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:    64  184    8    57  299   41    12  105  126    19  202   73
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   64  184    8    57  299   41    12  105  126    19  202   73
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:   64  184    8    57  299   41    12  105  126    19  202   73
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.25 0.72 0.03  0.14 0.76 0.10  0.05 0.43 0.52  0.06 0.69 0.25
Final Sat.:   131  377   16    83  434   60    26  228  274    35  370  134
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.49 0.49 0.49  0.69 0.69 0.69  0.46 0.46 0.46  0.55 0.55 0.55
Crit Moves:       ****            ****                 ****       ****
Delay/Veh:   14.3 14.3 14.3  19.7 19.7 19.7  13.3 13.3 13.3  15.2 15.2 15.2
Delay Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:  14.3 14.3 14.3  19.7 19.7 19.7  13.3 13.3 13.3  15.2 15.2 15.2
LOS by Move:    B    B    B     C    C    C     B    B    B     C    C    C
ApproachDel:      14.3             19.7             13.3             15.2
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       14.3             19.7             13.3             15.2
LOS by Appr:        B                C                B                C
AllWayAvgQ:   0.7  0.7  0.7   1.7  1.7  1.7   0.6  0.6  0.6   0.9  0.9  0.9
********************************************************************************
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LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #9 Tujunga Canyon Boulevard / Valmont Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.661
Loss Time (sec):	0	Average Delay (sec/veh):	13.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard						Valmont Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	30	170	7	31	420	14	5	56	72	6	97	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	170	7	31	420	14	5	56	72	6	97	56
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	30	170	7	31	420	14	5	56	72	6	97	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	170	7	31	420	14	5	56	72	6	97	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	170	7	31	420	14	5	56	72	6	97	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	30	170	7	31	420	14	5	56	72	6	97	56
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.14	0.83	0.03	0.07	0.90	0.03	0.04	0.42	0.54	0.04	0.61	0.35
Final Sat.:	92	522	21	47	636	21	22	245	315	22	355	205
Capacity Analysis Module:												
Vol/Sat:	0.33	0.33	0.33	0.66	0.66	0.66	0.23	0.23	0.23	0.27	0.27	0.27
Crit Moves:	****			****				****		****		
Delay/Veh:	10.7	10.7	10.7	16.5	16.5	16.5	9.9	9.9	9.9	10.4	10.4	10.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.7	10.7	10.7	16.5	16.5	16.5	9.9	9.9	9.9	10.4	10.4	10.4
LOS by Move:	B	B	B	C	C	C	A	A	A	B	B	B
ApproachDel:		10.7			16.5			9.9			10.4	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.7			16.5			9.9			10.4	
LOS by Appr:		B			C			A			B	
AllWayAvgQ:	0.4	0.4	0.4	1.7	1.7	1.7	0.2	0.2	0.2	0.3	0.3	0.3

LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 Tujunga Canyon Boulevard / Foothill Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.800
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	93	Level Of Service:	D

Street Name:	Tujunga Canyon Boulevard						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 1	0	1 0	1 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	254	102	32	306	367	20	9	928	584	50	367	94
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	254	102	32	306	367	20	9	928	584	50	367	94
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	254	102	32	306	367	20	9	928	584	50	367	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	254	102	32	306	367	20	9	928	584	50	367	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	254	102	32	306	367	20	9	928	584	50	367	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	279	102	32	306	367	20	9	928	584	50	367	94
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.76	0.24	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2850	1085	340	1425	1425	1425	1425	2850	1425	1425	2850	1425
Capacity Analysis Module:												
Vol/Sat:	0.10	0.09	0.09	0.21	0.26	0.01	0.01	0.33	0.41	0.04	0.13	0.07
Crit Volume:	140				367				584	50		
Crit Moves:	****				****				****	****		

LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Mt. Gleason Avenue / Hillrose Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.373
Loss Time (sec):	0	Average Delay (sec/veh):	9.6
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Mt. Gleason Avenue						Hillrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	19	226	30	13	148	13	29	93	27	16	65	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	226	30	13	148	13	29	93	27	16	65	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	226	30	13	148	13	29	93	27	16	65	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19	226	30	13	148	13	29	93	27	16	65	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	226	30	13	148	13	29	93	27	16	65	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	19	226	30	13	148	13	29	93	27	16	65	21
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.07	0.82	0.11	0.07	0.86	0.07	0.19	0.63	0.18	0.16	0.64	0.20
Final Sat.:	51	605	80	53	602	53	130	416	121	103	417	135
Capacity Analysis Module:												
Vol/Sat:	0.37	0.37	0.37	0.25	0.25	0.25	0.22	0.22	0.22	0.16	0.16	0.16
Crit Moves:		****			****				****		****	
Delay/Veh:	10.3	10.3	10.3	9.3	9.3	9.3	9.3	9.3	9.3	8.9	8.9	8.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.3	10.3	10.3	9.3	9.3	9.3	9.3	9.3	9.3	8.9	8.9	8.9
LOS by Move:	B	B	B	A	A	A	A	A	A	A	A	A
ApproachDel:		10.3			9.3			9.3			8.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.3			9.3			9.3			8.9	
LOS by Appr:		B			A			A			A	
AllWayAvgQ:	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2

LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

Note: Queue reported is the number of cars per lane.

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                   LADWP Redmont Pumping Station and Tank
                            Existing Conditions
                               PM Peak Hour
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                     Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Tujunga Canyon Blvd. / Hillrose Street (North)
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):        0.272
Loss Time (sec):       0               Average Delay (sec/veh):        8.5
Optimal Cycle:         0               Level Of Service:                 A
********************************************************************************
Street Name:     Tujunga Canyon Boulevard             Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  1  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      82  137    2     1  160   12    13    0   80     1    1    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:   82  137    2     1  160   12    13    0   80     1    1    0
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   82  137    2     1  160   12    13    0   80     1    1    0
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:    82  137    2     1  160   12    13    0   80     1    1    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   82  137    2     1  160   12    13    0   80     1    1    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:   82  137    2     1  160   12    13    0   80     1    1    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.37 0.62 0.01  0.01 0.92 0.07  0.14 0.00 0.86  0.50 0.50 0.00
Final Sat.:   301  503    7     5  757   57   110    0  677   336  336    0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.27 0.27 0.27  0.21 0.21 0.21  0.12 xxxx 0.12  0.00 0.00 xxxx
Crit Moves:       ****            ****       ****                  ****
Delay/Veh:    8.9  8.9  8.9   8.4  8.4  8.4   7.8  0.0  7.8   8.0  8.0  0.0
Delay Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:   8.9  8.9  8.9   8.4  8.4  8.4   7.8  0.0  7.8   8.0  8.0  0.0
LOS by Move:    A    A    A     A    A    A     A    *    A     A    A    *
ApproachDel:       8.9             8.4              7.8              8.0
Delay Adj:        1.00            1.00             1.00             1.00
ApprAdjDel:        8.9             8.4              7.8              8.0
LOS by Appr:         A               A                A                A
AllWayAvgQ:   0.4  0.4  0.4   0.3  0.3  0.3   0.1  0.1  0.1   0.0  0.0  0.0
********************************************************************************
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                   LADWP Redmont Pumping Station and Tank
                            Existing Conditions
                               PM Peak Hour
--------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
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                 LADWP Redmont Pumping Station and Tank
                          Existing Conditions
                             PM Peak Hour
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                    Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Tujunga Canyon Blvd. / Hillrose Street (South)
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.290
Loss Time (sec):      0              Average Delay (sec/veh):        8.6
Optimal Cycle:        0              Level Of Service:                 A
********************************************************************************
Street Name:     Tujunga Canyon Boulevard             Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0    0  1  0  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  174     3    59  183     0     0    0     0    13    0    47
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  174     3    59  183     0     0    0     0    13    0    47
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  174     3    59  183     0     0    0     0    13    0    47
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  174     3    59  183     0     0    0     0    13    0    47
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  174     3    59  183     0     0    0     0    13    0    47
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  174     3    59  183     0     0    0     0    13    0    47
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.98  0.02  0.24 0.76  0.00  0.00 0.00  0.00  0.22 0.00  0.78
Final Sat.:     0  816    14   204  631     0     0    0     0   167    0   604
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx 0.21  0.21  0.29 0.29  xxxx  xxxx xxxx  xxxx  0.08 xxxx  0.08
Crit Moves:       ****             ****                                     ****
Delay/Veh:    0.0  8.4   8.4   8.9  8.9   0.0   0.0  0.0   0.0   7.7  0.0   7.7
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  8.4   8.4   8.9  8.9   0.0   0.0  0.0   0.0   7.7  0.0   7.7
LOS by Move:    *    A     A     A    A     *     *    *     *     A    *     A
ApproachDel:       8.4              8.9            xxxxxx              7.7
Delay Adj:        1.00             1.00             xxxxx             1.00
ApprAdjDel:        8.4              8.9            xxxxxx              7.7
LOS by Appr:         A                A                *                 A
AllWayAvgQ:   0.3  0.3   0.3   0.4  0.4   0.4   0.0  0.0   0.0   0.1  0.1   0.1
********************************************************************************
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LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

Note: Queue reported is the number of cars per lane.

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---------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                           Existing Conditions
                              PM Peak Hour
---------------------------------------------------------------------------------

                    Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #4 Jardine Avenue / Foothill Boulevard
*********************************************************************************
Average Delay (sec/veh):      0.5      Worst Case Level Of Service: F[ 58.6]
*********************************************************************************
Street Name:             Jardine Avenue                 Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  2  0  1    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      12    0     8     0    0     0     0 1269    28    15 1300     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   12    0     8     0    0     0     0 1269    28    15 1300     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   12    0     8     0    0     0     0 1269    28    15 1300     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    12    0     8     0    0     0     0 1269    28    15 1300     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   12    0     8     0    0     0     0 1269    28    15 1300     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1949 2599   635  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1297 xxxx xxxxx
Potent Cap.:   58   25   426  xxxx xxxx xxxxx  xxxx xxxx xxxxx   541 xxxx xxxxx
Move Cap.:     57   25   426  xxxx xxxx xxxxx  xxxx xxxx xxxxx   541 xxxx xxxxx
Volume/Cap:  0.21 0.00  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.03 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  11.8 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     B    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx   87 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.8 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 58.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    F     *     *    *     *     *    *     *     *    *     *
ApproachDel:      58.6            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        F                *                *                *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
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                  LADWP Redmont Pumping Station and Tank
                           Existing Conditions
                              PM Peak Hour
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                    Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
*********************************************************************************
Intersection #5 Mt. Gleason Avenue / Foothill Boulevard
*********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.551
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         41               Level Of Service:                  A
*********************************************************************************
Street Name:             Mt. Gleason Avenue             Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        0  0  0  1  0    0  0  1! 0  0    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0   72    21    99   26     3   167 1049    44    18  980   144
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0   72    21    99   26     3   167 1049    44    18  980   144
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0   72    21    99   26     3   167 1049    44    18  980   144
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0   72    21    99   26     3   167 1049    44    18  980   144
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0   72    21    99   26     3   167 1049    44    18  980   144
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0   72    21    99   26     3   167 1049    44    18  980   144
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.77  0.23  0.78 0.20  0.02  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:     0 1103   322  1102  289    33  1425 2850  1425  1425 2850  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.07  0.07  0.09 0.09  0.09  0.12 0.37  0.03  0.01 0.34  0.10
Crit Volume:    0                    128         167                   490
Crit Moves:  ****                   ****        ****                  ****
*********************************************************************************
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LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 Tujunga Canyon Boulevard / Summitrose Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.292
Loss Time (sec):	0	Average Delay (sec/veh):	9.4
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Tujunga Canyon Boulevard						Summitrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	41	150	15	15	166	9	19	83	97	11	76	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	150	15	15	166	9	19	83	97	11	76	9
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	150	15	15	166	9	19	83	97	11	76	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	41	150	15	15	166	9	19	83	97	11	76	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	150	15	15	166	9	19	83	97	11	76	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	41	150	15	15	166	9	19	83	97	11	76	9
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.20	0.73	0.07	0.08	0.87	0.05	0.09	0.42	0.49	0.11	0.80	0.09
Final Sat.:	140	514	51	56	614	33	69	299	350	75	519	61
Capacity Analysis Module:												
Vol/Sat:	0.29	0.29	0.29	0.27	0.27	0.27	0.28	0.28	0.28	0.15	0.15	0.15
Crit Moves:		****			****		****			****		
Delay/Veh:	9.7	9.7	9.7	9.5	9.5	9.5	9.3	9.3	9.3	8.9	8.9	8.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.7	9.7	9.7	9.5	9.5	9.5	9.3	9.3	9.3	8.9	8.9	8.9
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		9.7			9.5			9.3			8.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.7			9.5			9.3			8.9	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1

LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

Note: Queue reported is the number of cars per lane.

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                  LADWP Redmont Pumping Station and Tank
                           Existing Conditions
                              PM Peak Hour
--------------------------------------------------------------------------------

                    Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Redmont Avenue / Summitrose Street
********************************************************************************
Average Delay (sec/veh):      0.7      Worst Case Level Of Service: A[  9.1]
********************************************************************************
Street Name:          Redmont Avenue                  Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0     2    0     7    15  132     0     0   97     8
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0    0     0     2    0     7    15  132     0     0   97     8
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0    0     0     2    0     7    15  132     0     0   97     8
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0    0     0     2    0     7    15  132     0     0   97     8
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   0    0     0     2    0     7    15  132     0     0   97     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   263  263   101   105 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   730  646   960  1499 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   725  639   960  1499 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.00 0.00  0.01  0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  895 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.0 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.1 xxxxx   7.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    A     *     A    *     *     *    *     *
ApproachDel:    xxxxxx              9.1            xxxxxx           xxxxxx
ApproachLOS:       *                 A                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```



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--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                           Existing Conditions
                              PM Peak Hour
--------------------------------------------------------------------------------

                    Level Of Service Computation Report
              2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Tujunga Canyon Boulevard / Apperson Street
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):         0.427
Loss Time (sec):      0               Average Delay (sec/veh):        10.9
Optimal Cycle:        0               Level Of Service:                  B
********************************************************************************
Street Name:     Tujunga Canyon Boulevard            Apperson Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     52  176    21    47  218    18    18  111    90     8   92    29
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  52  176    21    47  218    18    18  111    90     8   92    29
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  52  176    21    47  218    18    18  111    90     8   92    29
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   52  176    21    47  218    18    18  111    90     8   92    29
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  52  176    21    47  218    18    18  111    90     8   92    29
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  52  176    21    47  218    18    18  111    90     8   92    29
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.21 0.71  0.08  0.17 0.77  0.06  0.08 0.51  0.41  0.06 0.72  0.22
Final Sat.:   137  462    55   110  511    42    53  324   263    37  425   134
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.38 0.38  0.38  0.43 0.43  0.43  0.34 0.34  0.34  0.22 0.22  0.22
Crit Moves:  ****             ****             ****                  ****
Delay/Veh:   11.1 11.1  11.1  11.6 11.6  11.6  10.6 10.6  10.6   9.8  9.8   9.8
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  11.1 11.1  11.1  11.6 11.6  11.6  10.6 10.6  10.6   9.8  9.8   9.8
LOS by Move:    B    B     B     B    B     B     B    B     B     A    A     A
ApproachDel:      11.1             11.6             10.6              9.8
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       11.1             11.6             10.6              9.8
LOS by Appr:        B                B                B                A
AllWayAvgQ:   0.5  0.5   0.5   0.6  0.6   0.6   0.4  0.4   0.4   0.2  0.2   0.2
********************************************************************************
```

LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

```
                      Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Tujunga Canyon Boulevard / Valmont Street
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.473
Loss Time (sec):        0                Average Delay (sec/veh):        10.5
Optimal Cycle:          0                Level Of Service:                  B
********************************************************************************
Street Name:     Tujunga Canyon Boulevard              Valmont Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47  302     5   18  214    19   11   60    28    8   56    15
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   47  302     5   18  214    19   11   60    28    8   56    15
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   47  302     5   18  214    19   11   60    28    8   56    15
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    47  302     5   18  214    19   11   60    28    8   56    15
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   47  302     5   18  214    19   11   60    28    8   56    15
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   47  302     5   18  214    19   11   60    28    8   56    15
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.13 0.86  0.01 0.07 0.85  0.08 0.11 0.61  0.28 0.10 0.71  0.19
Final Sat.:    99  638    11   52  623    55   69  376   176   62  431   115
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.47 0.47  0.47 0.34 0.34  0.34 0.16 0.16  0.16 0.13 0.13  0.13
Crit Moves:       ****             ****             ****             ****
Delay/Veh:   11.6 11.6  11.6 10.1 10.1  10.1  9.1  9.1   9.1  9.0  9.0   9.0
Delay Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  11.6 11.6  11.6 10.1 10.1  10.1  9.1  9.1   9.1  9.0  9.0   9.0
LOS by Move:    B    B     B    B    B     B    A    A     A    A    A     A
ApproachDel:      11.6             10.1              9.1              9.0
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       11.6             10.1              9.1              9.0
LOS by Appr:         B                B                A                A
AllWayAvgQ:   0.8  0.8   0.8  0.5  0.5   0.5  0.2  0.2   0.2  0.1  0.1   0.1
********************************************************************************
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LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 Tujunga Canyon Boulevard / Foothill Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.718
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	66	Level Of Service:	C

Street Name:	Tujunga Canyon Boulevard						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 0 1 0			1 0 1 0 1			1 0 2 0 1			1 0 2 0 1		
Volume Module:												
Base Vol:	627	306	25	155	191	22	40	577	388	54	896	336
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	627	306	25	155	191	22	40	577	388	54	896	336
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	627	306	25	155	191	22	40	577	388	54	896	336
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	627	306	25	155	191	22	40	577	388	54	896	336
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	627	306	25	155	191	22	40	577	388	54	896	336
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	690	306	25	155	191	22	40	577	388	54	896	336
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.92	0.08	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2850	1317	108	1425	1425	1425	1425	2850	1425	1425	2850	1425
Capacity Analysis Module:												
Vol/Sat:	0.24	0.23	0.23	0.11	0.13	0.02	0.03	0.20	0.27	0.04	0.31	0.24
Crit Volume:	345				191		40				448	
Crit Moves:	****				****		****				****	

APPENDIX C
LOS Operations Worksheets – Existing plus-Project Conditions

```
-------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 AM Peak Hour
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mt. Gleason Avenue / Hillrose Street
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.581
Loss Time (sec):       0               Average Delay (sec/veh):        13.6
Optimal Cycle:         0               Level Of Service:                  B
********************************************************************************
Street Name:        Mt. Gleason Avenue                Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13  169   37   45  267   37   21  153   29   66  163   63
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:   13  169   37   45  267   37   21  153   29   66  163   63
Added Vol:      0    0    9    0    0    0    0    2    0    0    0    0
PasserByVol:    0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:   13  169   46   45  267   37   21  155   29   66  163   63
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    13  169   46   45  267   37   21  155   29   66  163   63
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   13  169   46   45  267   37   21  155   29   66  163   63
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:   13  169   46   45  267   37   21  155   29   66  163   63
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:       0.06 0.74 0.20 0.13 0.76 0.11 0.10 0.76 0.14 0.23 0.56 0.21
Final Sat.:    32  420  114   78  460   64   56  413   77  131  323  125
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.40 0.40 0.40 0.58 0.58 0.58 0.38 0.38 0.38 0.50 0.50 0.50
Crit Moves:  ****            ****                 ****            ****
Delay/Veh:   12.2 12.2 12.2 15.4 15.4 15.4 12.0 12.0 12.0 13.8 13.8 13.8
Delay Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:  12.2 12.2 12.2 15.4 15.4 15.4 12.0 12.0 12.0 13.8 13.8 13.8
LOS by Move:    B    B    B    C    C    C    B    B    B    B    B    B
ApproachDel:      12.2             15.4             12.0             13.8
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       12.2             15.4             12.0             13.8
LOS by Appr:         B                C                B                B
AllWayAvgQ:   0.5  0.5  0.5  1.1  1.1  1.1  0.5  0.5  0.5  0.8  0.8  0.8
********************************************************************************
```



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-------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 AM Peak Hour
-------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

LADWP Redmont Pumping Station and Tank
Existing + Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Tujunga Canyon Blvd. / Hillrose Street (North)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.475
Loss Time (sec):	0	Average Delay (sec/veh):	10.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard						Hillrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 0 0 1		
Volume Module:												
Base Vol:	125	224	0	2	263	25	11	1	125	0	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	224	0	2	263	25	11	1	125	0	0	1
Added Vol:	1	12	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	126	236	0	2	263	25	11	1	125	0	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	126	236	0	2	263	25	11	1	125	0	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	236	0	2	263	25	11	1	125	0	0	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	126	236	0	2	263	25	11	1	125	0	0	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.35	0.65	0.00	0.01	0.91	0.08	0.08	0.01	0.91	0.00	0.00	1.00
Final Sat.:	265	497	0	5	693	66	55	5	624	0	0	629
Capacity Analysis Module:												
Vol/Sat:	0.47	0.47	xxxx	0.38	0.38	0.38	0.20	0.20	0.20	xxxx	xxxx	0.00
Crit Moves:		****			****			****				****
Delay/Veh:	11.6	11.6	0.0	10.2	10.2	10.2	8.8	8.8	8.8	0.0	0.0	7.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.6	11.6	0.0	10.2	10.2	10.2	8.8	8.8	8.8	0.0	0.0	7.9
LOS by Move:	B	B	*	B	B	B	A	A	A	*	*	A
ApproachDel:		11.6			10.2			8.8			7.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		11.6			10.2			8.8			7.9	
LOS by Appr:		B			B			A			A	
AllWayAvgQ:	0.8	0.8	0.8	0.6	0.6	0.6	0.2	0.2	0.2	0.0	0.0	0.0

LADWP Redmont Pumping Station and Tank
Existing + Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

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LADWP Redmont Pumping Station and Tank
Existing + Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #3 Tujunga Canyon Blvd. / Hillrose Street (South)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.496
Loss Time (sec):	0	Average Delay (sec/veh):	10.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard		Hillrose Street	
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 0	0 0 1! 0 0

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	232	1	83	305	0	0	0	0	8	0	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	232	1	83	305	0	0	0	0	8	0	118
Added Vol:	0	10	0	0	0	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	242	1	83	305	0	0	0	0	8	0	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	242	1	83	305	0	0	0	0	8	0	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	242	1	83	305	0	0	0	0	8	0	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	242	1	83	305	0	0	0	0	8	0	120
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.99	0.01	0.21	0.79	0.00	0.00	0.00	0.00	0.06	0.00	0.94
Final Sat.:	0	754	3	167	615	0	0	0	0	44	0	657
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.32	0.32	0.50	0.50	xxxx	xxxx	xxxx	xxxx	0.18	xxxx	0.18
Crit Moves:		****			****							****
Delay/Veh:	0.0	9.7	9.7	11.7	11.7	0.0	0.0	0.0	0.0	8.6	0.0	8.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.7	9.7	11.7	11.7	0.0	0.0	0.0	0.0	8.6	0.0	8.6
LOS by Move:	*	A	A	B	B	*	*	*	*	A	*	A
ApproachDel:		9.7			11.7			xxxxxx			8.6	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		9.7			11.7			xxxxxx			8.6	
LOS by Appr:		A			B			*			A	
AllWayAvgQ:	0.4	0.4	0.4	0.9	0.9	0.9	0.0	0.0	0.0	0.2	0.2	0.2

LADWP Redmont Pumping Station and Tank
Existing + Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to KOA CORP, MONTEREY PK

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---------------------------------------------------------------------------------
                   LADWP Redmont Pumping Station and Tank
                             Existing + Project
                                AM Peak Hour
---------------------------------------------------------------------------------

                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #4 Jardine Avenue / Foothill Boulevard
*********************************************************************************
Average Delay (sec/veh):      0.2      Worst Case Level Of Service: F[ 69.3]
*********************************************************************************
Street Name:          Jardine Avenue                  Foothill Boulevard
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  1! 0  0   0  0  0  0  0   0  0  2  0  1   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      6    0    2     0    0    0     0 1317    7     6 1393    0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   6    0    2     0    0    0     0 1317    7     6 1393    0
Added Vol:     0    0    0     0    0    0     0   13    0     0    1    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   6    0    2     0    0    0     0 1330    7     6 1394    0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    6    0    2     0    0    0     0 1330    7     6 1394    0
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
FinalVolume:   6    0    2     0    0    0     0 1330    7     6 1394    0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 2039 2736   665  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1337 xxxx xxxxx
Potent Cap.:   50   21   407  xxxx xxxx xxxxx  xxxx xxxx xxxxx   522 xxxx xxxxx
Move Cap.:     50   20   407  xxxx xxxx xxxxx  xxxx xxxx xxxxx   522 xxxx xxxxx
Volume/Cap:  0.12 0.00  0.00  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  12.0 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx   64 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 69.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    F     *     *    *     *     *    *     *     *    *     *
ApproachDel:       69.3            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         F                *                *                *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
```



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---------------------------------------------------------------------------------
                   LADWP Redmont Pumping Station and Tank
                             Existing + Project
                                AM Peak Hour
---------------------------------------------------------------------------------

                     Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
*********************************************************************************
Intersection #5 Mt. Gleason Avenue / Foothill Boulevard
*********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.578
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         44                 Level Of Service:                  A
*********************************************************************************
Street Name:         Mt. Gleason Avenue               Foothill Boulevard
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:       0  0  0  1  0   0  0  1! 0  0   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  109   11   191   38    4   134 1116   25     6  914   92
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0  109   11   191   38    4   134 1116   25     6  914   92
Added Vol:     0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   0  109   11   191   38    4   134 1116   25     6  914   92
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0  109   11   191   38    4   134 1116   25     6  914   92
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   0  109   11   191   38    4   134 1116   25     6  914   92
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  109   11   191   38    4   134 1116   25     6  914   92
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.91  0.09  0.82 0.16  0.02  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:     0 1294   131  1168  232    24  1425 2850  1425  1425 2850  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.08  0.08  0.16 0.16  0.16  0.09 0.39  0.02  0.00 0.32  0.06
Crit Volume:    0                     233        134                   457
Crit Moves:  ****                ****        ****                  ****
*********************************************************************************
```

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-------------------------------------------------------------------------------
                 LADWP Redmont Pumping Station and Tank
                           Existing + Project
                              AM Peak Hour
-------------------------------------------------------------------------------
                   Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
*******************************************************************************
Intersection #6 Tujunga Canyon Boulevard / Summitrose Street
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.497
Loss Time (sec):       0              Average Delay (sec/veh):        11.9
Optimal Cycle:         0              Level Of Service:                  B
*******************************************************************************
Street Name:     Tujunga Canyon Boulevard            Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      76  191     6    15  286    18    21   63    76    16  149    20
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   76  191     6    15  286    18    21   63    76    16  149    20
Added Vol:      0   11     0     0    4     1     4    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   76  202     6    15  290    19    25   63    76    16  149    20
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    76  202     6    15  290    19    25   63    76    16  149    20
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   76  202     6    15  290    19    25   63    76    16  149    20
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   76  202     6    15  290    19    25   63    76    16  149    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.27 0.71  0.02  0.05 0.89  0.06  0.15 0.38  0.47  0.09 0.80  0.11
Final Sat.:   170  452    13    30  584    38    89  225   272    50  465    62
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.45 0.45  0.45  0.50 0.50  0.50  0.28 0.28  0.28  0.32 0.32  0.32
Crit Moves:  ****                  ****              ****              ****
Delay/Veh:   12.3 12.3  12.3  12.9 12.9  12.9  10.4 10.4  10.4  11.0 11.0  11.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  12.3 12.3  12.3  12.9 12.9  12.9  10.4 10.4  10.4  11.0 11.0  11.0
LOS by Move:    B    B     B     B    B     B     B    B     B     B    B     B
ApproachDel:      12.3              12.9              10.4              11.0
Delay Adj:        1.00              1.00              1.00              1.00
ApprAdjDel:       12.3              12.9              10.4              11.0
LOS by Appr:         B                 B                 B                 B
AllWayAvgQ:    0.7  0.7   0.7   0.8  0.8   0.8   0.3  0.3   0.3   0.4  0.4   0.4
*******************************************************************************
```



```
-------------------------------------------------------------------------------
                 LADWP Redmont Pumping Station and Tank
                           Existing + Project
                              AM Peak Hour
-------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

```
-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                           Existing + Project
                              AM Peak Hour
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 Redmont Avenue / Summitrose Street
*******************************************************************************
Average Delay (sec/veh):      0.8      Worst Case Level Of Service: A[  9.2]
*******************************************************************************
Street Name:          Redmont Avenue                 Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0   0  0  1! 0  0   0  1  0  0  0   0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0    0    1    0   18    7   74    0    0  167    2
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0    0    0    1    0   18    7   74    0    0  167    2
Added Vol:      0    0    0    0    0    0    0    0    0    0    0    2
PasserByVol:    0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:    0    0    0    1    0   18    7   74    0    0  167    4
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0    0    0    1    0   18    7   74    0    0  167    4
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:    0    0    0    1    0   18    7   74    0    0  167    4
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   257  257   169   171 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   736  651   880  1418 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   733  647   880  1418 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.00 0.00  0.02  0.00 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *    *     *    *     *     A    *     *     *    *     *
Movement:    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  871 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.2 xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *    *     *    A     *     A    *     *     *    *     *
ApproachDel:    xxxxxx              9.2            xxxxxx           xxxxxx
ApproachLOS:         *               A                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```



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-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                           Existing + Project
                              AM Peak Hour
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 Tujunga Canyon Boulevard / Apperson Street
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.701
Loss Time (sec):        0              Average Delay (sec/veh):        16.5
Optimal Cycle:          0              Level Of Service:                  C
*******************************************************************************
Street Name:     Tujunga Canyon Boulevard            Apperson Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:       0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      64  184    8   57  299   41   12  105  126   19  202   73
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:   64  184    8   57  299   41   12  105  126   19  202   73
Added Vol:      0   10    0    0    4    0    1    0    0    0    0    0
PasserByVol:    0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:   64  194    8   57  303   41   13  105  126   19  202   73
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    64  194    8   57  303   41   13  105  126   19  202   73
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   64  194    8   57  303   41   13  105  126   19  202   73
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:   64  194    8   57  303   41   13  105  126   19  202   73
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:       0.24 0.73 0.03 0.14 0.76 0.10 0.05 0.43 0.52 0.06 0.69 0.25
Final Sat.:   126  380   16   81  432   58   28  224  269   34  366  132
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.51 0.51 0.51 0.70 0.70 0.70 0.47 0.47 0.47 0.55 0.55 0.55
Crit Moves:       ****             ****             ****             ****
Delay/Veh:   14.8 14.8 14.8 20.3 20.3 20.3 13.6 13.6 13.6 15.5 15.5 15.5
Delay Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:  14.8 14.8 14.8 20.3 20.3 20.3 13.6 13.6 13.6 15.5 15.5 15.5
LOS by Move:    B    B    B    C    C    C    B    B    B    C    C    C
ApproachDel:      14.8             20.3             13.6             15.5
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       14.8             20.3             13.6             15.5
LOS by Appr:        B                C                B                C
AllWayAvgQ:   0.8  0.8  0.8  1.8  1.8  1.8  0.6  0.6  0.6  0.9  0.9  0.9
*******************************************************************************
```

LADWP Redmont Pumping Station and Tank
Existing + Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Existing + Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #9 Tujunga Canyon Boulevard / Valmont Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.669
Loss Time (sec):	0	Average Delay (sec/veh):	13.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard						Valmont Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	30	170	7	31	420	14	5	56	72	6	97	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	170	7	31	420	14	5	56	72	6	97	56
Added Vol:	0	10	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	30	180	7	31	424	14	5	56	72	6	97	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	180	7	31	424	14	5	56	72	6	97	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	180	7	31	424	14	5	56	72	6	97	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	30	180	7	31	424	14	5	56	72	6	97	56
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.14	0.83	0.03	0.07	0.90	0.03	0.04	0.42	0.54	0.04	0.61	0.35
Final Sat.:	88	526	20	46	634	21	22	243	312	22	352	203
Capacity Analysis Module:												
Vol/Sat:	0.34	0.34	0.34	0.67	0.67	0.67	0.23	0.23	0.23	0.28	0.28	0.28
Crit Moves:		****			****		****			****		
Delay/Veh:	10.9	10.9	10.9	16.9	16.9	16.9	10.0	10.0	10.0	10.4	10.4	10.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.9	10.9	10.9	16.9	16.9	16.9	10.0	10.0	10.0	10.4	10.4	10.4
LOS by Move:	B	B	B	C	C	C	A	A	A	B	B	B
ApproachDel:		10.9			16.9			10.0			10.4	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.9			16.9			10.0			10.4	
LOS by Appr:		B			C			A			B	
AllWayAvgQ:	0.4	0.4	0.4	1.7	1.7	1.7	0.2	0.2	0.2	0.3	0.3	0.3

```
--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 AM Peak Hour
--------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
```



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--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 AM Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Tujunga Canyon Boulevard / Foothill Boulevard
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.806
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        96               Level Of Service:                  D
********************************************************************************
Street Name:     Tujunga Canyon Boulevard            Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        2  0  0  1  0   1  0  1  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     254  102    32  306  367    20    9  928   584   50  367    94
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  254  102    32  306  367    20    9  928   584   50  367    94
Added Vol:      0   10     0    0    4     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  254  112    32  306  371    20    9  928   584   50  367    94
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   254  112    32  306  371    20    9  928   584   50  367    94
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  254  112    32  306  371    20    9  928   584   50  367    94
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  279  112    32  306  371    20    9  928   584   50  367    94
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425 1425 1425  1425 1425 1425  1425 1425 1425  1425
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 0.78  0.22 1.00 1.00  1.00 1.00 2.00  1.00 1.00 2.00  1.00
Final Sat.:  2850 1108   317 1425 1425  1425 1425 2850  1425 1425 2850  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.10  0.10 0.21 0.26  0.01 0.01 0.33  0.41 0.04 0.13  0.07
Crit Volume:       144              371                     584   50
Crit Moves:       ****             ****                    ****  ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                     LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 PM Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mt. Gleason Avenue / Hillrose Street
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.376
Loss Time (sec):       0              Average Delay (sec/veh):         9.7
Optimal Cycle:         0              Level Of Service:                  A
********************************************************************************
Street Name:        Mt. Gleason Avenue                 Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     19  226    30    13  148    13    29   93    27    16   65    21
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  19  226    30    13  148    13    29   93    27    16   65    21
Added Vol:     0    0     0     0    0     0     0    0     0     9    2     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  19  226    30    13  148    13    29   93    27    25   67    21
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   19  226    30    13  148    13    29   93    27    25   67    21
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  19  226    30    13  148    13    29   93    27    25   67    21
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  19  226    30    13  148    13    29   93    27    25   67    21
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.07 0.82  0.11  0.07 0.86  0.07  0.19 0.63  0.18  0.22 0.59  0.19
Final Sat.:   51  601    80    52  597    52   129  414   120   144  386   121
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.38 0.38  0.38  0.25 0.25  0.25  0.22 0.22  0.22  0.17 0.17  0.17
Crit Moves:       ****             ****             ****             ****
Delay/Veh:   10.4 10.4  10.4   9.4  9.4   9.4   9.4  9.4   9.4   9.1  9.1   9.1
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  10.4 10.4  10.4   9.4  9.4   9.4   9.4  9.4   9.4   9.1  9.1   9.1
LOS by Move:    B    B     B     A    A     A     A    A     A     A    A     A
ApproachDel:      10.4              9.4              9.4              9.1
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       10.4              9.4              9.4              9.1
LOS by Appr:         B                A                A                A
AllWayAvgQ:    0.5  0.5   0.5   0.3  0.3   0.3   0.2  0.2   0.2   0.2  0.2   0.2
********************************************************************************
```



```
--------------------------------------------------------------------------------
                     LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 PM Peak Hour
--------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
----------------------------------------------------------------------------
                 LADWP Redmont Pumping Station and Tank
                          Existing + Project
                             PM Peak Hour
----------------------------------------------------------------------------
                   Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
****************************************************************************
Intersection #2 Tujunga Canyon Blvd. / Hillrose Street (North)
****************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.274
Loss Time (sec):      0              Average Delay (sec/veh):        8.6
Optimal Cycle:        0              Level Of Service:                 A
****************************************************************************
Street Name:     Tujunga Canyon Boulevard             Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:       0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  1  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      82  137    2     1  160   12    13    0   80     1    1    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:   82  137    2     1  160   12    13    0   80     1    1    0
Added Vol:      0    0    0     0    9    0     0    0    4     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   82  137    2     1  169   12    13    0   84     1    1    0
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:    82  137    2     1  169   12    13    0   84     1    1    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   82  137    2     1  169   12    13    0   84     1    1    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:   82  137    2     1  169   12    13    0   84     1    1    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.37 0.62 0.01  0.01 0.93 0.06  0.13 0.00 0.87  0.50 0.50 0.00
Final Sat.:   299  500    7     4  758   54   105    0  678   333  333    0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.27 0.27 0.27  0.22 0.22 0.22  0.12 xxxx 0.12  0.00 0.00 xxxx
Crit Moves:       ****            ****       ****                  ****
Delay/Veh:    9.0  9.0  9.0   8.5  8.5  8.5   7.8  0.0  7.8   8.0  8.0  0.0
Delay Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:   9.0  9.0  9.0   8.5  8.5  8.5   7.8  0.0  7.8   8.0  8.0  0.0
LOS by Move:    A    A    A     A    A    A     A    *    A     A    A    *
ApproachDel:       9.0              8.5              7.8              8.0
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:        9.0              8.5              7.8              8.0
LOS by Appr:         A                A                A                A
AllWayAvgQ:   0.4  0.4  0.4   0.3  0.3  0.3   0.1  0.1  0.1   0.0  0.0  0.0
****************************************************************************
```



```
----------------------------------------------------------------------------
                 LADWP Redmont Pumping Station and Tank
                          Existing + Project
                             PM Peak Hour
----------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
****************************************************************************
```

LADWP Redmont Pumping Station and Tank
Existing + Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #3 Tujunga Canyon Blvd. / Hillrose Street (South)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.304
Loss Time (sec):	0	Average Delay (sec/veh):	8.7
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Tujunga Canyon Boulevard						Hillrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	1 0	0 1	0	0 0	0 0	0	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	0	174	3	59	183	0	0	0	0	13	0	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	174	3	59	183	0	0	0	0	13	0	47
Added Vol:	0	0	0	2	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	174	3	61	193	0	0	0	0	13	0	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	174	3	61	193	0	0	0	0	13	0	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	174	3	61	193	0	0	0	0	13	0	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	174	3	61	193	0	0	0	0	13	0	47
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.98	0.02	0.24	0.76	0.00	0.00	0.00	0.00	0.22	0.00	0.78
Final Sat.:	0	814	14	201	634	0	0	0	0	166	0	599
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.21	0.21	0.30	0.30	xxxx	xxxx	xxxx	xxxx	0.08	xxxx	0.08
Crit Moves:			****		****					****		
Delay/Veh:	0.0	8.4	8.4	9.1	9.1	0.0	0.0	0.0	0.0	7.7	0.0	7.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.4	8.4	9.1	9.1	0.0	0.0	0.0	0.0	7.7	0.0	7.7
LOS by Move:	*	A	A	A	A	*	*	*	*	A	*	A
ApproachDel:		8.4			9.1			xxxxxx			7.7	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		8.4			9.1			xxxxxx			7.7	
LOS by Appr:		A			A			*			A	
AllWayAvgQ:	0.3	0.3	0.3	0.4	0.4	0.4	0.0	0.0	0.0	0.1	0.1	0.1

LADWP Redmont Pumping Station and Tank
Existing + Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

```
--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 PM Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Jardine Avenue / Foothill Boulevard
********************************************************************************
Average Delay (sec/veh):      0.5      Worst Case Level Of Service: F[ 59.4]
********************************************************************************
Street Name:          Jardine Avenue                   Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0   0  0  0  0  0   0  0  2  0  1   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      12    0     8     0    0     0     0 1269    28    15 1300     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   12    0     8     0    0     0     0 1269    28    15 1300     0
Added Vol:      0    0     0     0    0     0     0    1     0     0   13     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   12    0     8     0    0     0     0 1270    28    15 1313     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    12    0     8     0    0     0     0 1270    28    15 1313     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   12    0     8     0    0     0     0 1270    28    15 1313     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1957 2613   635  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1298 xxxx xxxxx
Potent Cap.:   57   25   426  xxxx xxxx xxxxx  xxxx xxxx xxxxx   540 xxxx xxxxx
Move Cap.:     56   24   426  xxxx xxxx xxxxx  xxxx xxxx xxxxx   540 xxxx xxxxx
Volume/Cap:  0.21 0.00  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.03 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  11.9 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     B    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx   86 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.8 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 59.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    F     *     *    *     *     *    *     *     *    *     *
ApproachDel:       59.4           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         F                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```



```
--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 PM Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
            Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Mt. Gleason Avenue / Foothill Boulevard
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.551
Loss Time (sec):       0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        41                Level Of Service:                  A
********************************************************************************
Street Name:          Mt. Gleason Avenue               Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        0  0  0  1  0   0  0  1! 0  0   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0   72    21    99   26     3   167 1049    44    18  980   144
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0   72    21    99   26     3   167 1049    44    18  980   144
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0   72    21    99   26     3   167 1049    44    18  980   144
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0   72    21    99   26     3   167 1049    44    18  980   144
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0   72    21    99   26     3   167 1049    44    18  980   144
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0   72    21    99   26     3   167 1049    44    18  980   144
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.77  0.23  0.78 0.20  0.02  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:     0 1103   322  1102  289    33  1425 2850  1425  1425 2850  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.07  0.07  0.09 0.09  0.09  0.12 0.37  0.03  0.01 0.34  0.10
Crit Volume:    0                     128         167                    490
Crit Moves:  ****                    ****        ****                   ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                           Existing + Project
                              PM Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Tujunga Canyon Boulevard / Summitrose Street
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):        0.299
Loss Time (sec):      0               Average Delay (sec/veh):        9.6
Optimal Cycle:        0               Level Of Service:                 A
********************************************************************************
Street Name:     Tujunga Canyon Boulevard            Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      41  150   15     15  166    9     19   83   97     11   76    9
Growth Adj:  1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
Initial Bse:   41  150   15     15  166    9     19   83   97     11   76    9
Added Vol:      0    4    0      0   11    4      1    0    0      0    0    0
PasserByVol:    0    0    0      0    0    0      0    0    0      0    0    0
Initial Fut:   41  154   15     15  177   13     20   83   97     11   76    9
User Adj:    1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
PHF Volume:    41  154   15     15  177   13     20   83   97     11   76    9
Reduct Vol:     0    0    0      0    0    0      0    0    0      0    0    0
Reduced Vol:   41  154   15     15  177   13     20   83   97     11   76    9
PCE Adj:     1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
FinalVolume:   41  154   15     15  177   13     20   83   97     11   76    9
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
Lanes:       0.20 0.73 0.07   0.07 0.87 0.06   0.10 0.41 0.49   0.11 0.80 0.09
Final Sat.:   137  515   50     51  607   45     71  294  343     74  512   61
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.30 0.30 0.30   0.29 0.29 0.29   0.28 0.28 0.28   0.15 0.15 0.15
Crit Moves:  ****                  ****                  ****   ****
Delay/Veh:    9.8  9.8  9.8    9.7  9.7  9.7    9.4  9.4  9.4    8.9  8.9  8.9
Delay Adj:   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
AdjDel/Veh:   9.8  9.8  9.8    9.7  9.7  9.7    9.4  9.4  9.4    8.9  8.9  8.9
LOS by Move:    A    A    A      A    A    A      A    A    A      A    A    A
ApproachDel:       9.8              9.7              9.4              8.9
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:        9.8              9.7              9.4              8.9
LOS by Appr:         A                A                A                A
AllWayAvgQ:   0.4  0.4  0.4    0.4  0.4  0.4    0.3  0.3  0.3    0.1  0.1  0.1
********************************************************************************
```



```
--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                           Existing + Project
                              PM Peak Hour
--------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
-------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 PM Peak Hour
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 Redmont Avenue / Summitrose Street
*******************************************************************************
Average Delay (sec/veh):      0.8      Worst Case Level Of Service: A[  9.2]
*******************************************************************************
Street Name:           Redmont Avenue                Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   0  1  0  0  0   0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     2    0     7    15  132     0     0   97     8
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     2    0     7    15  132     0     0   97     8
Added Vol:      0    0     0     2    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     4    0     7    15  132     0     0   97     8
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0    0     0     4    0     7    15  132     0     0   97     8
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     4    0     7    15  132     0     0   97     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   263  263   101   105 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   730  646   960  1499 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   725  639   960  1499 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.01 0.00  0.01  0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  859 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.0 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.2 xxxxx   7.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    A     *     A    *     *     *    *     *
ApproachDel:    xxxxxx             9.2            xxxxxx           xxxxxx
ApproachLOS:         *                A                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```



```
-------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Existing + Project
                                 PM Peak Hour
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
               2000 HCM 4-Way Stop Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 Tujunga Canyon Boulevard / Apperson Street
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):        0.444
Loss Time (sec):        0                Average Delay (sec/veh):       11.1
Optimal Cycle:          0                Level Of Service:                 B
*******************************************************************************
Street Name:      Tujunga Canyon Boulevard            Apperson Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      52  176    21    47  218    18    18  111    90     8   92    29
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   52  176    21    47  218    18    18  111    90     8   92    29
Added Vol:      0    4     0     0   10     1     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   52  180    21    47  228    19    18  111    90     8   92    29
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    52  180    21    47  228    19    18  111    90     8   92    29
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   52  180    21    47  228    19    18  111    90     8   92    29
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   52  180    21    47  228    19    18  111    90     8   92    29
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.21 0.71  0.08  0.16 0.78  0.06  0.08 0.51  0.41  0.06 0.72  0.22
Final Sat.:   134  463    54   106  513    43    52  321   260    37  420   133
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.39 0.39  0.39  0.44 0.44  0.44  0.35 0.35  0.35  0.22 0.22  0.22
Crit Moves:       ****                   ****  ****                   ****
Delay/Veh:   11.2 11.2  11.2  11.9 11.9  11.9  10.7 10.7  10.7   9.8  9.8   9.8
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  11.2 11.2  11.2  11.9 11.9  11.9  10.7 10.7  10.7   9.8  9.8   9.8
LOS by Move:    B    B     B     B    B     B     B    B     B     A    A     A
ApproachDel:      11.2             11.9             10.7              9.8
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       11.2             11.9             10.7              9.8
LOS by Appr:         B                B                B                A
AllWayAvgQ:   0.5  0.5   0.5   0.7  0.7   0.7   0.4  0.4   0.4   0.2  0.2   0.2
*******************************************************************************
```

LADWP Redmont Pumping Station and Tank
Existing + Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Existing + Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #9 Tujunga Canyon Boulevard / Valmont Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.480
Loss Time (sec):	0	Average Delay (sec/veh):	10.7
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard		Valmont Street	
Approach:	North Bound	South Bound	East Bound	West Bound
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	47	302	5	18	214	19	11	60	28	8	56	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	302	5	18	214	19	11	60	28	8	56	15
Added Vol:	0	4	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	306	5	18	224	19	11	60	28	8	56	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	306	5	18	224	19	11	60	28	8	56	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	306	5	18	224	19	11	60	28	8	56	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	306	5	18	224	19	11	60	28	8	56	15
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.13	0.86	0.01	0.07	0.86	0.07	0.11	0.61	0.28	0.10	0.71	0.19
Final Sat.:	98	637	10	50	626	53	68	373	174	61	427	114
Capacity Analysis Module:												
Vol/Sat:	0.48	0.48	0.48	0.36	0.36	0.36	0.16	0.16	0.16	0.13	0.13	0.13
Crit Moves:			****	****				****			****	
Delay/Veh:	11.7	11.7	11.7	10.2	10.2	10.2	9.2	9.2	9.2	9.1	9.1	9.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.7	11.7	11.7	10.2	10.2	10.2	9.2	9.2	9.2	9.1	9.1	9.1
LOS by Move:	B	B	B	B	B	B	A	A	A	A	A	A
ApproachDel:		11.7			10.2			9.2			9.1	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		11.7			10.2			9.2			9.1	
LOS by Appr:		B			B			A			A	
AllWayAvgQ:	0.8	0.8	0.8	0.5	0.5	0.5	0.2	0.2	0.2	0.1	0.1	0.1

LADWP Redmont Pumping Station and Tank
Existing + Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Existing + Project
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 Tujunga Canyon Boulevard / Foothill Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.726
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	68	Level Of Service:	C

Street Name:	Tujunga Canyon Boulevard		Foothill Boulevard	
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Permitted	Permitted
Rights:	Include	Include	Include	Include
Lanes:	2 0 0 1 0	1 0 1 0 1	1 0 2 0 1	1 0 2 0 1

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	627	306	25	155	191	22	40	577	388	54	896	336
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	627	306	25	155	191	22	40	577	388	54	896	336
Added Vol:	0	4	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	627	310	25	155	201	22	40	577	388	54	896	336
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	627	310	25	155	201	22	40	577	388	54	896	336
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	627	310	25	155	201	22	40	577	388	54	896	336
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	690	310	25	155	201	22	40	577	388	54	896	336
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.93	0.07	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2850	1319	106	1425	1425	1425	1425	2850	1425	1425	2850	1425
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.24	0.11	0.14	0.02	0.03	0.20	0.27	0.04	0.31	0.24
Crit Volume:	345				201		40				448	
Crit Moves:	****				****		****				****	

APPENDIX D
LOS Operations Worksheets – Future Without-Project Conditions

```
--------------------------------------------------------------------------------
                 LADWP Redmont Pumping Station and Tank
                         Future Without Project
                              AM Peak Hour
--------------------------------------------------------------------------------

                   Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mt. Gleason Avenue / Hillrose Street
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):        0.612
Loss Time (sec):       0              Average Delay (sec/veh):       14.3
Optimal Cycle:         0              Level Of Service:                 B
********************************************************************************
Street Name:        Mt. Gleason Avenue                Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      13  169   37    45  267   37    21  153   29    66  163   63
Growth Adj:  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04
Initial Bse:   14  176   39    47  278   39    22  159   30    69  170   66
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   14  176   39    47  278   39    22  159   30    69  170   66
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:    14  176   39    47  278   39    22  159   30    69  170   66
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   14  176   39    47  278   39    22  159   30    69  170   66
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:   14  176   39    47  278   39    22  159   30    69  170   66
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.06 0.77 0.17  0.13 0.76 0.11  0.10 0.76 0.14  0.23 0.56 0.21
Final Sat.:    33  426   93    76  454   63    55  403   76   129  319  123
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.41 0.41 0.41  0.61 0.61 0.61  0.39 0.39 0.39  0.53 0.53 0.53
Crit Moves:            ****  ****                  ****             ****
Delay/Veh:   12.5 12.5 12.5  16.4 16.4 16.4  12.4 12.4 12.4  14.5 14.5 14.5
Delay Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:  12.5 12.5 12.5  16.4 16.4 16.4  12.4 12.4 12.4  14.5 14.5 14.5
LOS by Move:    B    B    B     C    C    C     B    B    B     B    B    B
ApproachDel:      12.5             16.4             12.4             14.5
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       12.5             16.4             12.4             14.5
LOS by Appr:         B                C                B                B
AllWayAvgQ:   0.5  0.5  0.5   1.3  1.3  1.3   0.5  0.5  0.5   0.9  0.9  0.9
********************************************************************************
```



```
--------------------------------------------------------------------------------
                 LADWP Redmont Pumping Station and Tank
                         Future Without Project
                              AM Peak Hour
--------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                        Future Without Project
                             AM Peak Hour
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 Tujunga Canyon Blvd. / Hillrose Street (North)
*******************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.481
Loss Time (sec):       0                Average Delay (sec/veh):        10.8
Optimal Cycle:         0                Level Of Service:                  B
*******************************************************************************
Street Name:     Tujunga Canyon Boulevard              Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       0  1  0  0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    125  224     0     2  263    25    11    1   125     0    0     1
Growth Adj: 1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse: 130  233     0     2  274    26    11    1   130     0    0     1
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 130  233     0     2  274    26    11    1   130     0    0     1
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  130  233     0     2  274    26    11    1   130     0    0     1
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 130  233     0     2  274    26    11    1   130     0    0     1
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 130  233     0     2  274    26    11    1   130     0    0     1
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      0.36 0.64  0.00  0.01 0.91  0.08  0.08 0.01  0.91  0.00 0.00  1.00
Final Sat.:  271  485     0     5  689    66    55    5   619     0    0   620
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.48 0.48  xxxx  0.40 0.40  0.40  0.21 0.21  0.21  xxxx xxxx  0.00
Crit Moves:      ****             ****             ****                   ****
Delay/Veh:  11.7 11.7   0.0  10.5 10.5  10.5   8.9  8.9   8.9   0.0  0.0   8.0
Delay Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh: 11.7 11.7   0.0  10.5 10.5  10.5   8.9  8.9   8.9   0.0  0.0   8.0
LOS by Move:   B    B     *     B    B     B     A    A     A     *    *     A
ApproachDel:      11.7             10.5              8.9              8.0
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       11.7             10.5              8.9              8.0
LOS by Appr:         B                B                A                A
AllWayAvgQ:   0.9  0.9   0.9   0.6  0.6   0.6   0.2  0.2   0.2   0.0  0.0   0.0
*******************************************************************************
```



```
-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                        Future Without Project
                             AM Peak Hour
-------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

```
-------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                          Future Without Project
                               AM Peak Hour
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Tujunga Canyon Blvd. / Hillrose Street (South)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.517
Loss Time (sec):       0              Average Delay (sec/veh):        10.8
Optimal Cycle:         0              Level Of Service:                  B
********************************************************************************
Street Name:     Tujunga Canyon Boulevard             Hillrose Street
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:       0  0  0  1  0    0  1  0  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  232     1    83  305     0     0    0     0     8    0   118
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   0  241     1    86  317     0     0    0     0     8    0   123
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0  241     1    86  317     0     0    0     0     8    0   123
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0  241     1    86  317     0     0    0     0     8    0   123
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0  241     1    86  317     0     0    0     0     8    0   123
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  241     1    86  317     0     0    0     0     8    0   123
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.99  0.01  0.21 0.79  0.00  0.00 0.00  0.00  0.06 0.00  0.94
Final Sat.:    0  749     3   167  614     0     0    0     0    44    0   650
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx 0.32  0.32  0.52 0.52  xxxx  xxxx xxxx  xxxx  0.19 xxxx  0.19
Crit Moves:             ****       ****                         ****
Delay/Veh:    0.0  9.7   9.7  12.1 12.1   0.0   0.0  0.0   0.0   8.7  0.0   8.7
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  9.7   9.7  12.1 12.1   0.0   0.0  0.0   0.0   8.7  0.0   8.7
LOS by Move:   *    A     A     B    B     *     *    *     *     A    *     A
ApproachDel:       9.7             12.1            xxxxxx             8.7
Delay Adj:        1.00             1.00             xxxxx            1.00
ApprAdjDel:        9.7             12.1            xxxxxx             8.7
LOS by Appr:        A                B                *                A
AllWayAvgQ:   0.4  0.4   0.4   1.0  1.0   1.0   0.0  0.0   0.0   0.2  0.2   0.2
********************************************************************************
```



```
-------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                          Future Without Project
                               AM Peak Hour
-------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                        Future Without Project
                             AM Peak Hour
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #4 Jardine Avenue / Foothill Boulevard
*******************************************************************************
Average Delay (sec/veh):      0.3      Worst Case Level Of Service: F[ 84.8]
*******************************************************************************
Street Name:          Jardine Avenue                 Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  1! 0  0   0  0  0  0  0   0  0  2  0  1   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6    0     2    0    0     0    0 1317     7    6 1393     0
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:    6    0     2    0    0     0    0 1370     7    6 1450     0
Added Vol:      0    0     0    0    0     0    0   32     0    0   36     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    6    0     2    0    0     0    0 1402     7    6 1486     0
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     6    0     2    0    0     0    0 1402     7    6 1486     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
FinalVolume:    6    0     2    0    0     0    0 1402     7    6 1486     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 2158 2901   701  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1410 xxxx xxxxx
Potent Cap.:   42   16   386  xxxx xxxx xxxxx  xxxx xxxx xxxxx   490 xxxx xxxxx
Move Cap.:     41   16   386  xxxx xxxx xxxxx  xxxx xxxx xxxxx   490 xxxx xxxxx
Volume/Cap:  0.15 0.00  0.01  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  12.4 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx   53 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 84.8 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    F     *     *    *     *     *    *     *     *    *     *
ApproachDel:       84.8           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         F                *                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```



```
-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                        Future Without Project
                             AM Peak Hour
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
*******************************************************************************
Intersection #5 Mt. Gleason Avenue / Foothill Boulevard
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.616
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         48                Level Of Service:                  B
*******************************************************************************
Street Name:          Mt. Gleason Avenue               Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected         Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  0  1  0   0  0  1! 0  0   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  109    11  191   38     4  134 1116    25    6  914    92
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:    0  113    11  199   40     4  139 1161    26    6  951    96
Added Vol:      0   23     0    0   20     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0  136    11  199   60     4  139 1161    26    6  951    96
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0  136    11  199   60     4  139 1161    26    6  951    96
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0  136    11  199   60     4  139 1161    26    6  951    96
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0  136    11  199   60     4  139 1161    26    6  951    96
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425 1425 1425  1425 1425 1425  1425 1425 1425  1425
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.92  0.08 0.76 0.23  0.01 1.00 2.00  1.00 1.00 2.00  1.00
Final Sat.:     0 1315   110 1079  323    23 1425 2850  1425 1425 2850  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.10  0.10 0.18 0.18  0.18 0.10 0.41  0.02 0.00 0.33  0.07
Crit Volume:    0                  262         139                  476
Crit Moves:  ****                 ****        ****                 ****
*******************************************************************************
```

LADWP Redmont Pumping Station and Tank
Future Without Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 Tujunga Canyon Boulevard / Summitrose Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.523
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard						Summitrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	76	191	6	15	286	18	21	63	76	16	149	20
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	79	199	6	16	298	19	22	66	79	17	155	21
Added Vol:	0	0	0	0	0	0	0	12	0	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	79	199	6	16	298	19	22	78	79	17	169	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	79	199	6	16	298	19	22	78	79	17	169	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	199	6	16	298	19	22	78	79	17	169	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	199	6	16	298	19	22	78	79	17	169	21
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.28	0.70	0.02	0.05	0.90	0.05	0.12	0.43	0.45	0.08	0.82	0.10
Final Sat.:	171	429	13	30	569	36	70	249	254	46	465	57
Capacity Analysis Module:												
Vol/Sat:	0.46	0.46	0.46	0.52	0.52	0.52	0.31	0.31	0.31	0.36	0.36	0.36
Crit Moves:		****			****			****			****	
Delay/Veh:	12.7	12.7	12.7	13.6	13.6	13.6	10.8	10.8	10.8	11.6	11.6	11.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.7	12.7	12.7	13.6	13.6	13.6	10.8	10.8	10.8	11.6	11.6	11.6
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
ApproachDel:		12.7			13.6			10.8			11.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.7			13.6			10.8			11.6	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.7	0.7	0.7	0.9	0.9	0.9	0.3	0.3	0.3	0.4	0.4	0.4

LADWP Redmont Pumping Station and Tank
Future Without Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

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--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                          Future Without Project
                               AM Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Redmont Avenue / Summitrose Street
********************************************************************************
Average Delay (sec/veh):      0.8      Worst Case Level Of Service: A[  9.3]
********************************************************************************
Street Name:          Redmont Avenue                  Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     1    0    18     7   74     0     0  167     2
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:    0    0     0     1    0    19     7   77     0     0  174     2
Added Vol:      0    0     0     0    0     0     0   12     0     0   14     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     1    0    19     7   89     0     0  188     2
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0    0     0     1    0    19     7   89     0     0  188     2
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     1    0    19     7   89     0     0  188     2
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   292  292   189   190 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   703  622   858  1396 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   700  618   858  1396 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.00 0.00  0.02  0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  848 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.3 xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    A     *     A    *     *     *    *     *
ApproachDel:   xxxxxx              9.3            xxxxxx           xxxxxx
ApproachLOS:        *                A                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```



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--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                          Future Without Project
                               AM Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Tujunga Canyon Boulevard / Apperson Street
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.734
Loss Time (sec):        0                 Average Delay (sec/veh):        17.7
Optimal Cycle:          0                 Level Of Service:                  C
********************************************************************************
Street Name:     Tujunga Canyon Boulevard            Apperson Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      64  184     8    57  299    41    12  105   126    19  202    73
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   67  191     8    59  311    43    12  109   131    20  210    76
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   67  191     8    59  311    43    12  109   131    20  210    76
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    67  191     8    59  311    43    12  109   131    20  210    76
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   67  191     8    59  311    43    12  109   131    20  210    76
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   67  191     8    59  311    43    12  109   131    20  210    76
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.25 0.72  0.03  0.14 0.76  0.10  0.05 0.43  0.52  0.06 0.69  0.25
Final Sat.:   127  365    16    81  424    58    25  221   265    34  360   130
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.52 0.52  0.52  0.73 0.73  0.73  0.49 0.49  0.49  0.58 0.58  0.58
Crit Moves:       ****        ****             ****                   ****
Delay/Veh:   15.3 15.3  15.3  22.3 22.3  22.3  14.2 14.2  14.2  16.5 16.5  16.5
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  15.3 15.3  15.3  22.3 22.3  22.3  14.2 14.2  14.2  16.5 16.5  16.5
LOS by Move:    C    C     C     C    C     C     B    B     B     C    C     C
ApproachDel:      15.3             22.3             14.2             16.5
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       15.3             22.3             14.2             16.5
LOS by Appr:         C                C                B                C
AllWayAvgQ:   0.8  0.8   0.8   2.1  2.1   2.1   0.7  0.7   0.7   1.0  1.0   1.0
********************************************************************************
```

LADWP Redmont Pumping Station and Tank
Future Without Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future Without Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #9 Tujunga Canyon Boulevard / Valmont Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.696
Loss Time (sec):	0	Average Delay (sec/veh):	14.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard						Valmont Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	30	170	7	31	420	14	5	56	72	6	97	56
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	31	177	7	32	437	15	5	58	75	6	101	58
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	177	7	32	437	15	5	58	75	6	101	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	31	177	7	32	437	15	5	58	75	6	101	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	177	7	32	437	15	5	58	75	6	101	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	31	177	7	32	437	15	5	58	75	6	101	58
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.14	0.83	0.03	0.07	0.90	0.03	0.04	0.42	0.54	0.04	0.61	0.35
Final Sat.:	90	513	21	46	628	21	21	240	308	22	349	201
Capacity Analysis Module:												
Vol/Sat:	0.35	0.35	0.35	0.70	0.70	0.70	0.24	0.24	0.24	0.29	0.29	0.29
Crit Moves:		****			****			****			****	
Delay/Veh:	11.0	11.0	11.0	18.1	18.1	18.1	10.1	10.1	10.1	10.6	10.6	10.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.0	11.0	11.0	18.1	18.1	18.1	10.1	10.1	10.1	10.6	10.6	10.6
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B
ApproachDel:		11.0			18.1			10.1			10.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		11.0			18.1			10.1			10.6	
LOS by Appr:		B			C			B			B	
AllWayAvgQ:	0.4	0.4	0.4	1.9	1.9	1.9	0.2	0.2	0.2	0.3	0.3	0.3

LADWP Redmont Pumping Station and Tank
Future Without Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future Without Project
AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 Tujunga Canyon Boulevard / Foothill Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.833
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	111	Level Of Service:	D

Street Name:	Tujunga Canyon Boulevard						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 0 1 0			1 0 1 0 1			1 0 2 0 1			1 0 2 0 1		
Volume Module:												
Base Vol:	254	102	32	306	367	20	9	928	584	50	367	94
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	264	106	33	318	382	21	9	966	608	52	382	98
Added Vol:	0	0	0	0	0	0	0	20	0	0	23	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	264	106	33	318	382	21	9	986	608	52	405	98
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	264	106	33	318	382	21	9	986	608	52	405	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	264	106	33	318	382	21	9	986	608	52	405	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	291	106	33	318	382	21	9	986	608	52	405	98
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.76	0.24	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2850	1085	340	1425	1425	1425	1425	2850	1425	1425	2850	1425
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.22	0.27	0.01	0.01	0.35	0.43	0.04	0.14	0.07
Crit Volume:	145				382				608	52		
Crit Moves:	****				****				****	****		

LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Mt. Gleason Avenue / Hillrose Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.392
Loss Time (sec):	0	Average Delay (sec/veh):	9.8
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Mt. Gleason Avenue						Hillrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	19	226	30	13	148	13	29	93	27	16	65	21
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	20	235	31	14	154	14	30	97	28	17	68	22
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	235	31	14	154	14	30	97	28	17	68	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	235	31	14	154	14	30	97	28	17	68	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	235	31	14	154	14	30	97	28	17	68	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	235	31	14	154	14	30	97	28	17	68	22
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.07	0.82	0.11	0.07	0.86	0.07	0.19	0.63	0.18	0.16	0.64	0.20
Final Sat.:	50	600	80	52	594	52	128	411	119	101	410	133
Capacity Analysis Module:												
Vol/Sat:	0.39	0.39	0.39	0.26	0.26	0.26	0.24	0.24	0.24	0.16	0.16	0.16
Crit Moves:			****	****					****		****	
Delay/Veh:	10.6	10.6	10.6	9.5	9.5	9.5	9.5	9.5	9.5	9.0	9.0	9.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.6	10.6	10.6	9.5	9.5	9.5	9.5	9.5	9.5	9.0	9.0	9.0
LOS by Move:	B	B	B	A	A	A	A	A	A	A	A	A
ApproachDel:		10.6			9.5			9.5			9.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.6			9.5			9.5			9.0	
LOS by Appr:		B			A			A			A	
AllWayAvgQ:	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2

LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

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-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                        Future Without Project
                             PM Peak Hour
-------------------------------------------------------------------------------
                   Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Tujunga Canyon Blvd. / Hillrose Street (North)
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):        0.285
Loss Time (sec):      0               Average Delay (sec/veh):        8.6
Optimal Cycle:        0               Level Of Service:                 A
********************************************************************************
Street Name:     Tujunga Canyon Boulevard             Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:       0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  1  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     82  137     2    1  160    12   13    0    80    1    1     0
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:  85  143     2    1  166    12   14    0    83    1    1     0
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  85  143     2    1  166    12   14    0    83    1    1     0
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   85  143     2    1  166    12   14    0    83    1    1     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  85  143     2    1  166    12   14    0    83    1    1     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  85  143     2    1  166    12   14    0    83    1    1     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.37 0.62  0.01 0.01 0.92  0.07 0.14 0.00  0.86 0.50 0.50  0.00
Final Sat.:   300  500     7    5  754    57  109    0   670  332  332     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.28 0.28  0.28 0.22 0.22  0.22 0.12 xxxx  0.12 0.00 0.00  xxxx
Crit Moves:       ****       ****                          ****      ****
Delay/Veh:    9.0  9.0   9.0  8.5  8.5   8.5  7.8  0.0   7.8  8.0  8.0   0.0
Delay Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   9.0  9.0   9.0  8.5  8.5   8.5  7.8  0.0   7.8  8.0  8.0   0.0
LOS by Move:   A    A     A    A    A     A    A    *     A    A    A     *
ApproachDel:        9.0              8.5              7.8              8.0
Delay Adj:         1.00             1.00             1.00             1.00
ApprAdjDel:         9.0              8.5              7.8              8.0
LOS by Appr:         A                A                A                A
AllWayAvgQ:   0.4  0.4   0.4  0.3  0.3   0.3  0.1  0.1   0.1  0.0  0.0   0.0
********************************************************************************
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LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour


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-------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                        Future Without Project
                             PM Peak Hour
--------------------------------------------------------------------------------

                    Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Tujunga Canyon Blvd. / Hillrose Street (South)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.303
Loss Time (sec):       0              Average Delay (sec/veh):          8.7
Optimal Cycle:         0              Level Of Service:                   A
********************************************************************************
Street Name:     Tujunga Canyon Boulevard              Hillrose Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  0  1  0    0  1  0  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  174     3    59  183     0    0    0     0   13    0    47
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:    0  181     3    61  190     0    0    0     0   14    0    49
Added Vol:      0    0     0     0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0     0    0     0    0    0     0    0    0     0
Initial Fut:    0  181     3    61  190     0    0    0     0   14    0    49
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  181     3    61  190     0    0    0     0   14    0    49
Reduct Vol:     0    0     0     0    0     0    0    0     0    0    0     0
Reduced Vol:    0  181     3    61  190     0    0    0     0   14    0    49
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  181     3    61  190     0    0    0     0   14    0    49
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.98  0.02  0.24 0.76  0.00  0.00 0.00  0.00  0.22 0.00  0.78
Final Sat.:     0  813    14   203  628     0    0    0     0  165    0   597
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx 0.22  0.22  0.30 0.30  xxxx  xxxx xxxx  xxxx  0.08 xxxx  0.08
Crit Moves:       ****             ****                          ****
Delay/Veh:    0.0  8.5   8.5   9.1  9.1   0.0   0.0  0.0   0.0   7.7  0.0   7.7
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  8.5   8.5   9.1  9.1   0.0   0.0  0.0   0.0   7.7  0.0   7.7
LOS by Move:    *    A     A     A    A     *     *    *     *     A    *     A
ApproachDel:       8.5              9.1            xxxxxx              7.7
Delay Adj:        1.00             1.00             xxxxx             1.00
ApprAdjDel:        8.5              9.1            xxxxxx              7.7
LOS by Appr:         A                A                 *                A
AllWayAvgQ:   0.3  0.3   0.3   0.4  0.4   0.4   0.0  0.0   0.0   0.1  0.1   0.1
********************************************************************************
```



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--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                        Future Without Project
                             PM Peak Hour
--------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                          Future Without Project
                               PM Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Jardine Avenue / Foothill Boulevard
********************************************************************************
Average Delay (sec/veh):      0.6      Worst Case Level Of Service: F[ 77.1]
********************************************************************************
Street Name:           Jardine Avenue                  Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  1! 0  0   0  0  0  0  0   0  0  2  0  1   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     12    0    8    0    0    0    0 1269   28   15 1300    0
Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
Initial Bse:  12    0    8    0    0    0    0 1321   29   16 1353    0
Added Vol:     0    0    0    0    0    0    0   44    0    0   43    0
PasserByVol:   0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:  12    0    8    0    0    0    0 1365   29   16 1396    0
User Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:   12    0    8    0    0    0    0 1365   29   16 1396    0
Reduct Vol:    0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:  12    0    8    0    0    0    0 1365   29   16 1396    0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp: 6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim: 3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 2094 2792   682  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1394 xxxx xxxxx
Potent Cap.:   46   19   397  xxxx xxxx xxxxx  xxxx xxxx xxxxx   497 xxxx xxxxx
Move Cap.:     45   18   397  xxxx xxxx xxxxx  xxxx xxxx xxxxx   497 xxxx xxxxx
Volume/Cap:  0.28 0.00  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.03 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  12.5 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     B    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx   70 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 77.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    F     *     *    *     *     *    *     *     *    *     *
ApproachDel:      77.1            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        F                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```



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--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                          Future Without Project
                               PM Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Mt. Gleason Avenue / Foothill Boulevard
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.592
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         46               Level Of Service:                  A
********************************************************************************
Street Name:          Mt. Gleason Avenue              Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:       0  0  0  1  0   0  0  1! 0  0   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0   72   21   99   26    3  167 1049   44   18  980  144
Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
Initial Bse:   0   75   22  103   27    3  174 1092   46   19 1020  150
Added Vol:     0   27    0    0   27    0    0    0    0    0    0    0
PasserByVol:   0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:   0  102   22  103   54    3  174 1092   46   19 1020  150
User Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    0  102   22  103   54    3  174 1092   46   19 1020  150
Reduct Vol:    0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   0  102   22  103   54    3  174 1092   46   19 1020  150
PCE Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:   0  102   22  103   54    3  174 1092   46   19 1020  150
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1425 1425 1425 1425 1425 1425 1425 1425 1425 1425 1425 1425
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:      0.00 0.82 0.18 0.64 0.34 0.02 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.:    0 1173  252  916  481   28 1425 2850 1425 1425 2850 1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00 0.09 0.09 0.11 0.11 0.11 0.12 0.38 0.03 0.01 0.36 0.11
Crit Volume:   0                       160  174                     510
Crit Moves: ****                      **** ****                    ****
********************************************************************************
```

LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 Tujunga Canyon Boulevard / Summitrose Street

```
Cycle (sec):        100              Critical Vol./Cap.(X):        0.318
Loss Time (sec):      0              Average Delay (sec/veh):        9.8
Optimal Cycle:        0              Level Of Service:                 A
```

Street Name:	Tujunga Canyon Boulevard						Summitrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	41	150	15	15	166	9	19	83	97	11	76	9
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	43	156	16	16	173	9	20	86	101	11	79	9
Added Vol:	0	0	0	0	0	0	0	16	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	156	16	16	173	9	20	102	101	11	95	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	43	156	16	16	173	9	20	102	101	11	95	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	156	16	16	173	9	20	102	101	11	95	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	43	156	16	16	173	9	20	102	101	11	95	9
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.20	0.73	0.07	0.08	0.87	0.05	0.09	0.46	0.45	0.10	0.82	0.08
Final Sat.:	136	497	50	54	593	32	62	321	317	63	525	52
Capacity Analysis Module:												
Vol/Sat:	0.31	0.31	0.31	0.29	0.29	0.29	0.32	0.32	0.32	0.18	0.18	0.18
Crit Moves:	****				****			****			****	
Delay/Veh:	10.1	10.1	10.1	9.9	9.9	9.9	9.8	9.8	9.8	9.2	9.2	9.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.1	10.1	10.1	9.9	9.9	9.9	9.8	9.8	9.8	9.2	9.2	9.2
LOS by Move:	B	B	B	A	A	A	A	A	A	A	A	A
ApproachDel:		10.1			9.9			9.8			9.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.1			9.9			9.8			9.2	
LOS by Appr:		B			A			A			A	
AllWayAvgQ:	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2

LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to KOA CORP, MONTEREY PK

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-------------------------------------------------------------------------------
                   LADWP Redmont Pumping Station and Tank
                          Future Without Project
                               PM Peak Hour
-------------------------------------------------------------------------------

                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 Redmont Avenue / Summitrose Street
*******************************************************************************
Average Delay (sec/veh):       0.7      Worst Case Level Of Service: A[  9.2]
*******************************************************************************
Street Name:           Redmont Avenue                  Summitrose Street
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:         Include          Include          Include          Include
Lanes:       0  0  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0     2    0     7    15  132     0     0   97     8
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   0    0     0     2    0     7    16  137     0     0  101     8
Added Vol:     0    0     0     0    0     0     0   16     0     0   16     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0    0     0     2    0     7    16  153     0     0  117     8
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0    0     0     2    0     7    16  153     0     0  117     8
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   0    0     0     2    0     7    16  153     0     0  117     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   306  306   121   125 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   690  611   936  1474 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   685  605   936  1474 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.00 0.00  0.01  0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  865 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.0 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.2 xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    A     *     A    *     *     *    *     *
ApproachDel:   xxxxxx             9.2            xxxxxx           xxxxxx
ApproachLOS:      *                A                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```



```
-------------------------------------------------------------------------------
                   LADWP Redmont Pumping Station and Tank
                          Future Without Project
                               PM Peak Hour
-------------------------------------------------------------------------------

                     Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 Tujunga Canyon Boulevard / Apperson Street
*******************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.451
Loss Time (sec):       0                Average Delay (sec/veh):        11.3
Optimal Cycle:         0                Level Of Service:                  B
*******************************************************************************
Street Name:     Tujunga Canyon Boulevard            Apperson Street
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:         Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     52  176    21    47  218    18    18  111    90     8   92    29
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  54  183    22    49  227    19    19  116    94     8   96    30
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  54  183    22    49  227    19    19  116    94     8   96    30
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   54  183    22    49  227    19    19  116    94     8   96    30
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  54  183    22    49  227    19    19  116    94     8   96    30
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  54  183    22    49  227    19    19  116    94     8   96    30
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.21 0.71  0.08  0.17 0.77  0.06  0.08 0.51  0.41  0.06 0.72  0.22
Final Sat.:  135  455    54   108  503    42    52  318   258    36  416   131
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.40 0.40  0.40  0.45 0.45  0.45  0.36 0.36  0.36  0.23 0.23  0.23
Crit Moves:       ****             ****                   ****  ****
Delay/Veh:   11.5 11.5  11.5  12.1 12.1  12.1  10.9 10.9  10.9  10.0 10.0  10.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  11.5 11.5  11.5  12.1 12.1  12.1  10.9 10.9  10.9  10.0 10.0  10.0
LOS by Move:    B    B     B     B    B     B     B    B     B     A    A     A
ApproachDel:      11.5             12.1             10.9             10.0
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       11.5             12.1             10.9             10.0
LOS by Appr:        B                B                B                A
AllWayAvgQ:   0.6  0.6   0.6   0.7  0.7   0.7   0.5  0.5   0.5   0.2  0.2   0.2
*******************************************************************************
```

LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour

```
                    Level Of Service Computation Report
         2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Tujunga Canyon Boulevard / Valmont Street
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):        0.496
Loss Time (sec):       0               Average Delay (sec/veh):       10.9
Optimal Cycle:         0               Level Of Service:                 B
********************************************************************************
Street Name:     Tujunga Canyon Boulevard            Valmont Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:         0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47  302     5    18  214    19    11   60    28     8   56    15
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   49  314     5    19  223    20    11   62    29     8   58    16
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   49  314     5    19  223    20    11   62    29     8   58    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    49  314     5    19  223    20    11   62    29     8   58    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   49  314     5    19  223    20    11   62    29     8   58    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   49  314     5    19  223    20    11   62    29     8   58    16
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.13 0.86  0.01  0.07 0.85  0.08  0.11 0.61  0.28  0.10 0.71  0.19
Final Sat.:    99  633    10    52  616    55    68  370   173    60  423   113
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.50 0.50  0.50  0.36 0.36  0.36  0.17 0.17  0.17  0.14 0.14  0.14
Crit Moves:       ****              ****         ****              ****
Delay/Veh:   12.1 12.1  12.1  10.3 10.3  10.3   9.3  9.3   9.3   9.2  9.2   9.2
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  12.1 12.1  12.1  10.3 10.3  10.3   9.3  9.3   9.3   9.2  9.2   9.2
LOS by Move:    B    B     B     B    B     B     A    A     A     A    A     A
ApproachDel:      12.1              10.3               9.3               9.2
Delay Adj:        1.00              1.00              1.00              1.00
ApprAdjDel:       12.1              10.3               9.3               9.2
LOS by Appr:         B                 B                 A                 A
AllWayAvgQ:   0.9  0.9   0.9   0.5  0.5   0.5   0.2  0.2   0.2   0.1  0.1   0.1
********************************************************************************
```

LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future Without Project
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 Tujunga Canyon Boulevard / Foothill Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.757
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	77	Level Of Service:	C

Street Name:	Tujunga Canyon Boulevard		Foothill Boulevard	
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Permitted	Permitted
Rights:	Include	Include	Include	Include
Lanes:	2 0 0 1 0	1 0 1 0 1	1 0 2 0 1	1 0 2 0 1

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	627	306	25	155	191	22	40	577	388	54	896	336
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	652	318	26	161	199	23	42	600	404	56	932	350
Added Vol:	0	0	0	0	0	0	0	27	0	0	27	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	652	318	26	161	199	23	42	627	404	56	959	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	652	318	26	161	199	23	42	627	404	56	959	350
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	652	318	26	161	199	23	42	627	404	56	959	350
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	718	318	26	161	199	23	42	627	404	56	959	350
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.92	0.08	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2850	1317	108	1425	1425	1425	1425	2850	1425	1425	2850	1425
Capacity Analysis Module:												
Vol/Sat:	0.25	0.24	0.24	0.11	0.14	0.02	0.03	0.22	0.28	0.04	0.34	0.25
Crit Volume:	359				199		42				480	
Crit Moves:	****				****		****				****	

APPENDIX E
LOS Operations Worksheets – Future with Project Construction Conditions

LADWP Redmont Pumping Station and Tank
Future With Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Mt. Gleason Avenue / Hillrose Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.616
Loss Time (sec):	0	Average Delay (sec/veh):	14.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Mt. Gleason Avenue						Hillrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Stop Sign			Stop Sign			Stop Sign			Stop Sign	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	13	169	37	45	267	37	21	153	29	66	163	63
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	14	176	39	47	278	39	22	159	30	69	170	66
Added Vol:	0	0	9	0	0	0	0	2	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	176	48	47	278	39	22	161	30	69	170	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	176	48	47	278	39	22	161	30	69	170	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	176	48	47	278	39	22	161	30	69	170	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	176	48	47	278	39	22	161	30	69	170	66
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.74	0.20	0.13	0.76	0.11	0.10	0.76	0.14	0.23	0.56	0.21
Final Sat.:	32	410	111	76	451	63	54	402	75	128	316	122
Capacity Analysis Module:												
Vol/Sat:	0.43	0.43	0.43	0.62	0.62	0.62	0.40	0.40	0.40	0.54	0.54	0.54
Crit Moves:	****			****				****			****	
Delay/Veh:	12.7	12.7	12.7	16.6	16.6	16.6	12.5	12.5	12.5	14.7	14.7	14.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.7	12.7	12.7	16.6	16.6	16.6	12.5	12.5	12.5	14.7	14.7	14.7
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B
ApproachDel:		12.7			16.6			12.5			14.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.7			16.6			12.5			14.7	
LOS by Appr:		B			C			B			B	
AllWayAvgQ:	0.6	0.6	0.6	1.3	1.3	1.3	0.5	0.5	0.5	0.9	0.9	0.9

LADWP Redmont Pumping Station and Tank
Future With Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

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--------------------------------------------------------------------------------
                   LADWP Redmont Pumping Station and Tank
                            Future With Project
                               AM Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Tujunga Canyon Blvd. / Hillrose Street (North)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.498
Loss Time (sec):        0              Average Delay (sec/veh):        10.9
Optimal Cycle:          0              Level Of Service:                  B
********************************************************************************
Street Name:     Tujunga Canyon Boulevard             Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:       0  1  0  0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    125  224     0    2  263    25   11    1   125    0    0     1
Growth Adj: 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse: 130  233     0    2  274    26   11    1   130    0    0     1
Added Vol:     1   12     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut: 131  245     0    2  274    26   11    1   130    0    0     1
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:  131  245     0    2  274    26   11    1   130    0    0     1
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol: 131  245     0    2  274    26   11    1   130    0    0     1
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume: 131  245     0    2  274    26   11    1   130    0    0     1
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:      0.35 0.65  0.00 0.01 0.91  0.08 0.08 0.01  0.91 0.00 0.00  1.00
Final Sat.:  263  493     0    5  686    65   54    5   616    0    0   615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.50 0.50  xxxx 0.40 0.40  0.40 0.21 0.21  0.21 xxxx xxxx  0.00
Crit Moves: ****            ****                 ****                  ****
Delay/Veh:  12.0 12.0   0.0 10.5 10.5  10.5  9.0  9.0   9.0  0.0  0.0   8.0
Delay Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh: 12.0 12.0   0.0 10.5 10.5  10.5  9.0  9.0   9.0  0.0  0.0   8.0
LOS by Move:   B    B     *    B    B     B    A    A     A    *    *     A
ApproachDel:      12.0             10.5              9.0              8.0
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       12.0             10.5              9.0              8.0
LOS by Appr:         B                B                A                A
AllWayAvgQ:   0.9  0.9   0.9  0.6  0.6   0.6  0.2  0.2   0.2  0.0  0.0   0.0
********************************************************************************
```



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--------------------------------------------------------------------------------
                   LADWP Redmont Pumping Station and Tank
                            Future With Project
                               AM Peak Hour
--------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
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---------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Future With Project
                                 AM Peak Hour
---------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
*********************************************************************************
Intersection #3 Tujunga Canyon Blvd. / Hillrose Street (South)
*********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.519
Loss Time (sec):       0               Average Delay (sec/veh):        10.9
Optimal Cycle:         0               Level Of Service:                  B
*********************************************************************************
Street Name:     Tujunga Canyon Boulevard              Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  1  0   0  1  0  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  232     1    83  305     0     0    0     0     8    0   118
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:    0  241     1    86  317     0     0    0     0     8    0   123
Added Vol:      0   10     0     0    0     0     0    0     0     0    0     2
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  251     1    86  317     0     0    0     0     8    0   125
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  251     1    86  317     0     0    0     0     8    0   125
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  251     1    86  317     0     0    0     0     8    0   125
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0  251     1    86  317     0     0    0     0     8    0   125
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.99  0.01  0.21 0.79  0.00  0.00 0.00  0.00  0.06 0.00  0.94
Final Sat.:     0  748     3   166  611     0     0    0     0    43    0   648
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx 0.34  0.34  0.52 0.52  xxxx  xxxx xxxx  xxxx  0.19 xxxx  0.19
Crit Moves:       ****              ****                          ****
Delay/Veh:    0.0  9.9   9.9  12.2 12.2   0.0   0.0  0.0   0.0   8.7  0.0   8.7
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  9.9   9.9  12.2 12.2   0.0   0.0  0.0   0.0   8.7  0.0   8.7
LOS by Move:    *    A     A     B    B     *     *    *     *     A    *     A
ApproachDel:       9.9              12.2             xxxxxx             8.7
Delay Adj:        1.00              1.00              xxxxx            1.00
ApprAdjDel:        9.9              12.2             xxxxxx             8.7
LOS by Appr:         A                 B                *                 A
AllWayAvgQ:   0.5  0.5   0.5   1.0  1.0   1.0   0.0  0.0   0.0   0.2  0.2   0.2
*********************************************************************************
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---------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                              Future With Project
                                 AM Peak Hour
---------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
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---------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                           Future With Project
                              AM Peak Hour
---------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #4 Jardine Avenue / Foothill Boulevard
*********************************************************************************
Average Delay (sec/veh):      0.3      Worst Case Level Of Service: F[ 86.7]
*********************************************************************************
Street Name:           Jardine Avenue                 Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  2  0  1    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       6    0    2     0    0    0     0 1317    7     6 1393    0
Growth Adj:  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04
Initial Bse:    6    0    2     0    0    0     0 1370    7     6 1450    0
Added Vol:      0    0    0     0    0    0     0   45    0     0   37    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:    6    0    2     0    0    0     0 1415    7     6 1487    0
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:     6    0    2     0    0    0     0 1415    7     6 1487    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
FinalVolume:    6    0    2     0    0    0     0 1415    7     6 1487    0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5  6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0  3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 2171 2915  708  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1423 xxxx xxxxx
Potent Cap.:   41   16  382  xxxx xxxx xxxxx  xxxx xxxx xxxxx   485 xxxx xxxxx
Move Cap.:     40   16  382  xxxx xxxx xxxxx  xxxx xxxx xxxxx   485 xxxx xxxxx
Volume/Cap:  0.15 0.00 0.01  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  12.5 xxxx xxxxx
LOS by Move:    *    *    *     *    *    *     *    *    *     B    *    *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx   52 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 86.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    F    *     *    *    *     *    *    *     *    *    *
ApproachDel:      86.7            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        F                *                *                *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
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---------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                           Future With Project
                              AM Peak Hour
---------------------------------------------------------------------------------

                      Level Of Service Computation Report
          Circular 212 Planning Method (Future Volume Alternative)
*********************************************************************************
Intersection #5 Mt. Gleason Avenue / Foothill Boulevard
*********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.616
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         48                Level Of Service:                  B
*********************************************************************************
Street Name:         Mt. Gleason Avenue               Foothill Boulevard
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected         Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Y+R:          4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:        0  0  0  1  0    0  0  1! 0  0    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  109   11   191   38    4   134 1116   25     6  914   92
Growth Adj:  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04
Initial Bse:    0  113   11   199   40    4   139 1161   26     6  951   96
Added Vol:      0   23    0     0   20    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:    0  136   11   199   60    4   139 1161   26     6  951   96
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:     0  136   11   199   60    4   139 1161   26     6  951   96
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    0  136   11   199   60    4   139 1161   26     6  951   96
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:    0  136   11   199   60    4   139 1161   26     6  951   96
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425 1425  1425 1425 1425  1425 1425 1425  1425 1425 1425
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.00 0.92 0.08  0.76 0.23 0.01  1.00 2.00 1.00  1.00 2.00 1.00
Final Sat.:     0 1315  110  1079  323   23  1425 2850 1425  1425 2850 1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.10 0.10  0.18 0.18 0.18  0.10 0.41 0.02  0.00 0.33 0.07
Crit Volume:    0                  262        139                  476
Crit Moves:  ****                 ****       ****                 ****
*********************************************************************************
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--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                          Future With Project
                             AM Peak Hour
--------------------------------------------------------------------------------

                    Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Tujunga Canyon Boulevard / Summitrose Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.536
Loss Time (sec):        0               Average Delay (sec/veh):        12.8
Optimal Cycle:          0               Level Of Service:                  B
********************************************************************************
Street Name:     Tujunga Canyon Boulevard            Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      76  191     6    15  286    18    21   63    76    16  149    20
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   79  199     6    16  298    19    22   66    79    17  155    21
Added Vol:      0   11     0     0    4     1     4   12     0     0   14     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   79  210     6    16  302    20    26   78    79    17  169    21
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    79  210     6    16  302    20    26   78    79    17  169    21
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   79  210     6    16  302    20    26   78    79    17  169    21
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   79  210     6    16  302    20    26   78    79    17  169    21
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.27 0.71  0.02  0.05 0.89  0.06  0.14 0.42  0.44  0.08 0.82  0.10
Final Sat.:   164  434    13    29  563    37    80  240   245    45  459    56
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.48 0.48  0.48  0.54 0.54  0.54  0.32 0.32  0.32  0.37 0.37  0.37
Crit Moves:       ****             ****             ****             ****
Delay/Veh:   13.1 13.1  13.1  14.0 14.0  14.0  11.0 11.0  11.0  11.8 11.8  11.8
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  13.1 13.1  13.1  14.0 14.0  14.0  11.0 11.0  11.0  11.8 11.8  11.8
LOS by Move:    B    B     B     B    B     B     B    B     B     B    B     B
ApproachDel:      13.1             14.0             11.0             11.8
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       13.1             14.0             11.0             11.8
LOS by Appr:         B                B                B                B
AllWayAvgQ:    0.8  0.8   0.8   1.0  1.0   1.0   0.4  0.4   0.4   0.5  0.5   0.5
********************************************************************************
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--------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                          Future With Project
                             AM Peak Hour
--------------------------------------------------------------------------------
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
                    LADWP Redmont Pumping Station and Tank
                            Future With Project
                               AM Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Redmont Avenue / Summitrose Street
********************************************************************************
Average Delay (sec/veh):      0.8      Worst Case Level Of Service: A[  9.4]
********************************************************************************
Street Name:          Redmont Avenue                  Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   0  1  0  0  0   0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    1    0    18    7   74     0    0  167     2
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:    0    0     0    1    0    19    7   77     0    0  174     2
Added Vol:      0    0     0    0    0     0    0   12     0    0   14     2
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0    1    0    19    7   89     0    0  188     4
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0    0     0    1    0    19    7   89     0    0  188     4
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
FinalVolume:    0    0     0    1    0    19    7   89     0    0  188     4
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   293  293   190   192 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   702  621   857  1394 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   699  618   857  1394 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.00 0.00  0.02  0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *    *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  847 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.4 xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *    *    A     *     A    *     *     *    *     *
ApproachDel:    xxxxxx             9.4             xxxxxx           xxxxxx
ApproachLOS:        *                A                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
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                    LADWP Redmont Pumping Station and Tank
                            Future With Project
                               AM Peak Hour
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                      Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Tujunga Canyon Boulevard / Apperson Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):        0.746
Loss Time (sec):        0               Average Delay (sec/veh):       18.3
Optimal Cycle:          0               Level Of Service:                 C
********************************************************************************
Street Name:     Tujunga Canyon Boulevard             Apperson Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      64  184     8   57  299    41   12  105   126   19  202    73
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:   67  191     8   59  311    43   12  109   131   20  210    76
Added Vol:      0   10     0    0    4     0    1    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   67  201     8   59  315    43   13  109   131   20  210    76
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    67  201     8   59  315    43   13  109   131   20  210    76
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   67  201     8   59  315    43   13  109   131   20  210    76
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   67  201     8   59  315    43   13  109   131   20  210    76
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.24 0.73  0.03 0.14 0.76  0.10 0.05 0.43  0.52 0.06 0.69  0.25
Final Sat.:   122  369    15   79  422    57   27  217   261   33  355   128
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.55 0.55  0.55 0.75 0.75  0.75 0.50 0.50  0.50 0.59 0.59  0.59
Crit Moves:       ****                  ****      ****                 ****
Delay/Veh:   15.9 15.9  15.9 23.2 23.2  23.2 14.5 14.5  14.5 16.8 16.8  16.8
Delay Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  15.9 15.9  15.9 23.2 23.2  23.2 14.5 14.5  14.5 16.8 16.8  16.8
LOS by Move:    C    C     C    C    C     C    B    B     B    C    C     C
ApproachDel:      15.9             23.2             14.5             16.8
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       15.9             23.2             14.5             16.8
LOS by Appr:        C                C                B                C
AllWayAvgQ:   0.9  0.9   0.9  2.2  2.2   2.2  0.7  0.7   0.7  1.1  1.1   1.1
********************************************************************************
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LADWP Redmont Pumping Station and Tank
Future With Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future With Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #9 Tujunga Canyon Boulevard / Valmont Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.705
Loss Time (sec):	0	Average Delay (sec/veh):	14.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard						Valmont Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	30	170	7	31	420	14	5	56	72	6	97	56
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	31	177	7	32	437	15	5	58	75	6	101	58
Added Vol:	0	10	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	187	7	32	441	15	5	58	75	6	101	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	31	187	7	32	441	15	5	58	75	6	101	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	187	7	32	441	15	5	58	75	6	101	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	31	187	7	32	441	15	5	58	75	6	101	58
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.14	0.83	0.03	0.07	0.90	0.03	0.04	0.42	0.54	0.04	0.61	0.35
Final Sat.:	86	516	20	46	626	21	21	237	305	21	345	199
Capacity Analysis Module:												
Vol/Sat:	0.36	0.36	0.36	0.70	0.70	0.70	0.25	0.25	0.25	0.29	0.29	0.29
Crit Moves:		****			****			****			****	
Delay/Veh:	11.2	11.2	11.2	18.5	18.5	18.5	10.2	10.2	10.2	10.7	10.7	10.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.2	11.2	11.2	18.5	18.5	18.5	10.2	10.2	10.2	10.7	10.7	10.7
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B
ApproachDel:		11.2			18.5			10.2			10.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		11.2			18.5			10.2			10.7	
LOS by Appr:		B			C			B			B	
AllWayAvgQ:	0.5	0.5	0.5	2.0	2.0	2.0	0.2	0.2	0.2	0.3	0.3	0.3

LADWP Redmont Pumping Station and Tank
Future With Project
AM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future With Project
AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 Tujunga Canyon Boulevard / Foothill Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.839
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	115	Level Of Service:	D

Street Name:	Tujunga Canyon Boulevard						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 0 1 0			1 0 1 0 1			1 0 2 0 1			1 0 2 0 1		
Volume Module:												
Base Vol:	254	102	32	306	367	20	9	928	584	50	367	94
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	264	106	33	318	382	21	9	966	608	52	382	98
Added Vol:	0	10	0	0	4	0	0	20	0	0	23	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	264	116	33	318	386	21	9	986	608	52	405	98
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	264	116	33	318	386	21	9	986	608	52	405	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	264	116	33	318	386	21	9	986	608	52	405	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	291	116	33	318	386	21	9	986	608	52	405	98
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.78	0.22	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2850	1107	318	1425	1425	1425	1425	2850	1425	1425	2850	1425
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.22	0.27	0.01	0.01	0.35	0.43	0.04	0.14	0.07
Crit Volume:		149			386				608	52		
Crit Moves:		****			****				****	****		

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                     LADWP Redmont Pumping Station and Tank
                            Future With Project
                               PM Peak Hour
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                       Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mt. Gleason Avenue / Hillrose Street
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.395
Loss Time (sec):       0              Average Delay (sec/veh):         9.9
Optimal Cycle:         0              Level Of Service:                  A
********************************************************************************
Street Name:        Mt. Gleason Avenue                Hillrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      19  226    30    13  148    13    29   93    27    16   65    21
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   20  235    31    14  154    14    30   97    28    17   68    22
Added Vol:      0    0     0     0    0     0     0    0     0     9    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   20  235    31    14  154    14    30   97    28    26   70    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    20  235    31    14  154    14    30   97    28    26   70    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   20  235    31    14  154    14    30   97    28    26   70    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   20  235    31    14  154    14    30   97    28    26   70    22
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.07 0.82  0.11  0.07 0.86  0.07  0.19 0.63  0.18  0.22 0.59  0.19
Final Sat.:    50  595    79    52  589    52   127  408   118   140  381   120
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.40 0.40  0.40  0.26 0.26  0.26  0.24 0.24  0.24  0.18 0.18  0.18
Crit Moves:             ****  ****                          ****  ****
Delay/Veh:   10.7 10.7  10.7   9.5  9.5   9.5   9.5  9.5   9.5   9.2  9.2   9.2
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  10.7 10.7  10.7   9.5  9.5   9.5   9.5  9.5   9.5   9.2  9.2   9.2
LOS by Move:    B    B     B     A    A     A     A    A     A     A    A     A
ApproachDel:      10.7              9.5              9.5              9.2
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       10.7              9.5              9.5              9.2
LOS by Appr:         B                A                A                A
AllWayAvgQ:   0.6  0.6   0.6   0.3  0.3   0.3   0.3  0.3   0.3   0.2  0.2   0.2
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                     LADWP Redmont Pumping Station and Tank
                            Future With Project
                               PM Peak Hour
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Note: Queue reported is the number of cars per lane.
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LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Tujunga Canyon Blvd. / Hillrose Street (North)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.287
Loss Time (sec):	0	Average Delay (sec/veh):	8.7
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Tujunga Canyon Boulevard						Hillrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 1	0	0 0
Volume Module:												
Base Vol:	82	137	2	1	160	12	13	0	80	1	1	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	85	143	2	1	166	12	14	0	83	1	1	0
Added Vol:	0	0	0	0	9	0	0	0	4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	85	143	2	1	175	12	14	0	87	1	1	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	143	2	1	175	12	14	0	87	1	1	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	143	2	1	175	12	14	0	87	1	1	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	143	2	1	175	12	14	0	87	1	1	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.62	0.01	0.01	0.93	0.06	0.13	0.00	0.87	0.50	0.50	0.00
Final Sat.:	298	498	7	4	754	54	104	0	671	329	329	0
Capacity Analysis Module:												
Vol/Sat:	0.29	0.29	0.29	0.23	0.23	0.23	0.13	xxxx	0.13	0.00	0.00	xxxx
Crit Moves:		****				****	****				****	
Delay/Veh:	9.1	9.1	9.1	8.6	8.6	8.6	7.9	0.0	7.9	8.0	8.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.1	9.1	9.1	8.6	8.6	8.6	7.9	0.0	7.9	8.0	8.0	0.0
LOS by Move:	A	A	A	A	A	A	A	*	A	A	A	*
ApproachDel:		9.1			8.6			7.9			8.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.1			8.6			7.9			8.0	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.4	0.4	0.4	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0

LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #3 Tujunga Canyon Blvd. / Hillrose Street (South)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.317
Loss Time (sec):	0	Average Delay (sec/veh):	8.8
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Tujunga Canyon Boulevard						Hillrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	174	3	59	183	0	0	0	0	13	0	47
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	181	3	61	190	0	0	0	0	14	0	49
Added Vol:	0	0	0	2	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	181	3	63	200	0	0	0	0	14	0	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	181	3	63	200	0	0	0	0	14	0	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	181	3	63	200	0	0	0	0	14	0	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	181	3	63	200	0	0	0	0	14	0	49
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.98	0.02	0.24	0.76	0.00	0.00	0.00	0.00	0.22	0.00	0.78
Final Sat.:	0	809	14	200	631	0	0	0	0	164	0	593
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.22	0.22	0.32	0.32	xxxx	xxxx	xxxx	xxxx	0.08	xxxx	0.08
Crit Moves:		****			****					****		
Delay/Veh:	0.0	8.5	8.5	9.2	9.2	0.0	0.0	0.0	0.0	7.7	0.0	7.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.5	8.5	9.2	9.2	0.0	0.0	0.0	0.0	7.7	0.0	7.7
LOS by Move:	*	A	A	A	A	*	*	*	*	A	*	A
ApproachDel:		8.5			9.2			xxxxxx			7.7	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		8.5			9.2			xxxxxx			7.7	
LOS by Appr:		A			A			*			A	
AllWayAvgQ:	0.3	0.3	0.3	0.4	0.4	0.4	0.0	0.0	0.0	0.1	0.1	0.1

LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

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--------------------------------------------------------------------------------
                   LADWP Redmont Pumping Station and Tank
                            Future With Project
                               PM Peak Hour
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Jardine Avenue / Foothill Boulevard
********************************************************************************
Average Delay (sec/veh):      0.6      Worst Case Level Of Service: F[ 78.2]
********************************************************************************
Street Name:          Jardine Avenue                 Foothill Boulevard
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:      0  0  1! 0  0   0  0  0  0  0   0  0  2  0  1   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     12    0     8     0    0     0     0 1269    28    15 1300     0
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:  12    0     8     0    0     0     0 1321    29    16 1353     0
Added Vol:     0    0     0     0    0     0     0   45     0     0   56     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  12    0     8     0    0     0     0 1366    29    16 1409     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   12    0     8     0    0     0     0 1366    29    16 1409     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:  12    0     8     0    0     0     0 1366    29    16 1409     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 2101 2806   683  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1395 xxxx xxxxx
Potent Cap.:   46   19   397  xxxx xxxx xxxxx  xxxx xxxx xxxxx   497 xxxx xxxxx
Move Cap.:     45   18   397  xxxx xxxx xxxxx  xxxx xxxx xxxxx   497 xxxx xxxxx
Volume/Cap:  0.28 0.00  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.03 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  12.5 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx   69 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 78.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    F     *     *    *     *     *    *     *     *    *     *
ApproachDel:       78.2            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         F                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```



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--------------------------------------------------------------------------------
                   LADWP Redmont Pumping Station and Tank
                            Future With Project
                               PM Peak Hour
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
           Circular 212 Planning Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Mt. Gleason Avenue / Foothill Boulevard
********************************************************************************
Cycle (sec):           100                Critical Vol./Cap.(X):         0.593
Loss Time (sec):         0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:          46                Level Of Service:                  A
********************************************************************************
Street Name:          Mt. Gleason Avenue               Foothill Boulevard
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:      0  0  0  1  0   0  0  1! 0  0   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0   72    21    99   26     3   167 1049    44    18  980   144
Growth Adj:  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04  1.04 1.04  1.04
Initial Bse:   0   75    22   103   27     3   174 1092    46    19 1020   150
Added Vol:     0   27     0     0   28     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0  102    22   103   55     3   174 1092    46    19 1020   150
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0  102    22   103   55     3   174 1092    46    19 1020   150
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0  102    22   103   55     3   174 1092    46    19 1020   150
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  102    22   103   55     3   174 1092    46    19 1020   150
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.82  0.18  0.64 0.34  0.02  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:     0 1173   252   911  487    28  1425 2850  1425  1425 2850  1425
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.09  0.09  0.11 0.11  0.11  0.12 0.38  0.03  0.01 0.36  0.11
Crit Volume:    0                         161   174                    510
Crit Moves:  ****                        ****  ****                   ****
********************************************************************************
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LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 Tujunga Canyon Boulevard / Summitrose Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.324
Loss Time (sec):	0	Average Delay (sec/veh):	10.0
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Tujunga Canyon Boulevard						Summitrose Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Stop Sign			Stop Sign			Stop Sign			Stop Sign	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0	
Volume Module:												
Base Vol:	41	150	15	15	166	9	19	83	97	11	76	9
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	43	156	16	16	173	9	20	86	101	11	79	9
Added Vol:	0	4	0	0	11	4	1	16	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	160	16	16	184	13	21	102	101	11	95	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	43	160	16	16	184	13	21	102	101	11	95	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	160	16	16	184	13	21	102	101	11	95	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	43	160	16	16	184	13	21	102	101	11	95	9
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.20	0.73	0.07	0.07	0.87	0.06	0.09	0.46	0.45	0.10	0.82	0.08
Final Sat.:	132	497	48	50	585	43	64	316	311	62	518	51
Capacity Analysis Module:												
Vol/Sat:	0.32	0.32	0.32	0.31	0.31	0.31	0.32	0.32	0.32	0.18	0.18	0.18
Crit Moves:	****				****			****				****
Delay/Veh:	10.2	10.2	10.2	10.1	10.1	10.1	10.0	10.0	10.0	9.3	9.3	9.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.2	10.2	10.2	10.1	10.1	10.1	10.0	10.0	10.0	9.3	9.3	9.3
LOS by Move:	B	B	B	B	B	B	A	A	A	A	A	A
ApproachDel:		10.2			10.1			10.0			9.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.2			10.1			10.0			9.3	
LOS by Appr:		B			B			A			A	
AllWayAvgQ:	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2

LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

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-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                          Future With Project
                             PM Peak Hour
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
       2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 Redmont Avenue / Summitrose Street
*******************************************************************************
Average Delay (sec/veh):      0.7      Worst Case Level Of Service: A[  9.4]
*******************************************************************************
Street Name:          Redmont Avenue                 Summitrose Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   0  1  0  0  0   0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    2    0     7   15  132     0    0   97     8
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:    0    0     0    2    0     7   16  137     0    0  101     8
Added Vol:      0    0     0    2    0     0    0   16     0    0   16     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0    4    0     7   16  153     0    0  117     8
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0    0     0    4    0     7   16  153     0    0  117     8
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
FinalVolume:    0    0     0    4    0     7   16  153     0    0  117     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   306  306   121   125 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   690  611   936  1474 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   685  605   936  1474 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.01 0.00  0.01  0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  827 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.0 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.4 xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    A     *     A    *     *     *    *     *
ApproachDel:    xxxxxx             9.4           xxxxxx           xxxxxx
ApproachLOS:       *                A               *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```



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-------------------------------------------------------------------------------
                  LADWP Redmont Pumping Station and Tank
                          Future With Project
                             PM Peak Hour
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 Tujunga Canyon Boulevard / Apperson Street
*******************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.468
Loss Time (sec):        0               Average Delay (sec/veh):        11.5
Optimal Cycle:          0               Level Of Service:                  B
*******************************************************************************
Street Name:     Tujunga Canyon Boulevard             Apperson Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      52  176    21   47  218    18   18  111    90    8   92    29
Growth Adj:  1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04 1.04 1.04  1.04
Initial Bse:   54  183    22   49  227    19   19  116    94    8   96    30
Added Vol:      0    4     0    0   10     1    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   54  187    22   49  237    20   19  116    94    8   96    30
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    54  187    22   49  237    20   19  116    94    8   96    30
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   54  187    22   49  237    20   19  116    94    8   96    30
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   54  187    22   49  237    20   19  116    94    8   96    30
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.21 0.71  0.08 0.16 0.78  0.06 0.08 0.51  0.41 0.06 0.72  0.22
Final Sat.:   132  456    53  104  506    42   51  315   256   36  412   130
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.41 0.41  0.41 0.47 0.47  0.47 0.37 0.37  0.37 0.23 0.23  0.23
Crit Moves:  ****                 ****                 ****            ****
Delay/Veh:   11.6 11.6  11.6 12.4 12.4  12.4 11.0 11.0  11.0 10.1 10.1  10.1
Delay Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  11.6 11.6  11.6 12.4 12.4  12.4 11.0 11.0  11.0 10.1 10.1  10.1
LOS by Move:    B    B     B    B    B     B    B    B     B    B    B     B
ApproachDel:      11.6             12.4             11.0             10.1
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       11.6             12.4             11.0             10.1
LOS by Appr:        B                B                B                B
AllWayAvgQ:   0.6  0.6   0.6  0.7  0.7   0.7  0.5  0.5   0.5  0.2  0.2   0.2
*******************************************************************************
```

LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #9 Tujunga Canyon Boulevard / Valmont Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.503
Loss Time (sec):	0	Average Delay (sec/veh):	11.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tujunga Canyon Boulevard						Valmont Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	47	302	5	18	214	19	11	60	28	8	56	15
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	49	314	5	19	223	20	11	62	29	8	58	16
Added Vol:	0	4	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	49	318	5	19	233	20	11	62	29	8	58	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	49	318	5	19	233	20	11	62	29	8	58	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	318	5	19	233	20	11	62	29	8	58	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	49	318	5	19	233	20	11	62	29	8	58	16
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.13	0.86	0.01	0.07	0.86	0.07	0.11	0.61	0.28	0.10	0.71	0.19
Final Sat.:	97	632	10	50	620	53	67	367	171	60	420	112
Capacity Analysis Module:												
Vol/Sat:	0.50	0.50	0.50	0.38	0.38	0.38	0.17	0.17	0.17	0.14	0.14	0.14
Crit Moves:		****				****		****			****	
Delay/Veh:	12.2	12.2	12.2	10.5	10.5	10.5	9.3	9.3	9.3	9.2	9.2	9.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.2	12.2	12.2	10.5	10.5	10.5	9.3	9.3	9.3	9.2	9.2	9.2
LOS by Move:	B	B	B	B	B	B	A	A	A	A	A	A
ApproachDel:		12.2			10.5			9.3			9.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.2			10.5			9.3			9.2	
LOS by Appr:		B			B			A			A	
AllWayAvgQ:	0.9	0.9	0.9	0.5	0.5	0.5	0.2	0.2	0.2	0.1	0.1	0.1

LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Note: Queue reported is the number of cars per lane.

LADWP Redmont Pumping Station and Tank
Future With Project
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #10 Tujunga Canyon Boulevard / Foothill Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.764
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	79	Level Of Service:	C

Street Name:	Tujunga Canyon Boulevard						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Split Phase			Split Phase			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0	1 0	1 0	1	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	627	306	25	155	191	22	40	577	388	54	896	336
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	652	318	26	161	199	23	42	600	404	56	932	350
Added Vol:	0	4	0	0	10	0	0	27	0	0	27	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	652	322	26	161	209	23	42	627	404	56	959	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	652	322	26	161	209	23	42	627	404	56	959	350
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	652	322	26	161	209	23	42	627	404	56	959	350
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	718	322	26	161	209	23	42	627	404	56	959	350
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.93	0.07	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2850	1319	106	1425	1425	1425	1425	2850	1425	1425	2850	1425
Capacity Analysis Module:												
Vol/Sat:	0.25	0.24	0.24	0.11	0.15	0.02	0.03	0.22	0.28	0.04	0.34	0.25
Crit Volume:	359				209		42				480	
Crit Moves:	****				****		****				****	

APPENDIX F
Peak Hour Signal Warrant Worksheets

INTERSECTION: Foothill Boulevard & Jardine Avenue Scenario: Existing

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 2 of 4)

NOT ANALYZED

WARRANT 2 - Four Hour Vehicular Volume — SATISFIED* YES ☐ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	0	0	0	0	Hour
Both Approaches - Major Street		x	0	0	0	0	
Higher Approach - Minor Street	x		0	0	0	0	

*All plotted points fall above the curves in Figure 4C-1. (Urban Areas)	YES ☐	NO ☐
OR, All plotted points fall above the curves in Figure 4C-2. (Rural Areas)	YES ☐	NO ☐

WARRANT 3 - Peak Hour — SATISFIED YES ☐ NO ☒
(Part A or Part B must be satisfied)

PART A — SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1	The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND *51.8 seconds in delay & 0 vehicle-hours of delay*	YES ☐	NO ☒
2	The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES ☐	NO ☒
3	The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES ☒	NO ☐

PART B — SATISFIED YES ☐ NO ☒

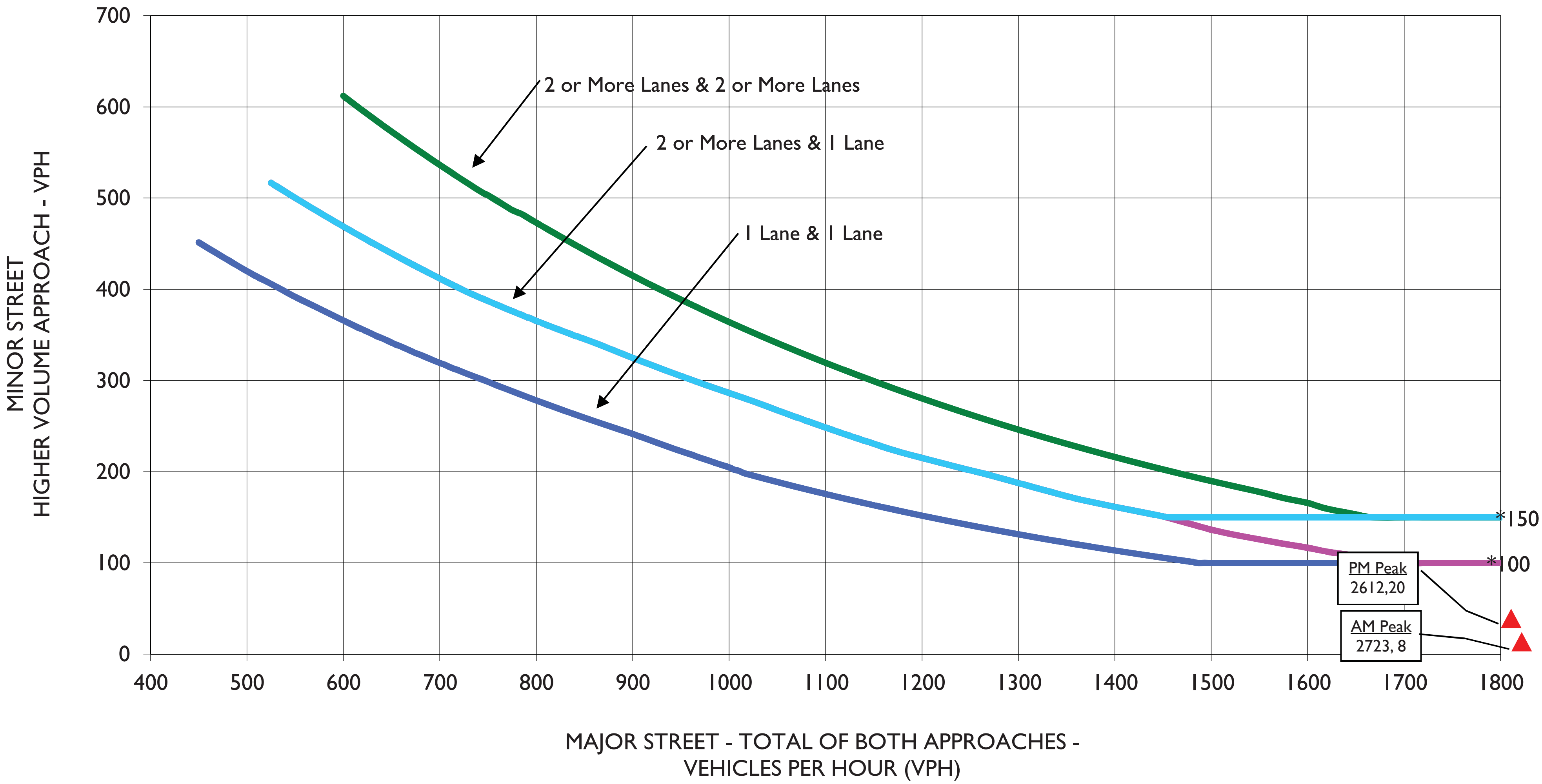
APPROACH LANES	One	2 or More	*am peak*	*pm peak*
Both Approaches - Major Street		x	2,723	2,612
Higher Approach - Minor Street	x		8	20

The plotted point falls above the curve in Figure 4C-3. (Urban Areas)	YES ☐	NO ☒
OR, The plotted point falls above the curve in Figure 4C-4. (Rural Areas)	YES ☐	NO ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

KOA CORPORATION
PLANNING & ENGINEERING

Foothill Boulevard & Jardine Avenue
AM(PM) Peak hour Traffic Signal Warrant Based on
California Manual on Uniform Traffic Control Devices, 2012
Scenario: Existing



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND
Foothill Boulevard - 2 Lane(s) Major Street: 2723 (2612) VPH
Jardine Avenue - 1 Lane(s) Minor Street: 8 (20) VPH

Peak Hour Volumes Satisfy Warrants? NO

INTERSECTION: Foothill Boulevard & Jardine Avenue   Scenario: Ex+Proj

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume — SATISFIED* YES ☐ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

NOT ANALYZED

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street			0	0	0	
Higher Approach - Minor Street	x		0	0	0	0

*All plotted points fall above the curves in Figure 4C-1. (Urban Areas)	YES ☐	NO ☐
OR, All plotted points fall above the curves in Figure 4C-2. (Rural Areas)	YES ☐	NO ☐

WARRANT 3 - Peak Hour (Part A or Part B must be satisfied) — SATISFIED YES ☐ NO ☒

PART A — SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1	The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND *69.3 seconds in delay & 0 vehicle-hours of delay*	YES ☐	NO ☒
2	The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES ☐	NO ☒
3	The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES ☒	NO ☐

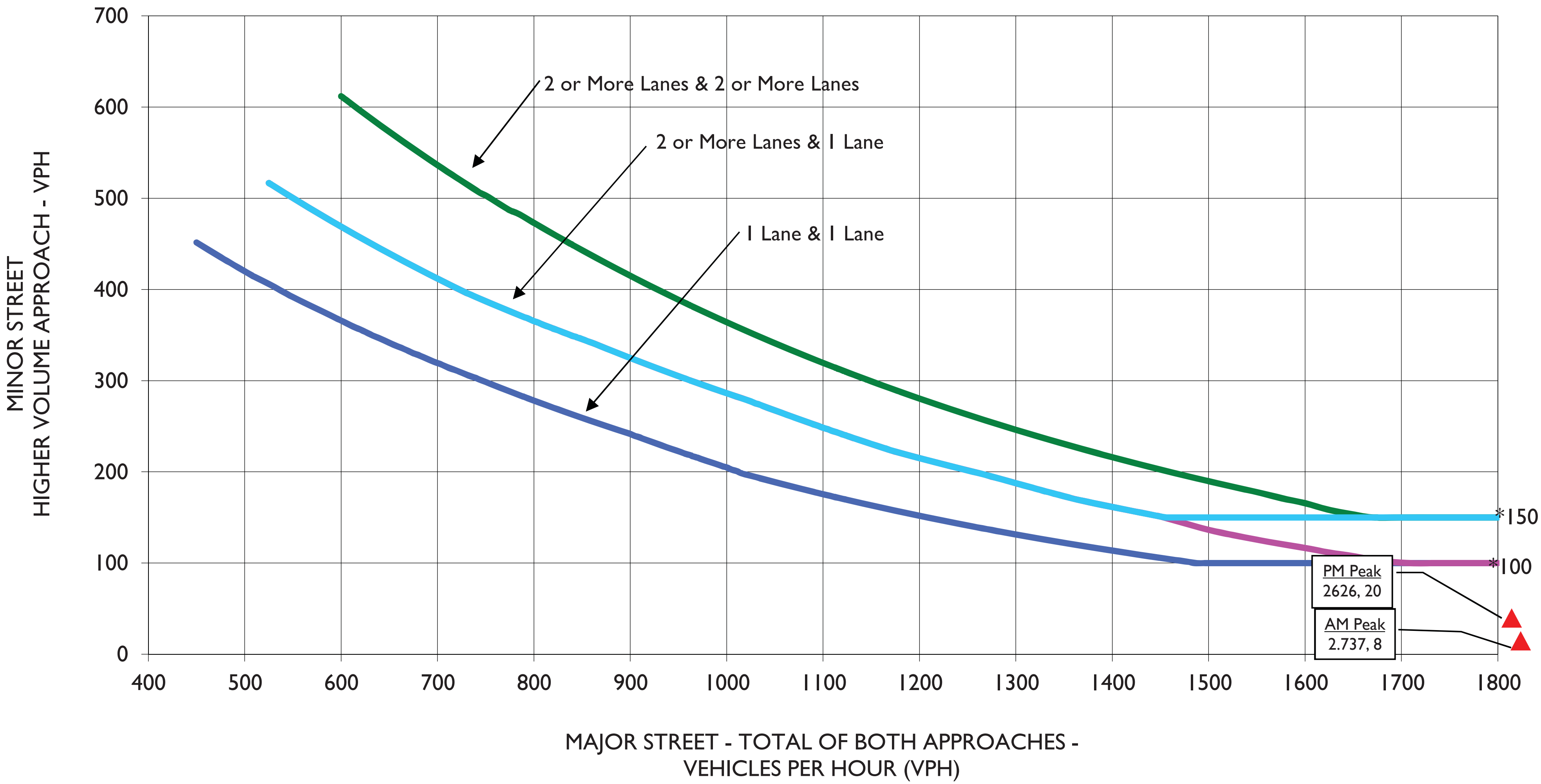
PART B — SATISFIED YES ☐ NO ☒

APPROACH LANES	One	2 or More	*am peak*	*pm peak*
Both Approaches - Major Street		x	2,737	2,626
Higher Approach - Minor Street	x		8	20

The plotted point falls above the curve in Figure 4C-3. (Urban Areas)	YES ☐	NO ☒
OR, The plotted point falls above the curve in Figure 4C-4. (Rural Areas)	YES ☐	NO ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Foothill Boulevard & Jardine Avenue
AM(PM) Peak hour Traffic Signal Warrant Based on California Manual on Uniform Traffic Control Devices, 2012
Scenario: Existing + Project



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND

Foothill Boulevard - 2 Lane(s) Major Street: 2737(2626) VPH
Jardine Avenue - 1 Lane(s) Minor Street: 8(20) VPH

Peak Hour Volumes Satisfy Warrants? NO

INTERSECTION: Foothill Boulevard & Jardine Avenue Scenario: Fut No Proj

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume — SATISFIED* YES ☐ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

NOT ANALYZED

APPROACH LANES	One	2 or More	0	0	0	Hour
Both Approaches - Major Street	[illegible]	[illegible]	0	0	0	[illegible]
Higher Approach - Minor Street	x		0	0	0	0

*All plotted points fall above the curves in Figure 4C-1. (Urban Areas)	YES ☐ NO ☐
OR, All plotted points fall above the curves in Figure 4C-2. (Rural Areas)	YES ☐ NO ☐

WARRANT 3 - Peak Hour (Part A or Part B must be satisfied) — SATISFIED YES ☐ NO ☒

PART A — SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1	The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND *84.8 seconds in delay & 0 vehicle-hours of delay*	YES ☐ NO ☒
2	The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES ☐ NO ☒
3	The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES ☒ NO ☐

PART B — SATISFIED YES ☐ NO ☒

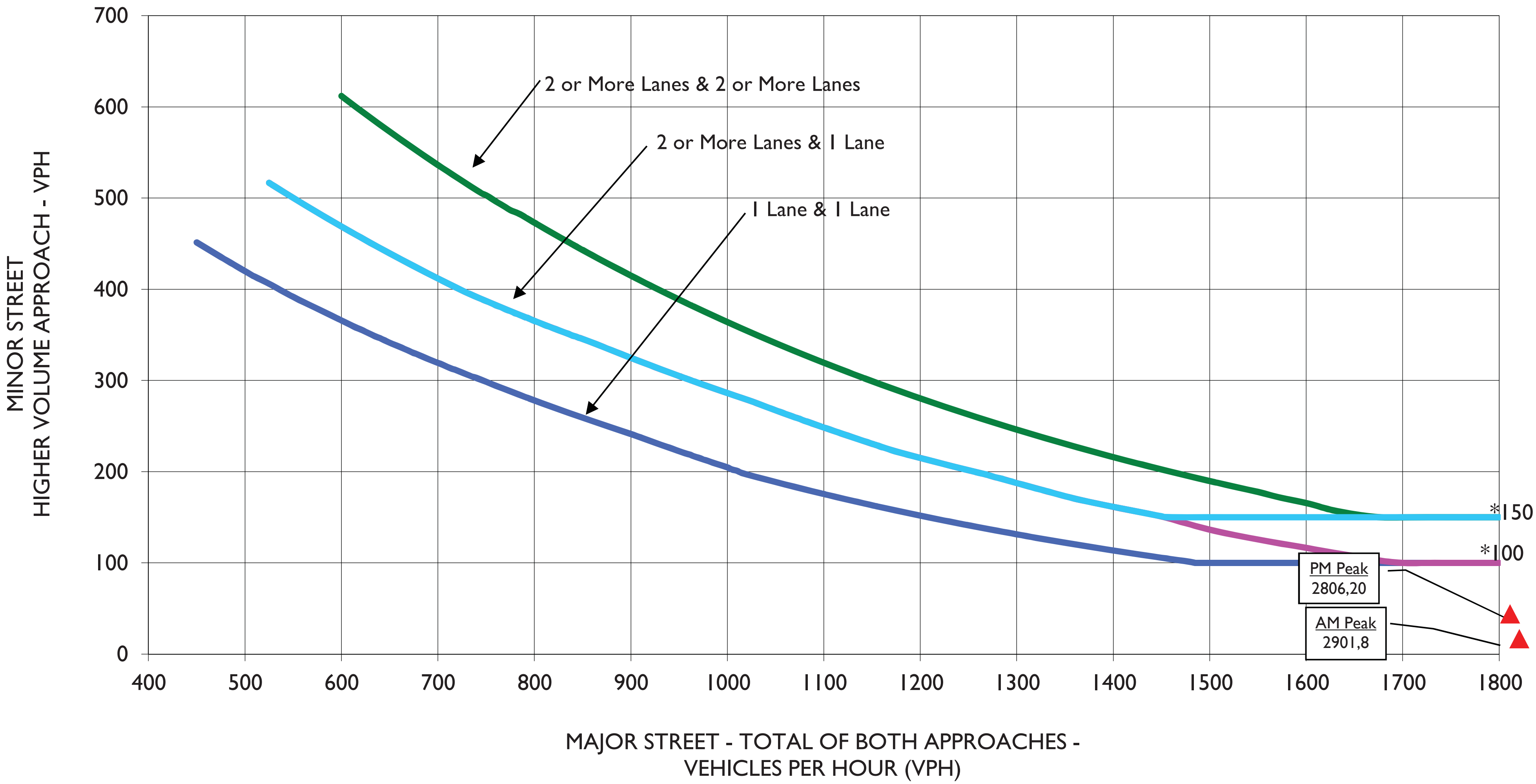
APPROACH LANES	One	2 or More	*am peak*	*pm peak*
Both Approaches - Major Street		x	2,901	2,806
Higher Approach - Minor Street	x		8	20

The plotted point falls above the curve in Figure 4C-3. (Urban Areas)	YES ☐ NO ☒
OR, The plotted point falls above the curve in Figure 4C-4. (Rural Areas)	YES ☐ NO ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

KOA CORPORATION
PLANNING & ENGINEERING

Foothill Boulevard & Jardine Avenue
AM(PM) Peak hour Traffic Signal Warrant Based on
California Manual on Uniform Traffic Control Devices, 2012
Scenario: Future No Project



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND
Foothill Boulevard - 2 Lane(s) Major Street: 2901 (2806) VPH
Jardine Avenue - 1 Lane(s) Minor Street: 8 (20) VPH

Peak Hour Volumes Satisfy Warrants? NO

INTERSECTION: Foothill Boulevard & Jardine Avenue   Scenario: Fut wProj

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED*** **YES** [ ] **NO** [ ]

Record hourly vehicular volumes for any four hours of an average day.

NOT ANALYZED

APPROACH LANES	One	2 or More	0	0	0	Hour
Both Approaches - Major Street			0	0	0	[illegible]
Higher Approach - Minor Street	x		0	0	0	0

*All plotted points fall above the curves in Figure 4C-1. (Urban Areas)	YES [ ] NO [ ]
OR, All plotted points fall above the curves in Figure 4C-2. (Rural Areas)	YES [ ] NO [ ]

WARRANT 3 - Peak Hour **SATISFIED** **YES** [ ] **NO** [X]
(Part A or Part B must be satisfied)

PART A **SATISFIED** **YES** [ ] **NO** [X]

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1	The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND *86.7 seconds in delay & 0 vehicle-hours of delay*	YES [ ] NO [X]
2	The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES [ ] NO [X]
3	The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES [X] NO [ ]

PART B **SATISFIED** **YES** [ ] **NO** [X]

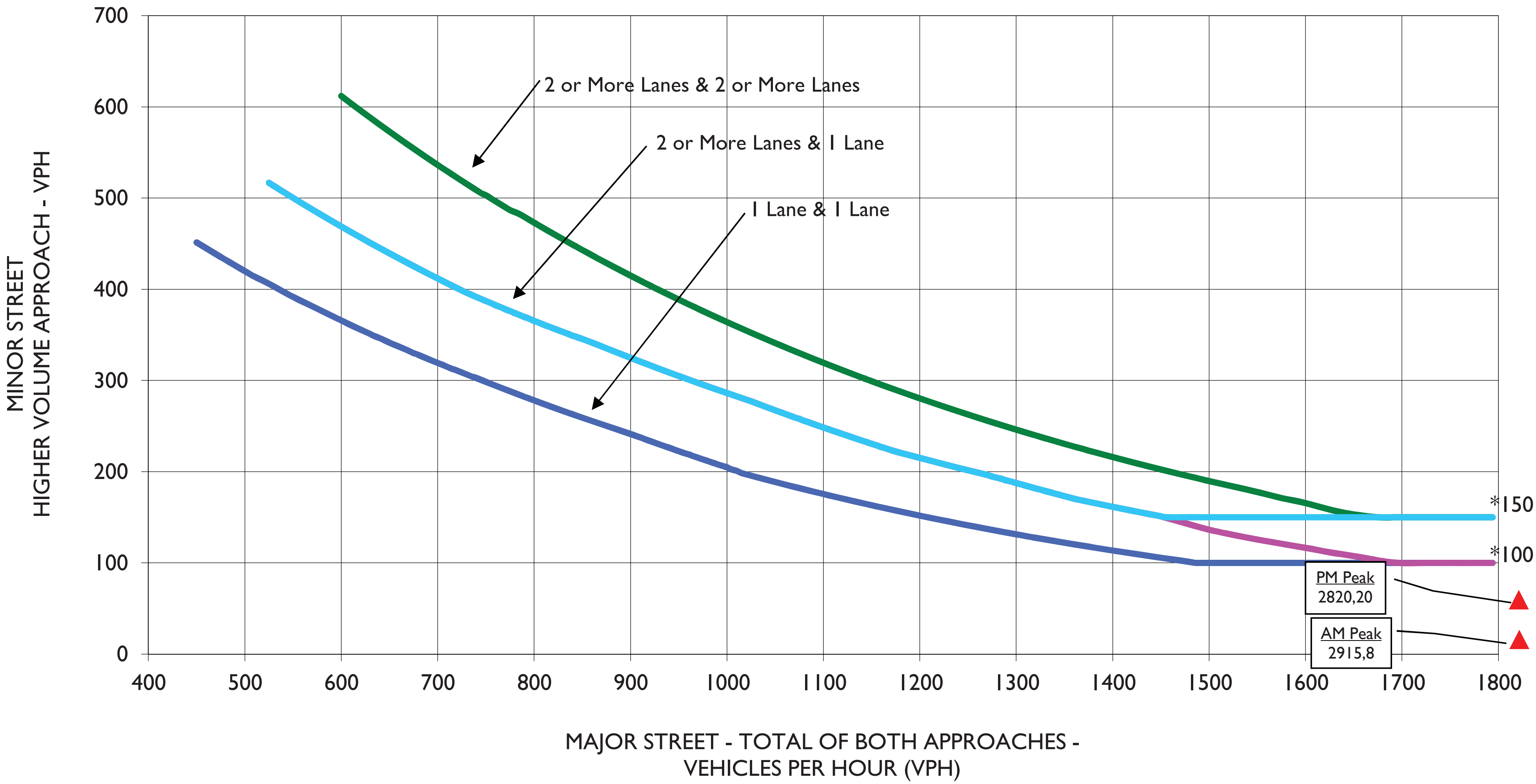
APPROACH LANES	One	2 or More	*am peak*	*pm peak*
Both Approaches - Major Street		x	2,915	2,820
Higher Approach - Minor Street	x		8	20

The plotted point falls above the curve in Figure 4C-3. (Urban Areas)	YES [ ] NO [X]
OR, The plotted point falls above the curve in Figure 4C-4. (Rural Areas)	YES [ ] NO [ ]

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

KOA CORPORATION
PLANNING & ENGINEERING

Foothill Boulevard & Jardine Avenue
AM(PM) Peak hour Traffic Signal Warrant Based on California Manual on Uniform Traffic Control Devices, 2012
Scenario: Future With Project



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND

▲ Foothill Boulevard - 2 Lane(s) Major Street: 2915(2820) VPH
Jardine Avenue - 1 Lane(s) Minor Street: 8 (20) VPH

Peak Hour Volumes Satisfy Warrants? NO