Appendix A – Notice of Preparation and Comments Received

Contains:

- Notice of Preparation, December 2, 2020
- Scoping Period comment letters received from:
  - Gail Price, December 19, 2020
  - City of Palo Alto, January 6, 2021
  - City of Palo Alto, January 11, 2021

County of Santa Clara

Facilities and Fleet Department

County Center at Charcot
2310 North First Street, Suite 200
San Jose, California 95131-1011
(408) 993-4600

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR 231 GRANT EDUCATOR WORKFORCE HOUSING

Project Owner/Proponent: County of Santa Clara - Facilities and Fleets Department (FAF)
Project Title: 231 Grant Educator Workforce Housing
Assessor's Parcel Number: 132-31-074

As the Lead Agency, the County of Santa Clara (County) will prepare an Environmental Impact Report (EIR) for the proposed project referenced above. The County welcomes your input regarding the scope and content of the environmental information to be included in the EIR. A brief description of the proposed project, its location, and a summary of the potential environmental effects is provided on the following pages.

The project proposes demolition of the existing single-story building on the site and construction of a four-story building that would contain approximately 110 residential units and related amenities and approximately 1,200 square feet of "flex space" which could be utilized as a café or other retail/commercial use. Approval of the project will require actions by the County of Santa Clara, including approval by the County Board of Supervisors.

A Public Scoping/Community Meeting to solicit comments on the Notice of Preparation will be held on:

Wednesday, December 16, 2020 from 6:30 p.m. to 7:30 p.m.

The meeting will be held virtually. The meeting link and instructions for joining the virtual meeting are available on the project website at https://www.sccgov.org/231grant.

In accordance with the California Environmental Quality Act (CEQA), comments on this Notice of Preparation are due within 30 days of its receipt. However, an earlier response, if possible, would be appreciated. Please send your response to:

County of Santa Clara Facilities and Fleets Department
Attention: Emily Chen
2310 North First Street, Suite 200
San Jose CA 95131
E-mail: Emily.F.Chen@faf.sccgov.org; Phone: (408) 993-4635

Prepared by:
Emily Chen, Senior Planner — Emily Chen — 12/2/2020
Signature ***Date***

Approved by:
David Barry, Chief of Facilities Planning Services — David Barry — 12/2/2020
Signature ***Date***

231 GRANT EDUCATOR WORKFORCE HOUSING

Project Location

The project site is at 231 Grant Avenue in the City of Palo Alto (Figure 1). The project site is approximately 1.4 acres bounded by Park Boulevard, Grant Avenue, and Birch Street. The project site contains an approximately 6,800-square-foot office building completed in 1956 and an associated parking area. The site is owned by the County and the existing office building currently houses the Santa Clara County Office of the Public Defender (Figure 2).

An outdoor café and multifamily residential housing are adjacent to northeast boundary of the Project site at the corner of Sheridan Avenue and Park Boulevard and a multistory office building is adjacent to southeast boundary of the project site at the corner of Sheridan Avenue and Birch Street. The Santa Clara County Superior Court building is west of the project site, across Grant Avenue. Areas to the east and west of Grant Avenue and south of Birch Street in the vicinity of the project site are predominantly multifamily residential housing. Office buildings and multifamily residential housing are north of the project site along Park Boulevard.

The project site is on County-owned property but within the incorporated area of the City of Palo Alto.

Project Description

The 231 Grant Educator Workforce Housing (the proposed project) is currently sponsored by the County of Santa Clara, Facebook, the City of Palo Alto, and participating school districts in Santa Clara County.

The proposed project would demolish the existing 6,800-square-foot office building at the project site and would construct a new four-story building, totaling approximately 112,000 square feet, on the site. The building would be developed with 110 residential units. These units would be intended to serve teachers and other full-time staff from participating school districts in Santa Clara County and from certain geographic districts in southern San Mateo County.[1] Approximately 2,000 square feet of community space, including a lounge, activity room and laundry, would be provided for residents' use, as well as management offices and approximately 1,200 square feet of "flex space" which could be utilized as a café or other retail or commercial use.

An at-grade parking structure with double car stackers would provide 112 parking spaces and a secure bicycle parking room would be provided with capacity for 134 bicycles. Approximately 5,600 square feet of open public space would be provided within three outdoor plaza areas, each centered around an existing mature tree (palm, camphor, and redwood, respectively) that would be retained as part of the project.

The project is anticipated to utilize modular construction methods; however, the use of traditional construction methods will also be analyzed as an alternative to the proposed project.

Potential Environmental Effects of the Project

The EIR will identify the significant environmental effects anticipated to result from implementation of the proposed project. As allowed by CEQA Guidelines §15063(a), an Initial Study has not been prepared for the proposed project because an EIR will clearly be required. Due to the location of the project site in an urban area that is not within or close to any farmlands or forestry resources, known mineral deposits, or wildfire hazard areas, these environmental topics will not be addressed in detail in the EIR.

[1] In the event units are not filled by school employees, then units may be offered to public safety employees or nonprofit employees.

The EIR will evaluate all other environmental issues contemplated for consideration under CEQA and the CEQA Guidelines, including:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Recreational Resources
- Population and Housing
- Public Services
- Transportation
- Utilities and Service Systems
- Tribal Cultural Resources

It is anticipated that the primary focus of analysis will be on the specific environmental topics outlined below. Mitigation measures will be identified to reduce or avoid significant impacts, as appropriate.

Aesthetics

The project site currently contains a single-story office building and associated surface parking and landscaping. The proposed project calls for the County to demolish this building, and to develop a four story building on the site. The EIR will describe the existing visual setting of the project area and changes that are anticipated to occur as a result of the proposed project. The EIR will also discuss potential light and glare issues from the development and evaluate the project's consistency with applicable zoning and design guidelines and other regulations governing scenic quality and aesthetics.

Air Quality

The EIR will address the regional air quality conditions in the Bay Area and discuss the proposed project's impacts to local and regional air quality according to the 2017 Bay Area Air Quality Management District guidelines and thresholds, focusing on temporary construction-related impacts such as construction vehicle exhaust and dust, as well as operational impacts from traffic generated by project residents, employees and visitors, and other operational emissions sources.

Biological Resources

The EIR will describe existing biological resources in the project vicinity and address any biological resource effects associated with the project, including impacts to habitats and special-status species, including nesting birds. The EIR will also address the loss of trees within the project site and the project's consistency with tree preservation ordinances of both the City of Palo Alto and the County.

Cultural and Tribal Cultural Resources

The existing office building on the project site was constructed in 1956. An historical resource evaluation has been completed for the site (AECOM 2020), which found that the existing building is not eligible for the National Register of Historic Places, California Register of Historical Places, County Heritage Resource Inventory, or the City of Palo Alto Historic Inventory. Direct impacts to built historic resources are therefore not anticipated for the project, although the EIR will identify any built historic resources in the vicinity of the project site that could potentially be indirectly impacted by the project. The EIR will also discuss the potential for prehistoric and Native American tribal cultural resources to be located in the project area.

Energy

The EIR will examine the potential for the project to result in excessive or inefficient use of energy and will discuss any energy conservation measures included as part of the project.

Geology & Soils

The project site is located within a seismically active region. The EIR will describe existing geological and soil conditions at the site, and discuss possible impacts associated with seismic hazards and soil instability, as well as potential impacts to paleontological resources.

Greenhouse Gas Emissions

The EIR will describe the regulatory context surrounding the issue of global climate change and will evaluate the project's greenhouse gas emissions and contribution to global climate change, in conformance with the methodology of the Bay Area Air Quality Management District and any other applicable criteria.

Hazards & Hazardous Materials

According to Regional Water Quality Control Board GeoTracker records, a regional plume of chlorinated solvents, known as the California-Olive-Emerson plume, exists in groundwater in the project vicinity. The EIR will describe existing hazardous materials conditions on and adjacent to the project site and identify any potential contamination or other hazardous materials that could affect construction workers and/or nearby receptors, such as residences, schools, daycare facilities, and open space/recreational areas. The EIR will also describe any hazardous materials or emissions associated with project construction or operation, and their potential impacts.

Hydrology & Water Quality

The EIR will describe the existing hydrologic and drainage conditions at the project site, as well as changes in site drainage and hydrological conditions that may result from the proposed project. The EIR will address the possible impacts of the project on stormwater, surface water, and groundwater quality.

Land Use and Planning

The project site is located in an urban area within the City of Palo Alto. The EIR will describe the existing land uses and zoning designations on and adjacent to the project site. Cumulative land use impacts that would occur as a result of the proposed project would be analyzed, including impacts due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Noise and Vibration

The EIR will describe existing noise conditions in the project area and evaluate the potential for noise and vibration generated by the project to exceed applicable noise standards and adversely affect sensitive receptors in the area. Noise and vibration impacts from both construction-related sources and operational sources (including project-generated traffic) will be analyzed.

Population and Housing

The project would construct up to 110 residential units. The EIR will assess whether the project would induce cumulative unplanned population growth in the area or displace substantial numbers of existing people or housing.

Public Services and Recreational Resources

The EIR will discuss the availability of public facilities and service systems (including police and fire services, parks, schools, and libraries) and recreational resources in the project area, and the potential for the project to require the construction of new or expanded facilities or result in adverse physical impacts to existing facilities.

Transportation

The EIR will describe the existing transportation network and analyze the impacts of the project, including whether the project would conflict with applicable transportation planning policies, result in a substantial

increase in vehicle miles travelled, create a traffic safety hazard, or impact emergency access. Temporary construction-related traffic impacts will also be analyzed.

Utilities and Service Systems

The EIR will describe the existing utilities serving the project area, including potable water supply, sanitary sewer, storm drainage, and solid waste management services. The EIR will evaluate the proposed project's effects on these utilities.

Alternatives

The EIR will identify and evaluate a reasonable range of alternatives to the project that would feasibly attain most of the project's basic objectives, but would avoid or substantially lessen any of the project's significant effects. It is anticipated that one of the alternatives to be analyzed would include the use of traditional construction methods rather than modular construction as proposed by the project. As required by CEQA, the EIR will analyze a "No Project" alternative. Other alternatives that seek to reduce the significant environmental impacts of the project will be identified. Alternatives discussed will be chosen based on their ability to reduce or avoid identified significant impacts of the project while achieving most of the identified objectives of the project (see CEQA Guidelines Section 15126.6).

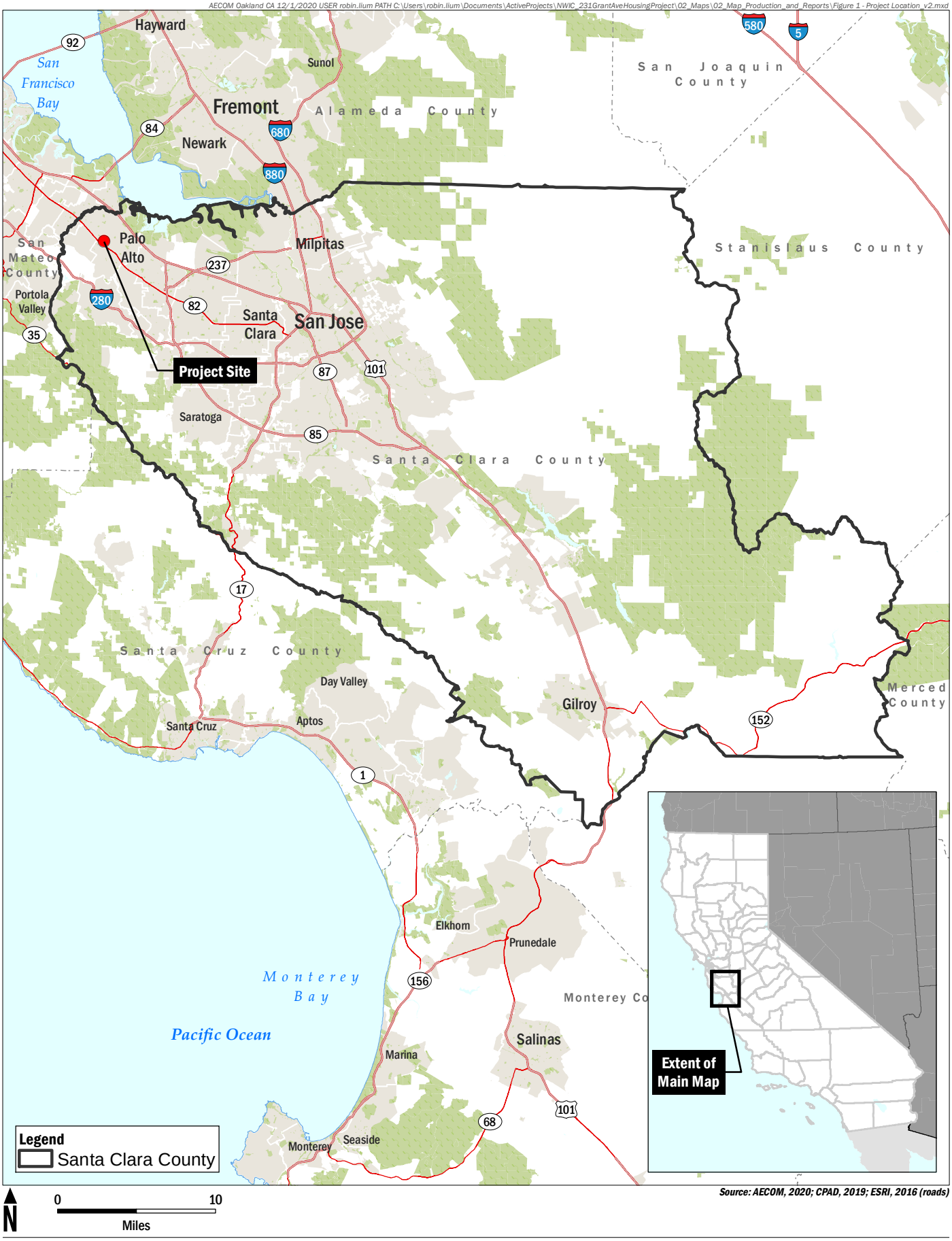
The EIR will identify the degree to which each alternative might avoid or substantially lessen one or more of the project's significant environmental impacts, whether the alternative could result in other or increased impacts, and the degree to which the alternative would feasibly accomplish most of the project's basic objectives. In accordance with CEQA, the EIR will identify an environmentally superior alternative, based on the number and degree of associated environmental impacts.

Cumulative Impacts

The EIR will include a discussion of significant cumulative impacts of the project when considered with other past, present, and reasonably foreseeable future projects in the area. This section will cover all relevant subject areas discussed in the EIR (e.g., air quality, noise, traffic), will specify which of the areas are anticipated to experience significant cumulative impacts, and will determine whether the proposed project's incremental contributions are cumulatively considerable. Mitigation measures will be identified to reduce or avoid any cumulatively considerable contribution from the project to significant cumulative impacts.

Other CEQA Sections

The EIR will also include other sections required by CEQA, including growth inducing impacts, significant and irreversible environmental changes, significant unavoidable impacts, references, EIR preparers, and appendices.



Source: AECOM, 2020; CPAD, 2019; ESRI, 2016 (roads)

AECOM

Santa Clara County

231 Grant Educator Workforce Housing

FIGURE 1

Project Location

AECOM

Santa Clara County

231 Grant Educator Workforce Housing

FIGURE 2

Proposed Project Site

donotreply@isd.sccgov.org

Subject: FW: 231 Grant: Public Comment from the Project Website

From: donotreply@isd.sccgov.org <donotreply@isd.sccgov.org>
Sent: Saturday, December 19, 2020 8:40 AM
To: Sifuentes, Melissa <melissa.sifuentes@faf.sccgov.org>
Subject: Request to receive updates about the County of Santa Clara's, 231 Grant Educator Workforce Housing project

First Name : Gail

Last Name : Price

Title:

Company or Organization Represented:

Phone Number: [redacted]

Street Address : [redacted]

City : [redacted]

State: [redacted]

Zip Code : 94306

Email: [redacted]

Comments: This is a critical and needed housing complex for educator workforce employees. It will serve as a model for other communities and demonstrate how partnerships can create much needed housing. Gail Price Former PAUSD School Board Trustee

PLANNING & DEVELOPMENT SERVICES
CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

January 6, 2021

Emily Chen, Project Manager
City of East Palo Alto, Planning Division
2310 North First Street, Suite 200
San Jose, CA 95131
Email: Emily.F.Chen@faf.sccgov.org

RE: Notice of Preparation of Environmental Impact Report, 231 Grant Educator Workforce Housing

Thank you for including the City of Palo Alto in the environmental review process for the above-referenced project.

Project Understanding
The Project, 231 Grant Educator Workforce Housing, is located on Assessor's Parcel Number (APN) 132-31-074, a 1.4 acre County-owned parcel within the City of Palo Alto bounded by Park Boulevard, Grant Avenue, and Birch Street. The project proposes demolition of an existing 6,800 square foot (sf) office building and associated parking lot and reconstruction of the site with a new four-story building totaling approximately 112,000 sf. The new building would include 110 multi-family residential rental units, approximately 2,000 sf of community living space, and approximately 1,200 sf of "flex space:" which could be utilized as a café or other retail or commercial use. The City understands that 112 vehicle parking spaces and 134 bicycle parking spaces would be provided. Approximately 5,600 sf of open public space would be provided within three outdoor plaza areas, each plaza designed around an existing mature tree that would be retained.

The zoning designation on the site is Public Facilities (PF) and the Comprehensive Plan land use designation of the site is Major Institution, Special Facilities (MISP). However, the City understands that the County intends to use preemptive authority for governmental immunity on this project. The City understands that, therefore, the City's zoning code and associated permit requirements would not apply to the proposed project. The County will serve as the lead agency and the County's applicable regulations would apply in-lieu of the City's requirements.

The City of Palo Alto provides the following comments in response to the Notice of Preparation.

Project Description
The project description should clearly demonstrate how the project qualifies for an exemption from local regulation under California Government Code Section 54701 with respect to the proposed uses of the site. The different uses of the project and the future tenants must meet the requirements in the government code in order to qualify for this exemption from local zoning requirements and local permitting requirements.

Thresholds
Because the project is located squarely within the City of Palo Alto and because the City of Palo Alto will serve as a responsible agency for this project, the EIR should utilize the City's thresholds of significance in-lieu of or in addition to the County's thresholds of significance when evaluating CEQA impacts. To the extent that these thresholds differ from the County's thresholds, the County should utilize the more conservative threshold. In particular, the City notes that its Council adopted thresholds of significance for Vehicle Miles Traveled that may differ from the County's thresholds.

Transportation

Although the CEQA analysis will not include a level of service analysis at nearby intersections in accordance with SB 743, the City of Palo may require a separate local traffic analysis be prepared so that the local impacts of the proposed development can be understood in accordance with the City of Palo Alto's Local Transportation Impact Analysis Policy and the City's Comprehensive Plan. The City requests that a proposed analysis scope discuss the anticipated trip generated by the proposed development, the anticipated distribution pattern of those trips, and estimated number of peak hour project trips at the nearby intersections where anticipated project trips may trigger the City's thresholds for additional Level of Service (LOS) analysis. This scoping and analysis is necessary for understanding traffic circulation around the site. The City of Palo Alto's intersection standards should be utilized. The City's LOS policy, which includes thresholds and standards, is provided here:
https://www.cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=65453.84&BlobID=77026

Bicycle and Vehicle Circulation

Park Boulevard is a major bike route; therefore, the City would not recommend the addition of any new curb cuts along this frontage or a design that directs increased vehicle ingress/egress to this frontage. The City encourages reducing existing curb cuts where feasible.

Traffic Calming

In the past, the City has received concerns from the residents in this neighborhood regarding the volume and speed of traffic in this area. The environmental analysis must determine whether the project may contribute to such issues, and consider if implementing traffic calming measures as part of the project would be appropriate within the immediate vicinity of the project.

Coordination

The City anticipates that construction of the City's Public Service Building could coincide with construction of this building. The traffic analysis must consider the cumulative impacts of these projects, particularly during construction, so that the impacts on traffic and access to adjacent residences and businesses can be understood. Access to adjacent properties must be maintained throughout construction. Coordination between the County and City of Palo Alto must occur to minimize potential impacts associated with street closures, vehicle deliveries, and other construction activities.

Permits

The County must obtain a permit from the City of Palo Alto for any material haul/wide truck loads as well as encroachment permit(s) for any temporary or permanent encroachment within the City's right-of-way.

The City understands that the County will be evaluating modular construction as an alternative to traditional construction methods. This would reduce the timeframe of construction; however, the City anticipates that it would increase the number of wide loads and total trucks traveling to and from the site during certain periods of construction. Additional information on the number of truck trips, the number of wide loads, etc. must be provided as part of the environmental analysis. The City will require that the County submit a Traffic Control Plan (TCP) for the City's review and approval prior to construction; this should be identified in the environmental analysis. The City would review the TCP to analyze and approve the routes, timing, and to determine if additional temporary traffic control measures are necessary.

Groundwater

The City understands that the project site is located within the California-Olive-Emerson Plume, which is known to contain groundwater contaminated with volatile organic compounds (VOCs). The EIR must analyze the impacts of construction activities on the release of VOCs and must identify the proper disposal of contaminated water, if encountered during construction. Although not required in accordance with

CEQA, the City anticipates that the County will work with the Regional Water Quality Control Board, Department of Toxic Substances Control, and/or the County Department of Environmental Health to identify appropriate measures for the safety of future residents/users.

Should you have any questions regarding this letter and the City's comment, please contact Claire Raybould at (650) 329-2116 or Claire.Raybould@cityofpaloalto.org or Jonathan Lait at Jonathan.Lait@cityofpaloalto.org.

Sincerely,

DocuSigned by:
Claire Raybould
2721A1A8AE4C4AA...

Claire Raybould, AICP
Senior Planner, Planning & Development Services

PLANNING & DEVELOPMENT SERVICES
CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

January 11, 2021

Emily Chen, Project Manager
City of East Palo Alto, Planning Division
2310 North First Street, Suite 200
San Jose, CA 95131
Email: Emily.F.Chen@faf.sccgov.org

RE: City of Palo Alto Comprehensive Plan Conformity Analysis, 231 Grant Educator Workforce Housing Project

On December 2, 2020 the County of Santa Clara submitted a letter to the City of Palo Alto noticing the proposed lease and project construction at 231 Grant Avenue pursuant to Government Code Section 25351. The letter also constituted a request for a General Plan conformity determination pursuant to Government Code Section 65402(b)[1].

Project Understanding
The Project, 231 Grant Educator Workforce Housing, is located on Assessor's Parcel Number (APN) 132-31-074, a 1.4 acre County-owned parcel within the City of Palo Alto bounded by Park Boulevard, Grant Avenue, and Birch Street. The project proposes demolition of an existing 6,800 square foot (sf) office building and associated parking lot and reconstruction of the site with a new four-story building totaling approximately 112,000 sf. The new building would include 110 multi-family residential rental units, approximately 2,000 sf of community living space, and approximately 1,200 sf of "flex space:" which could be utilized as a café or other retail or commercial use. The City understands that 112 vehicle parking spaces and 134 bicycle parking spaces would be provided. Approximately 5,600 sf of open public space would be provided within three outdoor plaza areas, each plaza designed around an existing mature tree that would be retained. The City understands that the County intends to use preemptive authority for governmental immunity on this project.

The City is unable to provide a complete analysis of the project's conformity with the City's Comprehensive Plan at this time because sufficient plan details are not yet available for the City to review. Instead we are providing the following comments based on the information currently available:

Land Use Designation
The Comprehensive Plan land use designation for this property is "Major Institution, Special Facilities (MISP)". The MISP land use designation in the City's Land Use Element states that "Consistent with the

[1] Government Code Section 65402(b) states: "(b) A county shall not acquire real property for any of the purposes specified in paragraph (a), nor dispose of any real property, nor construct or authorize a public building or structure, in another county or within the corporate limits of a city, if such city or other county has adopted a general plan or part thereof and such general plan or part thereof is applicable thereto,…until the location, purpose and extent of such acquisition, disposition, or such public building or structure have been submitted to and reported upon by the planning agency having jurisdiction, as to conformity with said adopted general plan or part thereof. Failure of the planning agency to report within forty (40) days after the matter has been submitted to it shall be conclusively deemed a finding that the proposed acquisition, disposition, or public building or structure is in conformity with said adopted general plan or part thereof…"

Comprehensive Plan's encouragement of housing near transit centers, higher density multi-family housing may be allowed in specific locations." Therefore construction of a multi-family housing project in this location and other common space associated with the multi-family residential use appears to be consistent with the City's land use designation at this site.

Housing

The project goals and general program description appear to be consistent with overarching goals outlined in the City's Housing Element and Land Use Element, which encourage housing production. In particular, the City notes that the project appears to be consistent with the following goals and policies because it would increase housing production in a transit rich location, creates more affordable housing options for teachers and public employees, and it utilizes new strategies to help increase housing density and diversity within the City:

- Program L2.4.7: Explore mechanisms for increasing multi-family housing density near multimodal transit centers.

- Policy L-2.5: Support the creation of affordable housing units for middle to lower income level earners, such as City and school district employees, as feasible.

- Policy H2.1: Identify and implement strategies to increase housing density and diversity, including mixed-use development and a range of unit styles, near community services. Emphasize and encourage the development of affordable and mixed income housing to support the City's fair share of the regional housing needs and to ensure that the City's population remains economically diverse.

- Program H2.1.2: Allow increased residential densities and mixed use development only where adequate urban services and amenities, including roadway capacity, are available.

The City requests confirmation from the County that, although located on County land, the proposed units, which are located squarely within the City's boundaries, would contribute toward the City's Regional Housing Needs Allocation. This would further Policy H2.1, as noted above, and works toward implementation of housing units in accordance with the City's RHNA allocation in Section 2.6 of the City's Housing Element.

The City reserves the right to provide further analysis of the project's conformity with the City's Comprehensive Plan once project plans become available.

Should you have any questions regarding this letter, please contact Claire Raybould at (650) 329-2116 or Claire.Raybould@cityofpaloalto.org or Jonathan Lait at Jonathan.Lait@cityofpaloalto.org.

Sincerely,

DocuSigned by:
Claire Raybould
2721A1A8AE4C4AA...

Claire Raybould, AICP
Senior Planner, Planning & Development Services

Appendix B – Air Quality and Greenhouse Gas Emissions Supporting Documentation

231 Grant Educator Workforce Housing - Air Quality and Greenhouse Gas Emissions Summary

Annual Construction Emissions											
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	CO2e
Year	tons/year										MT/year
2022	0.1385	1.5155	1.4285	3.72E-03	0.0845	0.0593	0.1437	0.0221	0.0548	0.0769	348
2023	0.7651	0.7431	0.9424	2.27E-03	0.1119	0.0299	0.1417	0.0298	0.0275	0.0573	207
Total Emissions (tons)	0.90	2.26	2.37	0.01	0.20	0.09	0.29	0.05	0.08	0.13	555
Notes: ROG = reactive organic gases; NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; PM10 = particulate matter equal or less than 10 micrometers in diameter; PM2.5 = particulate matter equal or less than 2.5 micrometers in diameter											

Average Daily Construction Emissions										
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Emissions (tons)	0.90	2.26	2.37	0.01	0.20	0.09	0.29	0.05	0.08	0.13
Average Daily Emissions (pounds/day)[1]	4.54	11.35	11.91	0.03	0.99	0.45	1.43	0.26	0.41	0.67
Threshold[2]	54	54				82			54	
Exceed Threshold?	No	No				No			No	
Notes: [1]Average daily emission estimates are based on approximately 398 construction workdays (15 months of construction, 6 days of construction per week). [2] Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017) ROG = reactive organic gases; NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; PM10 = particulate matter equal or less than 10 micrometers in diameter; PM2.5 = particulate matter equal or less than 2.5 micrometers in diameter										

Annual Operational Emissions											
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	CO2e
Year	tons/year										MT/year
Proposed Project	0.84	0.41	4.20	0.01	0.72	0.01	0.73	0.19	0.01	0.20	682
Existing	0.04	0.02	0.09	0.00	0.01	0.00	0.02	0.00	0.00	0.00	27
Net Emissions (tons)	0.79	0.39	4.11	0.01	0.70	0.01	0.71	0.19	0.01	0.20	656
Threshold	10.00	10.00					15.00			10.00	
Exceed Threshold?	No	No					No			No	
Notes: ROG = reactive organic gases; NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; PM10 = particulate matter equal or less than 10 micrometers in diameter; PM2.5 = particulate matter equal or less than 2.5 micrometers in diameter											

Average Daily Operational Emissions										
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Emissions (tons)	0.84	0.41	4.20	0.01	0.72	0.01	0.73	0.19	0.01	0.20
Average Daily Emissions (pounds/day)[1]	4.58	2.23	23.03	0.04	3.92	0.05	3.98	1.05	0.05	1.10
Existing Average Daily Emissions	0.22	0.10	0.51	0.00	0.08	0.00	0.08	0.02	0.00	0.03
Net Average Daily Emissions	4.36	2.13	22.52	0.04	3.84	0.05	3.89	1.03	0.05	1.07
Threshold	54	54					82			54
Exceed Threshold?	No	No					No			No

Start Date	6/1/2022
End Date	9/7/2023
Total Days of Construction	398
lb/ton	2000

Operational Greenhouse Gas Emissions	
Year	MT CO2e
Proposed Project	682
Existing	27
Net GHG Emissions	656
Amortized Construction GHG Emissions	18
Total GHG Emissions	674
Service Population (Pop + Emp)	276
Emissions Per SP (MT CO_2e/SP)	2.44
Threshold (MT CO_2e/SP)	2.88

Existing Average Daily Operational Emissions										
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Area	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.01	0.01	0.09	0.00	0.01	0.00	0.02	0.00	0.00	0.00
Total Emissions (tons)	0.04	0.02	0.09	0.00	0.01	0.00	0.02	0.00	0.00	0.00
Average Daily Emissions (pounds/day)[1]	0.22	0.10	0.51	0.00	0.08	0.00	0.08	0.02	0.00	0.03

Alternative 1 Emissions Summary

Annual Construction Emissions											
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	CO2e
Year	tons/year										MT/year
2022	0.1065	1.1691	1.1199	3.13E-03	0.087	0.0421	0.1291	0.0227	0.0389	0.0616	294
2023	0.7893	0.8336	1.176	2.79E-03	0.1592	0.0338	0.193	0.0423	0.0311	0.0734	253
Total Emissions (tons)	0.90	2.00	2.30	0.01	0.25	0.08	0.32	0.07	0.07	0.14	548
Notes: ROG = reactive organic gases; NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; PM10 = particulate matter equal or less than 10 micrometers in diameter; PM2.5 = particulate matter equal or less than 2.5 micrometers in diameter											

Average Daily Construction Emissions										
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Emissions (tons)	0.90	2.00	2.30	0.01	0.25	0.08	0.32	0.07	0.07	0.14
Average Daily Emissions (pounds/day)[1]	3.91	8.75	10.03	0.03	1.08	0.33	1.41	0.28	0.31	0.59
Threshold[2]	54	54				82			54	
Exceed Threshold?	No	No				No			No	

Notes:

[1]Average daily emission estimates are based on approximately 458 construction workdays (17 months of construction, 6 days of construction per week).

[2] Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

ROG = reactive organic gases; NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; PM10 = particulate matter equal or less than 10 micrometers in diameter; PM2.5 = particulate matter equal or less than 2.5 micrometers in diameter

Start Date	6/1/2022
End Date	11/16/2023
Total Days of Construction	458
lb/ton	2000

Unit Conversions	
tons	pounds
1	2000

Alternative 2 Emissions Summary

Annual Construction Emissions											
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	CO2e
Year	tons/year										MT/year
2022	0.1535	1.383	1.3601	3.41E-03	0.0828	0.0555	0.1383	0.0216	0.0513	0.0729	316
2023	0.5254	0.3907	0.6335	1.50E-03	0.0992	0.0167	0.1159	0.0264	0.0154	0.0418	137
Total Emissions (tons)	0.68	1.77	1.99	0.00	0.18	0.07	0.25	0.05	0.07	0.11	453
Notes: ROG = reactive organic gases; NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; PM10 = particulate matter equal or less than 10 micrometers in diameter; PM2.5 = particulate matter equal or less than 2.5 micrometers in diameter											

Average Daily Construction Emissions										
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Emissions (tons)	0.68	1.77	1.99	0.00	0.18	0.07	0.25	0.05	0.07	0.11
Average Daily Emissions (pounds/day)[1]	3.63	9.49	10.66	0.03	0.97	0.39	1.36	0.26	0.36	0.61
Threshold[2]	54	54				82			54	
Exceed Threshold?	No	No				No			No	
Notes: [1]Average daily emission estimates are based on approximately 374 construction workdays (14 months of construction, 6 days of construction per week). [2] Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017) ROG = reactive organic gases; NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; PM10 = particulate matter equal or less than 10 micrometers in diameter; PM2.5 = particulate matter equal or less than 2.5 micrometers in diameter										

Annual Operational Emissions											
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	CO2e
Year	tons/year										MT/year
Proposed Project	0.60	0.28	2.86	0.00	0.50	0.01	0.51	0.13	0.01	0.14	469
Existing	0.04	0.02	0.09	0.00	0.01	0.00	0.02	0.00	0.00	0.00	27
Net Emissions (tons)	0.56	0.26	2.77	0.00	0.48	0.01	0.49	0.13	0.01	0.13	442
Threshold	10.00	10.00					15.00			10.00	
Exceed Threshold?	No	No					No			No	
Notes: ROG = reactive organic gases; NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; PM10 = particulate matter equal or less than 10 micrometers in diameter; PM2.5 = particulate matter equal or less than 2.5 micrometers in diameter											

Average Daily Operational Emissions										
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Emissions (tons)	0.60	0.28	2.86	0.00	0.50	0.01	0.51	0.13	0.01	0.14
Average Daily Emissions (pounds/day)[1]	3.27	1.55	15.67	0.03	2.74	0.03	2.77	0.73	0.03	0.76
Existing Average Daily Emissions	0.22	0.10	0.51	0.00	0.08	0.00	0.08	0.02	0.00	0.03
Net Average Daily Emissions	3.05	1.45	15.16	0.02	2.66	0.03	2.68	0.71	0.03	0.74
Threshold	54	54					82			54
Exceed Threshold?	No	No					No			No

Start Date	6/1/2022
End Date	8/10/2023
Total Days of Construction	374
lb/ton	2000

Operational Greenhouse Gas Emissions	
Year	MT CO2e
Proposed Project	469
Existing	27
Net GHG Emissions	442
Amortized Construction GHG Emissions	15
Total GHG Emissions	457
Service Population (Pop + Emp)	159
Emissions Per SP (MT CO_2e/SP)	2.87
Threshold (MT CO_2e/SP)	2.88

Existing Average Daily Operational Emissions										
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Area	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.01	0.01	0.09	0.00	0.01	0.00	0.02	0.00	0.00	0.00
Total Emissions (tons)	0.04	0.02	0.09	0.00	0.01	0.00	0.02	0.00	0.00	0.00
Average Daily Emissions (pounds/day)[1]	0.22	0.10	0.51	0.00	0.08	0.00	0.08	0.02	0.00	0.03

231 Grant Educator Workforce Housing - Energy Consumption Summary

Project: Energy Consumption Summary			
Phase	Energy Requirement	Unit	Annual Energy Consumption (MMBtu)
Construction[1] (amortized over project lifetime)			
Diesel	1,395	Gallons/yr	193
Gasoline	451	Gallons/yr	56
		Subtotal	*249*
Building Operations[2]			
Electrical	941,420	KWh/yr	3,212
		Subtotal	*3,212*
Operational Transportation[3]			
Electricity	1,941	KWh/yr	7
Diesel	588	Gallons/yr	81
Gasoline	60,686	Gallons/yr	7,586
		Subtotal	*7,674*
		Total	*11,135*

Notes:

Totals do not add due to rounding.

Source: Modeled by AECOM in 2021

Notes:

1. Construction estimates are based on conversion for CO_2 emissions estimates from CalEEMod to fuel consumption for diesel and gasoline-powered vehicles using U.S. Energy Information Administration 2016 factors.
2. Building operation energy consumption is based on estimated electricity demand from CalEEMod. The analysis conservatively does not include the renewable energy generated via the rooftop solar panels.
3. Operational transportation fuel consumption reflects CalEEMod VMT estimate, which incorporates trip generation data provided by AECOM TIA for the Project and the fleet mix for Santa Clara County.

Conversion Factors		
Category	Amount	Units
Diesel (heat content)	5.8	MMBtu/barrel
Motor Gasoline	5.25	MMBtu/barrel
Btu per kWh	3,412	Btu/kWh
Gallons per Barrel	42	gallons/barrel

https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf

Existing Land Uses: Energy Consumption Summary			
Phase	Energy Requirement	Unit	Annual Energy Consumption (MMBtu)
Construction *(Not applicable)*			
Diesel	-	Gallons/yr	-
Gasoline	-	Gallons/yr	-
		Subtotal	-
Building Operations[1]			
Electrical	139,876	KWh/yr	477
Natural Gas	135,728	kBTU/yr	136
		Subtotal	*613*
Operational Transportation[2]			
Electricity	40	KWh/yr	0.1
Diesel	12	Gallons/yr	2
Gasoline	1,258	Gallons/yr	157
		Subtotal	*159*
		Total	*772*

Notes:

Totals do not add due to rounding.

Source: Modeled by AECOM in 2021

Notes:

1. Building operation energy consumption is based on estimated electricity and natural gas demand from CalEEMod using historical default energy rates for projects built to 2005 energy standards. This is conservative as the project was built prior to 2005.
2. Operational transportation fuel consumption reflects CalEEMod VMT estimate, which incorporates trip generation data provided by AECOM TIA for the Project and the fleet mix for Santa Clara County.

231 Grant Educator Workforce Housing - Project Construction-Related Energy Consumption

231 Grant Educator Workforce Housing: Fuel Consumption, Total and Amortized over 30 Years				
Source	MT CO_2 [a]	Fuel Type	Factor (MT CO_2/gallon) [b]	Gallons
Offroad Equipment	299	Diesel	0.01016	29,395
Hauling	104	Diesel	0.01016	10,220
Vendor	23	Diesel	0.01016	2,223
Worker	120	Gas	0.00889	13,530
Total Gallons			Diesel	41,838
			Gasoline	13,530
Amortized Demands (over 30 years)			Diesel	1,395
			Gasoline	451
Notes:				
Sources: [a] Modeled by AECOM in 2021; [b] U.S. Energy Information Administration 2016 (https://www.eia.gov/environment/emissions/co2_vol_mass.php)				

Amortization period (yrs): 30

Factor	MT/gallon
Diesel	1.02E-02
Gasoline	8.89E-03

Construction Activities by Phase	Year	Source	MT CO2
Demo/Site Clearing	2022	Offroad	13.7005
		Hauling	18.882
		Vendor	0
		Worker	1.2229
Grading and Excavation	2022	Offroad	51.31
		Hauling	62.9399
		Vendor	0
		Worker	2.3518
Underground Utilities	2022	Offroad	9.4771
		Hauling	0
		Vendor	0
		Worker	2.3518
Ground Floor Concrete Work	2022	Offroad	94.1954
		Hauling	0
		Vendor	22.5873
		Worker	22.7649
Modular Placement Framing and Connections	2022	Offroad	17.9999
		Hauling	13.0799
		Vendor	0
		Worker	7.3375
Modular Placement Framing and Connections	2023	Offroad	12.9229
		Hauling	8.932
		Vendor	0
		Worker	5.1354
Architectural Coatings	2023	Offroad	93.1615
		Hauling	0
		Vendor	0
		Worker	79.0791
Paving	2023	Offroad	5.8862
		Hauling	0
		Vendor	0
		Worker	0

Project Operational Transportation Energy Consumption

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Santa Clara
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	% VMT	Fuel Consumption	Fuel Consumption / Mile	EVMT	Energy Consumption	Energy Consumption / Mile
Santa Clara	2023	HHDT	Aggregate	Aggregate	Gasoline	3.454009	114.3093	0.00%	0.031050824	0.272	0	0	
Santa Clara	2023	HHDT	Aggregate	Aggregate	Diesel	8235.059	991289	2.14%	171.6488481	0.173	0	0	
Santa Clara	2023	HHDT	Aggregate	Aggregate	Electricity	6.70171	411.5054	0.00%	0	0.000	411.5053623	754.9232545	1.835
Santa Clara	2023	HHDT	Aggregate	Aggregate	Natural Gas	753.7366	53295.97	0.12%	10.5173842	0.197	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Gasoline	601938.3	22370251	48.37%	758.1523908	0.034	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Diesel	1871.125	56220.8	0.12%	1.29892798	0.023	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Electricity	53751.15	2268185	4.90%	0	0.000	2268185.318	875706.7364	0.386
Santa Clara	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	15805.32	700610.9	1.51%	12.06393978	0.017	343961.2598	103886.5521	0.302
Santa Clara	2023	LDT1	Aggregate	Aggregate	Gasoline	53782.25	1744480	3.77%	70.12001518	0.040	0	0	
Santa Clara	2023	LDT1	Aggregate	Aggregate	Diesel	26.04714	391.8698	0.00%	0.016037369	0.041	0	0	
Santa Clara	2023	LDT1	Aggregate	Aggregate	Electricity	194.8941	7068.184	0.02%	0	0.000	7068.184366	2728.902534	0.386
Santa Clara	2023	LDT1	Aggregate	Aggregate	Plug-in Hybrid	43.27677	2048.369	0.00%	0.03210507	0.016	1104.211319	333.5047292	0.302
Santa Clara	2023	LDT2	Aggregate	Aggregate	Gasoline	280180.4	10140967	21.93%	427.6416304	0.042	0	0	
Santa Clara	2023	LDT2	Aggregate	Aggregate	Diesel	978.4967	36936.87	0.08%	1.148123535	0.031	0	0	
Santa Clara	2023	LDT2	Aggregate	Aggregate	Electricity	1105.879	38931.7	0.08%	0	0.000	38931.70292	15030.85053	0.386
Santa Clara	2023	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1696.55	77270.66	0.17%	1.268124945	0.016	40127.97918	12119.84572	0.302
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Gasoline	19180.96	711085.5	1.54%	74.66781372	0.105	0	0	
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Diesel	9807.465	384084.8	0.83%	24.16048678	0.063	0	0	
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Gasoline	2494.382	90793.04	0.20%	10.67729528	0.118	0	0	
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Diesel	4479.532	176769.2	0.38%	13.40074061	0.076	0	0	
Santa Clara	2023	MCY	Aggregate	Aggregate	Gasoline	27894.5	164894.5	0.36%	3.930936692	0.024	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Gasoline	153799.1	5358084	11.59%	274.4637038	0.051	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Diesel	2374.918	86834.44	0.19%	3.53404257	0.041	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Electricity	1130.115	40073.7	0.09%	0	0.000	40073.70084	15471.75599	0.386
Santa Clara	2023	MDV	Aggregate	Aggregate	Plug-in Hybrid	986.0895	41899.14	0.09%	0.720324533	0.017	21111.78799	6376.389206	0.302
Santa Clara	2023	MH	Aggregate	Aggregate	Gasoline	2522.745	22546.87	0.05%	5.106865714	0.226	0	0	
Santa Clara	2023	MH	Aggregate	Aggregate	Diesel	959.1578	9344.849	0.02%	0.995112486	0.106	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Gasoline	1418.703	70785.86	0.15%	14.99216178	0.212	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Diesel	10273.55	431550.4	0.93%	51.22495678	0.119	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Electricity	4.749835	101.8022	0.00%	0	0.000	101.802183	108.6850176	1.068
Santa Clara	2023	MHDT	Aggregate	Aggregate	Natural Gas	83.841	4047.874	0.01%	0.566845061	0.140	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Gasoline	458.8974	20830.08	0.05%	4.374109066	0.210	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Diesel	870.4209	61645.66	0.13%	7.918344692	0.128	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Natural Gas	6.1456	409.5466	0.00%	0.054019102	0.132	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Gasoline	166.9867	8309.308	0.02%	0.842317687	0.101	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Diesel	667.1185	15392.68	0.03%	1.88782318	0.123	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Electricity	0.302373	3.510494	0.00%	0	0.000	3.510494287	3.69814983	1.053
Santa Clara	2023	SBUS	Aggregate	Aggregate	Natural Gas	23.50762	595.8705	0.00%	0.108660666	0.182	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Gasoline	45.94709	4798.244	0.01%	0.51741281	0.108	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Diesel	436.6681	48829.71	0.11%	5.293673869	0.108	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Electricity	5.046757	199.0027	0.00%	0	0.000	199.0027319	346.910342	1.743
Santa Clara	2023	UBUS	Aggregate	Aggregate	Natural Gas	42.26114	4829.673	0.01%	0.799417876	0.166	0	0	
								100.00%					

Total Annual VMT: 1,937,342

% VMT by Fuel:	
Diesel	5%
Gasoline	88%
Natural Gas	0%
Electricity	5%
Plug-in Hybrid	2%
	100.00%

Weighted Average Fuel Consumption:		Unit
Diesel	0.006109063	gal/mi
Gasoline	0.035580906	gal/mi
Natural Gas	0.000260477	gal/mi
Electricity	0.019680158	kWh/mi
Plug-in Hybrid	0.000304548	gal/mi

Fuel/Energy Use by Type		Unit
Diesel	588.42	gal/year
Gasoline	60,675.99	gal/year
Natural Gas	0.69	gal/year
Electricity	1,941.49	kWh/year
Plug-in Hybrid	10.48	gal/year

*Note that natural gas consumption is negligible an not accounted for in summary tab. Plug-in Hybrid is summed with Gasoline in Summary Tab.
Total Annual VMT is based on CalEEMod VMT estimate.

Note that grey highlighted columns indicated calculations using EMFAC data, not data output from EMFAC.

231 Grant Educator Workforce Housing - Alternative 1: Energy Consumption Summary

Alt 1: Energy Consumption Summary			
Phase	Energy Requirement	Unit	Annual Energy Consumption (MMBtu)
Construction[1] (amortized over project lifetime)			
Diesel	1,232	Gallons/yr	170
Gasoline	614	Gallons/yr	77
		Subtotal	*247*
Building Operations[2]			
Electrical	941,420	KWh/yr	3,212
		Subtotal	*3,212*
Operational Transportation[3]			
Electricity	1,941	KWh/yr	7
Diesel	588	Gallons/yr	81
Gasoline	60,686	Gallons/yr	7,586
		Subtotal	*7,674*
		Total	*11,133*

Notes:
Totals do not add due to rounding.
Source: Modeled by AECOM in 2021

Notes:
1. Construction estimates are based on conversion for CO_2 emissions estimates from CalEEMod to fuel consumption for diesel and gasoline-powered vehicles using U.S. Energy Information Administration 2016 factors.
2. Building operation energy consumption is based on estimated electricity demand from CalEEMod. The analysis conservatively does not include the renewable energy generated via the rooftop solar panels.
3. Operational transportation fuel consumption reflects CalEEMod VMT estimate, which incorporates trip generation data provided by AECOM TIA for the Project and the fleet mix for Santa Clara County.

Conversion Factors		
Category	Amount	Units
Diesel (heat content)	5.8	MMBtu/barrel
Motor Gasoline	5.25	MMBtu/barrel
Btu per kWh	3,412	Btu/kWh
Gallons per Barrel	42	gallons/barrel

https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf

231 Grant Educator Workforce Housing - Alternative 1: Construction-Related Energy Consumption

231 Grant Educator Workforce Housing Alternative 1: Fuel Consumption, Total and Amortized over 30 Years				
Source	MT CO_2 [a]	Fuel Type	Factor (MT CO_2/gallon) [b]	Gallons
Offroad Equipment	271	Diesel	0.01016	26,688
Hauling	82	Diesel	0.01016	8,053
Vendor	23	Diesel	0.01016	2,223
Worker	164	Gas	0.00889	18,415
Total Gallons			Diesel	36,965
			Gasoline	18,415
Amortized Demands (over 30 years)			Diesel	1,232
			Gasoline	614
Notes:				
Sources: [a] Modeled by AECOM in 2021; [b] U.S. Energy Information Administration 2016 (https://www.eia.gov/environment/emissions/co2_vol_mass.php)				

Amortization period (yrs): 30

Factor	MT/gallon
Diesel	1.02E-02
Gasoline	8.89E-03

Construction Activities by Phase	Year	Source	MT CO2
Demo/Site Clearing	2022	Offroad	13.7005
		Hauling	18.882
		Vendor	0
		Worker	1.2229
Grading and Excavation	2022	Offroad	25.1341
		Hauling	62.9399
		Vendor	0
		Worker	2.3518
Underground Utilities	2022	Offroad	9.0861
		Hauling	0
		Vendor	0
		Worker	2.3518
Ground Floor Concrete Work	2022	Offroad	84.1783
		Hauling	0
		Vendor	22.5873
		Worker	22.7649
Traditional Construction Method	2022	Offroad	10.4383
		Hauling	0
		Vendor	0
		Worker	12.2291
Traditional Construction Method	2023	Offroad	15.5235
		Hauling	0
		Vendor	0
		Worker	17.7294
Architectural Coatings	2023	Offroad	107.2059
		Hauling	0
		Vendor	0
		Worker	105.0007
Paving	2023	Offroad	5.8862
		Hauling	0
		Vendor	0
		Worker	0

231 Grant Educator Workforce Housing - Alternative 2: Energy Consumption Summary

Alternative 2: Energy Consumption Summary			
Phase	Energy Requirement	Unit	Annual Energy Consumption (MMBtu)
Construction[1] (amortized over project lifetime)			
Diesel	1,084	Gallons/yr	150
Gasoline	435	Gallons/yr	54
		Subtotal	*204*
Building Operations[2]			
Electrical	549,732	KWh/yr	1,876
		Subtotal	*1,876*
Operational Transportation[3]			
Electricity	1,355	KWh/yr	5
Diesel	411	Gallons/yr	57
Gasoline	42,341	Gallons/yr	5,293
		Subtotal	*5,354*
		Total	*7,434*

Notes:

Totals do not add due to rounding.

Source: Modeled by AECOM in 2021

Notes:

1. Construction estimates are based on conversion for CO_2 emissions estimates from CalEEMod to fuel consumption for diesel and gasoline-powered vehicles using U.S. Energy Information Administration 2016 factors.
2. Building operation energy consumption is based on estimated electricity demand from CalEEMod. The analysis conservatively does not include the renewable energy generated via the rooftop solar panels.
3. Operational transportation fuel consumption reflects CalEEMod VMT estimate, which incorporates trip generation data provided by AECOM TIA for the Project and the fleet mix for Santa Clara County.

Conversion Factors		
Category	Amount	Units
Diesel (heat content)	5.8	MMBtu/barrel
Motor Gasoline	5.25	MMBtu/barrel
Btu per kWh	3,412	Btu/kWh
Gallons per Barrel	42	gallons/barrel

https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf

Existing Land Uses: Energy Consumption Summary			
Phase	Energy Requirement	Unit	Annual Energy Consumption (MMBtu)
Construction *(Not applicable)*			
Diesel	-	Gallons/yr	-
Gasoline	-	Gallons/yr	-
		Subtotal	-
Building Operations[1]			
Electrical	139,876	KWh/yr	477
Natural Gas	135,728	kBTU/yr	136
		Subtotal	*613*
Operational Transportation[2]			
Electricity	40	KWh/yr	0.1
Diesel	12	Gallons/yr	2
Gasoline	1,258	Gallons/yr	157
		Subtotal	*159*
		Total	*772*

Notes:

Totals do not add due to rounding.

Source: Modeled by AECOM in 2021

Notes:

1. Building operation energy consumption is based on estimated electricity and natural gas demand from CalEEMod using historical default energy rates for projects built to 2005 energy standards. This is conservative as the project was built prior to 2005.
2. Operational transportation fuel consumption reflects CalEEMod VMT estimate, which incorporates trip generation data provided by AECOM TIA for the Project and the fleet mix for Santa Clara County.

231 Grant Educator Workforce Housing - Alternative 2: Construction-Related Energy Consumption

231 Grant Educator Workforce Housing Alternative 2: Fuel Consumption, Total and Amortized over 30 Years				
Source	MT CO_2 [a]	Fuel Type	Factor (MT CO_2/gallon) [b]	Gallons
Offroad Equipment	237	Diesel	0.01016	23,349
Hauling	81	Diesel	0.01016	7,968
Vendor	12	Diesel	0.01016	1,209
Worker	116	Gas	0.00889	13,045
Total Gallons			Diesel	32,525
			Gasoline	13,045
Amortized Demands (over 30 years)			Diesel	1,084
			Gasoline	435
Notes:				
Sources: [a] Modeled by AECOM in 2021; [b] U.S. Energy Information Administration 2016 (https://www.eia.gov/environment/emissions/co2_vol_mass.php)				

Amortization period (yrs): 30

Factor	MT/gallon
Diesel	1.02E-02
Gasoline	8.89E-03

Construction Activities by Phase	Year	Source	MT CO2
Demo/Site Clearing	2022	Offroad	13.7005
		Hauling	18.882
		Vendor	0
		Worker	1.2229
Grading and Excavation	2022	Offroad	40.4706
		Hauling	50.3519
		Vendor	0
		Worker	2.3518
Underground Utilities	2022	Offroad	9.8681
		Hauling	0
		Vendor	0
		Worker	2.3518
Ground Floor Concrete Work	2022	Offroad	94.1954
		Hauling	0
		Vendor	12.2791
		Worker	22.7649
Modular Placement Framing and Connect	2022	Offroad	17.9999
		Hauling	10.6754
		Vendor	0
		Worker	7.3375
Modular Placement Framing and Connect	2023	Offroad	1.8461
		Hauling	1.0414
		Vendor	0
		Worker	0.7336
Architectural Coatings	2022	Offroad	2.4088
		Hauling	0
		Vendor	0
		Worker	3.6687
Architectural Coatings	2023	Offroad	50.8529
		Hauling	0
		Vendor	0
		Worker	75.5027
Paving	2023	Offroad	5.8862
		Hauling	0
		Vendor	0
		Worker	0

Alternative 2 Operational Transportation Energy Consumption

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Santa Clara
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	% VMT	Fuel Consumption	Fuel Consumption / Mile	EVMT	Energy Consumption	Energy Consumption / Mile
Santa Clara	2023	HHDT	Aggregate	Aggregate	Gasoline	3.454009	114.3093	0.00%	0.031050824	0.272	0	0	
Santa Clara	2023	HHDT	Aggregate	Aggregate	Diesel	8235.059	991289	2.14%	171.6488481	0.173	0	0	
Santa Clara	2023	HHDT	Aggregate	Aggregate	Electricity	6.70171	411.5054	0.00%	0	0.000	411.5053623	754.9232545	1.835
Santa Clara	2023	HHDT	Aggregate	Aggregate	Natural Gas	753.7366	53295.97	0.12%	10.5173842	0.197	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Gasoline	601938.3	22370251	48.37%	758.1523908	0.034	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Diesel	1871.125	56220.8	0.12%	1.29892798	0.023	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Electricity	53751.15	2268185	4.90%	0	0.000	2268185.318	875706.7364	0.386
Santa Clara	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	15805.32	700610.9	1.51%	12.06393978	0.017	343961.2598	103886.5521	0.302
Santa Clara	2023	LDT1	Aggregate	Aggregate	Gasoline	53782.25	1744480	3.77%	70.12001518	0.040	0	0	
Santa Clara	2023	LDT1	Aggregate	Aggregate	Diesel	26.04714	391.8698	0.00%	0.016037369	0.041	0	0	
Santa Clara	2023	LDT1	Aggregate	Aggregate	Electricity	194.8941	7068.184	0.02%	0	0.000	7068.184366	2728.902534	0.386
Santa Clara	2023	LDT1	Aggregate	Aggregate	Plug-in Hybrid	43.27677	2048.369	0.00%	0.03210507	0.016	1104.211319	333.5047292	0.302
Santa Clara	2023	LDT2	Aggregate	Aggregate	Gasoline	280180.4	10140967	21.93%	427.6416304	0.042	0	0	
Santa Clara	2023	LDT2	Aggregate	Aggregate	Diesel	978.4967	36936.87	0.08%	1.148123535	0.031	0	0	
Santa Clara	2023	LDT2	Aggregate	Aggregate	Electricity	1105.879	38931.7	0.08%	0	0.000	38931.70292	15030.85053	0.386
Santa Clara	2023	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1696.55	77270.66	0.17%	1.268124945	0.016	40127.97918	12119.84572	0.302
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Gasoline	19180.96	711085.5	1.54%	74.66781372	0.105	0	0	
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Diesel	9807.465	384084.8	0.83%	24.16048678	0.063	0	0	
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Gasoline	2494.382	90793.04	0.20%	10.67729528	0.118	0	0	
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Diesel	4479.532	176769.2	0.38%	13.40074061	0.076	0	0	
Santa Clara	2023	MCY	Aggregate	Aggregate	Gasoline	27894.5	164894.5	0.36%	3.930936692	0.024	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Gasoline	153799.1	5358084	11.59%	274.4637038	0.051	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Diesel	2374.918	86834.44	0.19%	3.53404257	0.041	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Electricity	1130.115	40073.7	0.09%	0	0.000	40073.70084	15471.75599	0.386
Santa Clara	2023	MDV	Aggregate	Aggregate	Plug-in Hybrid	986.0895	41899.14	0.09%	0.720324533	0.017	21111.78799	6376.389206	0.302
Santa Clara	2023	MH	Aggregate	Aggregate	Gasoline	2522.745	22546.87	0.05%	5.106865714	0.226	0	0	
Santa Clara	2023	MH	Aggregate	Aggregate	Diesel	959.1578	9344.849	0.02%	0.995112486	0.106	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Gasoline	1418.703	70785.86	0.15%	14.99216178	0.212	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Diesel	10273.55	431550.4	0.93%	51.22495678	0.119	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Electricity	4.749835	101.8022	0.00%	0	0.000	101.802183	108.6850176	1.068
Santa Clara	2023	MHDT	Aggregate	Aggregate	Natural Gas	83.841	4047.874	0.01%	0.566845061	0.140	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Gasoline	458.8974	20830.08	0.05%	4.374109066	0.210	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Diesel	870.4209	61645.66	0.13%	7.918344692	0.128	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Natural Gas	6.1456	409.5466	0.00%	0.054019102	0.132	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Gasoline	166.9867	8309.308	0.02%	0.842317687	0.101	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Diesel	667.1185	15392.68	0.03%	1.88782318	0.123	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Electricity	0.302373	3.510494	0.00%	0	0.000	3.510494287	3.69814983	1.053
Santa Clara	2023	SBUS	Aggregate	Aggregate	Natural Gas	23.50762	595.8705	0.00%	0.108660666	0.182	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Gasoline	45.94709	4798.244	0.01%	0.51741281	0.108	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Diesel	436.6681	48829.71	0.11%	5.293673869	0.108	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Electricity	5.046757	199.0027	0.00%	0	0.000	199.0027319	346.910342	1.743
Santa Clara	2023	UBUS	Aggregate	Aggregate	Natural Gas	42.26114	4829.673	0.01%	0.799417876	0.166	0	0	
								100.00%					

Total Annual VMT: 1,351,692

% VMT by Fuel:	
Diesel	5%
Gasoline	88%
Natural Gas	0%
Electricity	5%
Plug-in Hybrid	2%
	100.00%

Weighted Average Fuel Consumption:		Unit
Diesel	0.006109063	gal/mi
Gasoline	0.035580906	gal/mi
Natural Gas	0.000260477	gal/mi
Electricity	0.019680158	kWh/mi
Plug-in Hybrid	0.000304548	gal/mi

Fuel/Energy Use by Type		Unit
Diesel	410.54	gal/year
Gasoline	42,333.91	gal/year
Natural Gas	0.48	gal/year
Electricity	1,354.59	kWh/year
Plug-in Hybrid	7.32	gal/year

*Note that natural gas consumption is negligible an not accounted for in summary tab. Plug-in Hybrid is summed with Gasoline in Summary Tab.
Total Annual VMT is based on CalEEMod VMT estimate.

Note that grey highlighted columns indicated calculations using EMFAC data, not data output from EMFAC.

Existing Operational Transportation Energy Consumption

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Santa Clara
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	% VMT	Fuel Consumption	Fuel Consumption / Mile	EVMT	Energy Consumption	Energy Consumption/Mile
Santa Clara	2023	HHDT	Aggregate	Aggregate	Gasoline	3.454009	114.3093	0.00%	0.031050824	0.272	0	0	
Santa Clara	2023	HHDT	Aggregate	Aggregate	Diesel	8235.059	991289	2.14%	171.6488481	0.173	0	0	
Santa Clara	2023	HHDT	Aggregate	Aggregate	Electricity	6.70171	411.5054	0.00%	0	0.000	411.5053623	754.9232545	1.835
Santa Clara	2023	HHDT	Aggregate	Aggregate	Natural Gas	753.7366	53295.97	0.12%	10.5173842	0.197	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Gasoline	601938.3	22370251	48.37%	758.1523908	0.034	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Diesel	1871.125	56220.8	0.12%	1.29892798	0.023	0	0	
Santa Clara	2023	LDA	Aggregate	Aggregate	Electricity	53751.15	2268185	4.90%	0	0.000	2268185.318	875706.7364	0.386
Santa Clara	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	15805.32	700610.9	1.51%	12.06393978	0.017	343961.2598	103886.5521	0.302
Santa Clara	2023	LDT1	Aggregate	Aggregate	Gasoline	53782.25	1744480	3.77%	70.12001518	0.040	0	0	
Santa Clara	2023	LDT1	Aggregate	Aggregate	Diesel	26.04714	391.8698	0.00%	0.016037369	0.041	0	0	
Santa Clara	2023	LDT1	Aggregate	Aggregate	Electricity	194.8941	7068.184	0.02%	0	0.000	7068.184366	2728.902534	0.386
Santa Clara	2023	LDT1	Aggregate	Aggregate	Plug-in Hybrid	43.27677	2048.369	0.00%	0.03210507	0.016	1104.211319	333.5047292	0.302
Santa Clara	2023	LDT2	Aggregate	Aggregate	Gasoline	280180.4	10140967	21.93%	427.6416304	0.042	0	0	
Santa Clara	2023	LDT2	Aggregate	Aggregate	Diesel	978.4967	36936.87	0.08%	1.148123535	0.031	0	0	
Santa Clara	2023	LDT2	Aggregate	Aggregate	Electricity	1105.879	38931.7	0.08%	0	0.000	38931.70292	15030.85053	0.386
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Santa Clara	2023	LHDT1	Aggregate	Aggregate	Gasoline	19180.96	711085.5	1.54%	74.66781372	0.105	0	0	
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Diesel	9807.465	384084.8	0.83%	24.16048678	0.063	0	0	
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Gasoline	2494.382	90793.04	0.20%	10.67729528	0.118	0	0	
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Diesel	4479.532	176769.2	0.38%	13.40074061	0.076	0	0	
Santa Clara	2023	MCY	Aggregate	Aggregate	Gasoline	27894.5	164894.5	0.36%	3.930936692	0.024	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Gasoline	153799.1	5358084	11.59%	274.4637038	0.051	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Diesel	2374.918	86834.44	0.19%	3.53404257	0.041	0	0	
Santa Clara	2023	MDV	Aggregate	Aggregate	Electricity	1130.115	40073.7	0.09%	0	0.000	40073.70084	15471.75599	0.386
Santa Clara	2023	MDV	Aggregate	Aggregate	Plug-in Hybrid	986.0895	41899.14	0.09%	0.720324533	0.017	21111.78799	6376.389206	0.302
Santa Clara	2023	MH	Aggregate	Aggregate	Gasoline	2522.745	22546.87	0.05%	5.106865714	0.226	0	0	
Santa Clara	2023	MH	Aggregate	Aggregate	Diesel	959.1578	9344.849	0.02%	0.995112486	0.106	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Gasoline	1418.703	70785.86	0.15%	14.99216178	0.212	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Diesel	10273.55	431550.4	0.93%	51.22495678	0.119	0	0	
Santa Clara	2023	MHDT	Aggregate	Aggregate	Electricity	4.749835	101.8022	0.00%	0	0.000	101.802183	108.6850176	1.068
Santa Clara	2023	MHDT	Aggregate	Aggregate	Natural Gas	83.841	4047.874	0.01%	0.566845061	0.140	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Gasoline	458.8974	20830.08	0.05%	4.374109066	0.210	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Diesel	870.4209	61645.66	0.13%	7.918344692	0.128	0	0	
Santa Clara	2023	OBUS	Aggregate	Aggregate	Natural Gas	6.1456	409.5466	0.00%	0.054019102	0.132	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Gasoline	166.9867	8309.308	0.02%	0.842317687	0.101	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Diesel	667.1185	15392.68	0.03%	1.88782318	0.123	0	0	
Santa Clara	2023	SBUS	Aggregate	Aggregate	Electricity	0.302373	3.510494	0.00%	0	0.000	3.510494287	3.69814983	1.053
Santa Clara	2023	SBUS	Aggregate	Aggregate	Natural Gas	23.50762	595.8705	0.00%	0.108660666	0.182	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Gasoline	45.94709	4798.244	0.01%	0.51741281	0.108	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Diesel	436.6681	48829.71	0.11%	5.293673869	0.108	0	0	
Santa Clara	2023	UBUS	Aggregate	Aggregate	Electricity	5.046757	199.0027	0.00%	0	0.000	199.0027319	346.910342	1.743
Santa Clara	2023	UBUS	Aggregate	Aggregate	Natural Gas	42.26114	4829.673	0.01%	0.799417876	0.166	0	0	
								100.00%					

Total Annual VMT: 40,148

% VMT by Fuel:	
Diesel	5%
Gasoline	88%
Natural Gas	0%
Electricity	5%
Plug-in Hybrid	2%
	100.00%

Weighted Average Fuel Consumption:		Unit
Diesel	0.006109063	gal/mi
Gasoline	0.035580906	gal/mi
Natural Gas	0.000260477	gal/mi
Electricity	0.019680158	kWh/mi
Plug-in Hybrid	0.000304548	gal/mi

Fuel/Energy Use by Type		Unit
Diesel	12.19	gal/year
Gasoline	1,257.40	gal/year
Natural Gas	0.01	gal/year
Electricity	40.23	kWh/year
Plug-in Hybrid	0.22	gal/year

*Note that natural gas consumption is negligible an not accounted for in summary tab. Plug-in Hybrid is summed with Gasoline in Summary Tab.
Total Annual VMT is based on CalEEMod VMT estimate.

Note that grey highlighted columns indicated calculations using EMFAC data, not data output from EMFAC.

231 Grant Educator Workforce Housing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

231 Grant Educator Workforce Housing

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	112.00	Space	0.00	21,088.00	0
Other Non-Asphalt Surfaces	16.60	1000sqft	0.38	16,600.00	0
Fast Food Restaurant w/o Drive Thru	1.10	1000sqft	0.03	1,100.00	0
Apartments Mid Rise	110.00	Dwelling Unit	0.99	92,812.00	273

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	City of Palo Alto Utilities Department				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses based on applicant provided information. Square footage for residential land use includes community spaces/leasing office/etc. Parking garage acreage included withing total acreage for the site of 1.4 acres. Fast food restaurant w/out drive thru to represent flex space.

Construction Phase - Based on project specific info and assumes a 2-week overlap between each phase.

Off-road Equipment - Default equipment for demolition.

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information.

231 Grant Educator Workforce Housing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Project specific information.

Off-road Equipment - Default equipment for paving.

Grading - Approximately 10,000 CY of material export.

Demolition - Demolition of existing 6,800 sq. ft. building.

Trips and VMT - Based on estimated average daily workers per phase. Project specific haul truck trips during demolition and grading. Haul trucks during modular placement assumes modular delivery from Vallejo.

Vehicle Trips - Adjusted residential trip rates to account for 9% reduction consistent with TIA due to VTA's guidelines for TOD housing.

Woodstoves - Assumes no woodstoves or wood-burning fireplaces per Reg 6, Rule 3.

Energy Use - Includes project design feature of all electric building (no natural gas infrastructure).

Construction Off-road Equipment Mitigation - Assumes implementation of BAAQMD BMPs for fugitive dust mitigation.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	199.00
tblConstructionPhase	NumDays	200.00	121.00
tblConstructionPhase	NumDays	200.00	67.00
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	4.00	25.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	NT24E	3,054.10	4,058.24
tblEnergyUse	NT24E	22.30	69.24
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	147.47	0.00
tblEnergyUse	T24E	70.89	1,734.38
tblEnergyUse	T24E	4.52	23.55

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblEnergyUse	T24NG	5,226.68	0.00
tblEnergyUse	T24NG	59.80	0.00
tblFireplaces	NumberGas	16.50	35.20
tblFireplaces	NumberWood	18.70	0.00
tblGrading	AcresOfGrading	0.00	4.00
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LandUseSquareFeet	44,800.00	21,088.00
tblLandUse	LandUseSquareFeet	110,000.00	92,812.00
tblLandUse	LotAcreage	1.01	0.00
tblLandUse	LotAcreage	2.89	0.99
tblLandUse	Population	315.00	273.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Ground Floor Concrete Work
tblOffRoadEquipment	PhaseName		Modular Placement Framing and Connect
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	PhaseName		Ground Floor Concrete Work
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Ground Floor Concrete Work
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	70.00
tblTripsAndVMT	HaulingTripNumber	31.00	600.00
tblTripsAndVMT	HaulingTripNumber	1,250.00	2,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	210.00
tblTripsAndVMT	VendorTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	33.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	95.00	60.00
tblTripsAndVMT	WorkerTripNumber	95.00	60.00
tblTripsAndVMT	WorkerTripNumber	19.00	130.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	4.91	4.47
tblVehicleTrips	SU_TR	4.09	3.72
tblVehicleTrips	WD_TR	5.44	4.95
tblWoodstoves	NumberCatalytic	2.20	0.00
tblWoodstoves	NumberNoncatalytic	2.20	0.00

2.0 Emissions Summary

231 Grant Educator Workforce Housing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1385	1.5155	1.4285	3.7200e-003	0.0845	0.0593	0.1437	0.0221	0.0548	0.0769	0.0000	340.2006	340.2006	0.0636	0.0194	347.5752
2023	0.7651	0.7431	0.9424	2.2700e-003	0.1119	0.0299	0.1417	0.0298	0.0275	0.0573	0.0000	205.1171	205.1171	0.0389	3.7300e-003	207.2014
Maximum	**0.7651**	**1.5155**	**1.4285**	**3.7200e-003**	**0.1119**	**0.0593**	**0.1437**	**0.0298**	**0.0548**	**0.0769**	**0.0000**	**340.2006**	**340.2006**	**0.0636**	**0.0194**	**347.5752**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1385	1.5155	1.4285	3.7200e-003	0.0811	0.0593	0.1404	0.0216	0.0548	0.0764	0.0000	340.2004	340.2004	0.0636	0.0194	347.5750
2023	0.7651	0.7431	0.9424	2.2700e-003	0.1119	0.0299	0.1417	0.0298	0.0275	0.0573	0.0000	205.1170	205.1170	0.0389	3.7300e-003	207.2013
Maximum	**0.7651**	**1.5155**	**1.4285**	**3.7200e-003**	**0.1119**	**0.0593**	**0.1417**	**0.0298**	**0.0548**	**0.0764**	**0.0000**	**340.2004**	**340.2004**	**0.0636**	**0.0194**	**347.5750**

231 Grant Educator Workforce Housing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**1.69**	**0.00**	**1.16**	**0.87**	**0.00**	**0.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-1-2022**	**8-31-2022**	0.9580	0.9580
2	**9-1-2022**	**11-30-2022**	0.5478	0.5478
3	**12-1-2022**	**2-28-2023**	0.4940	0.4940
4	**3-1-2023**	**5-31-2023**	0.5375	0.5375
5	**6-1-2023**	**8-31-2023**	0.5485	0.5485
6	**9-1-2023**	**9-30-2023**	0.0615	0.0615
		Highest	0.9580	0.9580

231 Grant Educator Workforce Housing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4611	0.0132	0.8198	7.0000e-005		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	5.7308	5.7308	1.3700e-003	8.0000e-005	5.7892
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3749	0.3937	3.3830	6.7000e-003	0.7159	4.8900e-003	0.7208	0.1911	4.5500e-003	0.1957	0.0000	624.1717	624.1717	0.0434	0.0308	634.4188
Waste						0.0000	0.0000		0.0000	0.0000	12.8432	0.0000	12.8432	0.7590	0.0000	31.8186
Water						0.0000	0.0000		0.0000	0.0000	2.3797	0.0000	2.3797	0.2444	5.7700e-003	10.2098
Total	**0.8360**	**0.4069**	**4.2027**	**6.7700e-003**	**0.7159**	**9.7200e-003**	**0.7257**	**0.1911**	**9.3800e-003**	**0.2005**	**15.2229**	**629.9025**	**645.1254**	**1.0482**	**0.0366**	**682.2363**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4611	0.0132	0.8198	7.0000e-005		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	5.7308	5.7308	1.3700e-003	8.0000e-005	5.7892
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3749	0.3937	3.3830	6.7000e-003	0.7159	4.8900e-003	0.7208	0.1911	4.5500e-003	0.1957	0.0000	624.1717	624.1717	0.0434	0.0308	634.4188
Waste						0.0000	0.0000		0.0000	0.0000	12.8432	0.0000	12.8432	0.7590	0.0000	31.8186
Water						0.0000	0.0000		0.0000	0.0000	2.3797	0.0000	2.3797	0.2444	5.7700e-003	10.2098
Total	**0.8360**	**0.4069**	**4.2027**	**6.7700e-003**	**0.7159**	**9.7200e-003**	**0.7257**	**0.1911**	**9.3800e-003**	**0.2005**	**15.2229**	**629.9025**	**645.1254**	**1.0482**	**0.0366**	**682.2363**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition/Site Clearing	Demolition	6/1/2022	6/15/2022	6	13	
2	Grading and Excavation	Grading	6/16/2022	7/14/2022	6	25	
3	Underground Utilities	Trenching	6/30/2022	7/28/2022	6	25	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Ground Floor Concrete Work	Building Construction	7/14/2022	12/1/2022	6	121	
5	Modular Placement Framing and Connect	Building Construction	11/17/2022	2/2/2023	6	67	
6	Architectural Coating	Architectural Coating	1/19/2023	9/7/2023	6	199	
7	Paving	Paving	8/28/2023	9/7/2023	6	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0.38

Residential Indoor: 187,944; Residential Outdoor: 62,648; Non-Residential Indoor: 1,650; Non-Residential Outdoor: 550; Striped Parking Area: 2,261 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition/Site Clearing	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition/Site Clearing	Rubber Tired Dozers	1	8.00	247	0.40
Demolition/Site Clearing	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading and Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Grading and Excavation	Excavators	2	8.00	158	0.38
Grading and Excavation	Graders	0	0.00	187	0.41
Grading and Excavation	Other Construction Equipment	2	8.00	172	0.42
Grading and Excavation	Plate Compactors	3	8.00	8	0.43
Grading and Excavation	Rollers	2	8.00	80	0.38
Grading and Excavation	Rubber Tired Dozers	0	0.00	247	0.40
Grading and Excavation	Skid Steer Loaders	1	8.00	65	0.37
Grading and Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Excavators	1	8.00	158	0.38
Underground Utilities	Plate Compactors	1	8.00	8	0.43
Underground Utilities	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Ground Floor Concrete Work	Aerial Lifts	2	8.00	63	0.31

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Ground Floor Concrete Work	Cranes	1	8.00	231	0.29
Ground Floor Concrete Work	Forklifts	2	8.00	89	0.20
Ground Floor Concrete Work	Generator Sets	0	0.00	84	0.74
Ground Floor Concrete Work	Plate Compactors	1	8.00	8	0.43
Ground Floor Concrete Work	Skid Steer Loaders	1	8.00	65	0.37
Ground Floor Concrete Work	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Ground Floor Concrete Work	Welders	0	0.00	46	0.45
Modular Placement Framing and Connect	Aerial Lifts	1	8.00	63	0.31
Modular Placement Framing and Connect	Cranes	1	8.00	231	0.29
Modular Placement Framing and Connect	Forklifts	2	8.00	89	0.20
Modular Placement Framing and Connect	Generator Sets	0	0.00	84	0.74
Modular Placement Framing and Connect	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Modular Placement Framing and Connect	Welders	0	0.00	46	0.45
Architectural Coating	Aerial Lifts	2	8.00	63	0.31
Architectural Coating	Air Compressors	0	0.00	78	0.48
Architectural Coating	Cranes	1	8.00	231	0.29
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition/Site Clearing	5	30.00	0.00	600.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading and Excavation	13	30.00	0.00	2,000.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	3	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Ground Floor Concrete Work	8	60.00	18.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Modular Placement Framing and Connect	4	60.00	0.00	210.00	10.80	7.30	70.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	130.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition/Site Clearing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3500e-003	0.0000	3.3500e-003	5.1000e-004	0.0000	5.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1080	0.0907	1.6000e-004		5.4500e-003	5.4500e-003		5.0900e-003	5.0900e-003	0.0000	13.7005	13.7005	3.4900e-003	0.0000	13.7878
Total	**0.0110**	**0.1080**	**0.0907**	**1.6000e-004**	**3.3500e-003**	**5.4500e-003**	**8.8000e-003**	**5.1000e-004**	**5.0900e-003**	**5.6000e-003**	**0.0000**	**13.7005**	**13.7005**	**3.4900e-003**	**0.0000**	**13.7878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition/Site Clearing - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4200e-003	0.0519	0.0109	1.9000e-004	5.0900e-003	4.7000e-004	5.5600e-003	1.4000e-003	4.5000e-004	1.8500e-003	0.0000	18.8820	18.8820	6.5000e-004	2.9900e-003	19.7899
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.8000e-004	4.7100e-003	1.0000e-005	1.5500e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2229	1.2229	4.0000e-005	4.0000e-005	1.2344
Total	**1.9400e-003**	**0.0523**	**0.0156**	**2.0000e-004**	**6.6400e-003**	**4.8000e-004**	**7.1100e-003**	**1.8100e-003**	**4.6000e-004**	**2.2700e-003**	**0.0000**	**20.1049**	**20.1049**	**6.9000e-004**	**3.0300e-003**	**21.0243**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5100e-003	0.0000	1.5100e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1080	0.0907	1.6000e-004		5.4500e-003	5.4500e-003		5.0900e-003	5.0900e-003	0.0000	13.7005	13.7005	3.4900e-003	0.0000	13.7878
Total	**0.0110**	**0.1080**	**0.0907**	**1.6000e-004**	**1.5100e-003**	**5.4500e-003**	**6.9600e-003**	**2.3000e-004**	**5.0900e-003**	**5.3200e-003**	**0.0000**	**13.7005**	**13.7005**	**3.4900e-003**	**0.0000**	**13.7878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition/Site Clearing - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4200e-003	0.0519	0.0109	1.9000e-004	5.0900e-003	4.7000e-004	5.5600e-003	1.4000e-003	4.5000e-004	1.8500e-003	0.0000	18.8820	18.8820	6.5000e-004	2.9900e-003	19.7899
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.8000e-004	4.7100e-003	1.0000e-005	1.5500e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2229	1.2229	4.0000e-005	4.0000e-005	1.2344
Total	**1.9400e-003**	**0.0523**	**0.0156**	**2.0000e-004**	**6.6400e-003**	**4.8000e-004**	**7.1100e-003**	**1.8100e-003**	**4.6000e-004**	**2.2700e-003**	**0.0000**	**20.1049**	**20.1049**	**6.9000e-004**	**3.0300e-003**	**21.0243**

3.3 Grading and Excavation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6900e-003	0.0000	2.6900e-003	3.1000e-004	0.0000	3.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0279	0.2742	0.3351	5.9000e-004		0.0136	0.0136		0.0125	0.0125	0.0000	51.3100	51.3100	0.0163	0.0000	51.7184
Total	**0.0279**	**0.2742**	**0.3351**	**5.9000e-004**	**2.6900e-003**	**0.0136**	**0.0163**	**3.1000e-004**	**0.0125**	**0.0128**	**0.0000**	**51.3100**	**51.3100**	**0.0163**	**0.0000**	**51.7184**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7300e-003	0.1731	0.0364	6.4000e-004	0.0170	1.5600e-003	0.0185	4.6700e-003	1.4900e-003	6.1600e-003	0.0000	62.9399	62.9399	2.1600e-003	9.9700e-003	65.9665
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**5.7300e-003**	**0.1739**	**0.0454**	**6.7000e-004**	**0.0199**	**1.5800e-003**	**0.0215**	**5.4600e-003**	**1.5000e-003**	**6.9700e-003**	**0.0000**	**65.2917**	**65.2917**	**2.2300e-003**	**0.0100**	**68.3403**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2100e-003	0.0000	1.2100e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0279	0.2742	0.3351	5.9000e-004		0.0136	0.0136		0.0125	0.0125	0.0000	51.3100	51.3100	0.0163	0.0000	51.7184
Total	**0.0279**	**0.2742**	**0.3351**	**5.9000e-004**	**1.2100e-003**	**0.0136**	**0.0148**	**1.4000e-004**	**0.0125**	**0.0127**	**0.0000**	**51.3100**	**51.3100**	**0.0163**	**0.0000**	**51.7184**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7300e-003	0.1731	0.0364	6.4000e-004	0.0170	1.5600e-003	0.0185	4.6700e-003	1.4900e-003	6.1600e-003	0.0000	62.9399	62.9399	2.1600e-003	9.9700e-003	65.9665
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**5.7300e-003**	**0.1739**	**0.0454**	**6.7000e-004**	**0.0199**	**1.5800e-003**	**0.0215**	**5.4600e-003**	**1.5000e-003**	**6.9700e-003**	**0.0000**	**65.2917**	**65.2917**	**2.2300e-003**	**0.0100**	**68.3403**

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0900e-003	0.0463	0.0713	1.1000e-004		2.3200e-003	2.3200e-003		2.1500e-003	2.1500e-003	0.0000	9.4771	9.4771	2.9800e-003	0.0000	9.5515
Total	**5.0900e-003**	**0.0463**	**0.0713**	**1.1000e-004**		**2.3200e-003**	**2.3200e-003**		**2.1500e-003**	**2.1500e-003**	**0.0000**	**9.4771**	**9.4771**	**2.9800e-003**	**0.0000**	**9.5515**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**1.0000e-003**	**7.4000e-004**	**9.0500e-003**	**3.0000e-005**	**2.9700e-003**	**2.0000e-005**	**2.9900e-003**	**7.9000e-004**	**1.0000e-005**	**8.1000e-004**	**0.0000**	**2.3518**	**2.3518**	**7.0000e-005**	**7.0000e-005**	**2.3738**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0900e-003	0.0463	0.0713	1.1000e-004		2.3200e-003	2.3200e-003		2.1500e-003	2.1500e-003	0.0000	9.4771	9.4771	2.9800e-003	0.0000	9.5515
Total	**5.0900e-003**	**0.0463**	**0.0713**	**1.1000e-004**		**2.3200e-003**	**2.3200e-003**		**2.1500e-003**	**2.1500e-003**	**0.0000**	**9.4771**	**9.4771**	**2.9800e-003**	**0.0000**	**9.5515**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**1.0000e-003**	**7.4000e-004**	**9.0500e-003**	**3.0000e-005**	**2.9700e-003**	**2.0000e-005**	**2.9900e-003**	**7.9000e-004**	**1.0000e-005**	**8.1000e-004**	**0.0000**	**2.3518**	**2.3518**	**7.0000e-005**	**7.0000e-005**	**2.3738**

3.5 Ground Floor Concrete Work - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0573	0.6214	0.6185	1.0800e-003		0.0284	0.0284		0.0261	0.0261	0.0000	94.1954	94.1954	0.0301	0.0000	94.9466
Total	**0.0573**	**0.6214**	**0.6185**	**1.0800e-003**		**0.0284**	**0.0284**		**0.0261**	**0.0261**	**0.0000**	**94.1954**	**94.1954**	**0.0301**	**0.0000**	**94.9466**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Ground Floor Concrete Work - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4100e-003	0.0614	0.0180	2.3000e-004	7.1700e-003	6.4000e-004	7.8100e-003	2.0700e-003	6.2000e-004	2.6900e-003	0.0000	22.5873	22.5873	5.1000e-004	3.3300e-003	23.5932
Worker	9.7200e-003	7.1300e-003	0.0876	2.5000e-004	0.0288	1.5000e-004	0.0289	7.6600e-003	1.4000e-004	7.8000e-003	0.0000	22.7649	22.7649	7.0000e-004	6.6000e-004	22.9785
Total	**0.0121**	**0.0685**	**0.1056**	**4.8000e-004**	**0.0360**	**7.9000e-004**	**0.0368**	**9.7300e-003**	**7.6000e-004**	**0.0105**	**0.0000**	**45.3522**	**45.3522**	**1.2100e-003**	**3.9900e-003**	**46.5717**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0573	0.6213	0.6185	1.0800e-003		0.0284	0.0284		0.0261	0.0261	0.0000	94.1952	94.1952	0.0301	0.0000	94.9465
Total	**0.0573**	**0.6213**	**0.6185**	**1.0800e-003**		**0.0284**	**0.0284**		**0.0261**	**0.0261**	**0.0000**	**94.1952**	**94.1952**	**0.0301**	**0.0000**	**94.9465**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Ground Floor Concrete Work - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4100e-003	0.0614	0.0180	2.3000e-004	7.1700e-003	6.4000e-004	7.8100e-003	2.0700e-003	6.2000e-004	2.6900e-003	0.0000	22.5873	22.5873	5.1000e-004	3.3300e-003	23.5932
Worker	9.7200e-003	7.1300e-003	0.0876	2.5000e-004	0.0288	1.5000e-004	0.0289	7.6600e-003	1.4000e-004	7.8000e-003	0.0000	22.7649	22.7649	7.0000e-004	6.6000e-004	22.9785
Total	**0.0121**	**0.0685**	**0.1056**	**4.8000e-004**	**0.0360**	**7.9000e-004**	**0.0368**	**9.7300e-003**	**7.6000e-004**	**0.0105**	**0.0000**	**45.3522**	**45.3522**	**1.2100e-003**	**3.9900e-003**	**46.5717**

3.6 Modular Placement Framing and Connect - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0124	0.1337	0.1032	2.0000e-004		6.3200e-003	6.3200e-003		5.8100e-003	5.8100e-003	0.0000	17.9999	17.9999	5.8200e-003	0.0000	18.1454
Total	**0.0124**	**0.1337**	**0.1032**	**2.0000e-004**		**6.3200e-003**	**6.3200e-003**		**5.8100e-003**	**5.8100e-003**	**0.0000**	**17.9999**	**17.9999**	**5.8200e-003**	**0.0000**	**18.1454**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Modular Placement Framing and Connect - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.6000e-004	0.0342	5.7600e-003	1.3000e-004	3.6300e-003	3.3000e-004	3.9600e-003	1.0000e-003	3.2000e-004	1.3100e-003	0.0000	13.0799	13.0799	4.5000e-004	2.0700e-003	13.7090
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1300e-003	2.3000e-003	0.0282	8.0000e-005	9.2800e-003	5.0000e-005	9.3300e-003	2.4700e-003	4.0000e-005	2.5100e-003	0.0000	7.3375	7.3375	2.3000e-004	2.1000e-004	7.4063
Total	**3.9900e-003**	**0.0365**	**0.0340**	**2.1000e-004**	**0.0129**	**3.8000e-004**	**0.0133**	**3.4700e-003**	**3.6000e-004**	**3.8200e-003**	**0.0000**	**20.4173**	**20.4173**	**6.8000e-004**	**2.2800e-003**	**21.1153**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0124	0.1337	0.1032	2.0000e-004		6.3200e-003	6.3200e-003		5.8100e-003	5.8100e-003	0.0000	17.9999	17.9999	5.8200e-003	0.0000	18.1454
Total	**0.0124**	**0.1337**	**0.1032**	**2.0000e-004**		**6.3200e-003**	**6.3200e-003**		**5.8100e-003**	**5.8100e-003**	**0.0000**	**17.9999**	**17.9999**	**5.8200e-003**	**0.0000**	**18.1454**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Modular Placement Framing and Connect - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.6000e-004	0.0342	5.7600e-003	1.3000e-004	3.6300e-003	3.3000e-004	3.9600e-003	1.0000e-003	3.2000e-004	1.3100e-003	0.0000	13.0799	13.0799	4.5000e-004	2.0700e-003	13.7090
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1300e-003	2.3000e-003	0.0282	8.0000e-005	9.2800e-003	5.0000e-005	9.3300e-003	2.4700e-003	4.0000e-005	2.5100e-003	0.0000	7.3375	7.3375	2.3000e-004	2.1000e-004	7.4063
Total	**3.9900e-003**	**0.0365**	**0.0340**	**2.1000e-004**	**0.0129**	**3.8000e-004**	**0.0133**	**3.4700e-003**	**3.6000e-004**	**3.8200e-003**	**0.0000**	**20.4173**	**20.4173**	**6.8000e-004**	**2.2800e-003**	**21.1153**

3.6 Modular Placement Framing and Connect - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2800e-003	0.0878	0.0730	1.5000e-004		4.0200e-003	4.0200e-003		3.7000e-003	3.7000e-003	0.0000	12.9229	12.9229	4.1800e-003	0.0000	13.0273
Total	**8.2800e-003**	**0.0878**	**0.0730**	**1.5000e-004**		**4.0200e-003**	**4.0200e-003**		**3.7000e-003**	**3.7000e-003**	**0.0000**	**12.9229**	**12.9229**	**4.1800e-003**	**0.0000**	**13.0273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Modular Placement Framing and Connect - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	0.0189	3.3000e-003	9.0000e-005	2.6000e-003	1.7000e-004	2.7700e-003	7.2000e-004	1.6000e-004	8.8000e-004	0.0000	8.9320	8.9320	3.1000e-004	1.4200e-003	9.3617
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.4600e-003	0.0188	6.0000e-005	6.6600e-003	3.0000e-005	6.7000e-003	1.7700e-003	3.0000e-005	1.8000e-003	0.0000	5.1354	5.1354	1.5000e-004	1.4000e-004	5.1812
Total	**2.3200e-003**	**0.0204**	**0.0221**	**1.5000e-004**	**9.2600e-003**	**2.0000e-004**	**9.4700e-003**	**2.4900e-003**	**1.9000e-004**	**2.6800e-003**	**0.0000**	**14.0674**	**14.0674**	**4.6000e-004**	**1.5600e-003**	**14.5429**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2800e-003	0.0878	0.0730	1.5000e-004		4.0200e-003	4.0200e-003		3.7000e-003	3.7000e-003	0.0000	12.9228	12.9228	4.1800e-003	0.0000	13.0273
Total	**8.2800e-003**	**0.0878**	**0.0730**	**1.5000e-004**		**4.0200e-003**	**4.0200e-003**		**3.7000e-003**	**3.7000e-003**	**0.0000**	**12.9228**	**12.9228**	**4.1800e-003**	**0.0000**	**13.0273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Modular Placement Framing and Connect - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	0.0189	3.3000e-003	9.0000e-005	2.6000e-003	1.7000e-004	2.7700e-003	7.2000e-004	1.6000e-004	8.8000e-004	0.0000	8.9320	8.9320	3.1000e-004	1.4200e-003	9.3617
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.4600e-003	0.0188	6.0000e-005	6.6600e-003	3.0000e-005	6.7000e-003	1.7700e-003	3.0000e-005	1.8000e-003	0.0000	5.1354	5.1354	1.5000e-004	1.4000e-004	5.1812
Total	**2.3200e-003**	**0.0204**	**0.0221**	**1.5000e-004**	**9.2600e-003**	**2.0000e-004**	**9.4700e-003**	**2.4900e-003**	**1.9000e-004**	**2.6800e-003**	**0.0000**	**14.0674**	**14.0674**	**4.6000e-004**	**1.5600e-003**	**14.5429**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6669					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0521	0.5813	0.5137	1.0600e-003		0.0236	0.0236		0.0217	0.0217	0.0000	93.1615	93.1615	0.0301	0.0000	93.9147
Total	**0.7190**	**0.5813**	**0.5137**	**1.0600e-003**		**0.0236**	**0.0236**		**0.0217**	**0.0217**	**0.0000**	**93.1615**	**93.1615**	**0.0301**	**0.0000**	**93.9147**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0323	0.0225	0.2895	8.5000e-004	0.1026	5.1000e-004	0.1031	0.0273	4.7000e-004	0.0278	0.0000	79.0791	79.0791	2.2500e-003	2.1700e-003	79.7836
Total	**0.0323**	**0.0225**	**0.2895**	**8.5000e-004**	**0.1026**	**5.1000e-004**	**0.1031**	**0.0273**	**4.7000e-004**	**0.0278**	**0.0000**	**79.0791**	**79.0791**	**2.2500e-003**	**2.1700e-003**	**79.7836**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6669					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0521	0.5813	0.5137	1.0600e-003		0.0236	0.0236		0.0217	0.0217	0.0000	93.1614	93.1614	0.0301	0.0000	93.9146
Total	**0.7190**	**0.5813**	**0.5137**	**1.0600e-003**		**0.0236**	**0.0236**		**0.0217**	**0.0217**	**0.0000**	**93.1614**	**93.1614**	**0.0301**	**0.0000**	**93.9146**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0323	0.0225	0.2895	8.5000e-004	0.1026	5.1000e-004	0.1031	0.0273	4.7000e-004	0.0278	0.0000	79.0791	79.0791	2.2500e-003	2.1700e-003	79.7836
Total	**0.0323**	**0.0225**	**0.2895**	**8.5000e-004**	**0.1026**	**5.1000e-004**	**0.1031**	**0.0273**	**4.7000e-004**	**0.0278**	**0.0000**	**79.0791**	**79.0791**	**2.2500e-003**	**2.1700e-003**	**79.7836**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2200e-003**	**0.0312**	**0.0440**	**7.0000e-005**		**1.5400e-003**	**1.5400e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.8862**	**5.8862**	**1.8700e-003**	**0.0000**	**5.9329**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2200e-003**	**0.0312**	**0.0440**	**7.0000e-005**		**1.5400e-003**	**1.5400e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.8862**	**5.8862**	**1.8700e-003**	**0.0000**	**5.9329**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

231 Grant Educator Workforce Housing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3749	0.3937	3.3830	6.7000e-003	0.7159	4.8900e-003	0.7208	0.1911	4.5500e-003	0.1957	0.0000	624.1717	624.1717	0.0434	0.0308	634.4188
Unmitigated	0.3749	0.3937	3.3830	6.7000e-003	0.7159	4.8900e-003	0.7208	0.1911	4.5500e-003	0.1957	0.0000	624.1717	624.1717	0.0434	0.0308	634.4188

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	544.54	491.49	409.41	1,195,591	1,195,591
Enclosed Parking with Elevator	0.00	0.00	0.00		
Fast Food Restaurant w/o Drive Thru	380.85	765.60	550.00	741,750	741,750
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	925.40	1,257.09	959.41	1,937,342	1,937,342

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Fast Food Restaurant w/o Drive	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Enclosed Parking with Elevator	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Fast Food Restaurant w/o Drive Thru	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Other Non-Asphalt Surfaces	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	718747	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	114719	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	107954	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	718747	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	114719	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	107954	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4611	0.0132	0.8198	7.0000e-005		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	5.7308	5.7308	1.3700e-003	8.0000e-005	5.7892
Unmitigated	0.4611	0.0132	0.8198	7.0000e-005		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	5.7308	5.7308	1.3700e-003	8.0000e-005	5.7892

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0667					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4000e-004	3.7900e-003	1.6100e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.3943	4.3943	8.0000e-005	8.0000e-005	4.4205
Landscaping	0.0247	9.4300e-003	0.8181	4.0000e-005		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003	0.0000	1.3365	1.3365	1.2900e-003	0.0000	1.3687
Total	**0.4611**	**0.0132**	**0.8198**	**6.0000e-005**		**4.8400e-003**	**4.8400e-003**		**4.8400e-003**	**4.8400e-003**	**0.0000**	**5.7308**	**5.7308**	**1.3700e-003**	**8.0000e-005**	**5.7892**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0667					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4000e-004	3.7900e-003	1.6100e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.3943	4.3943	8.0000e-005	8.0000e-005	4.4205
Landscaping	0.0247	9.4300e-003	0.8181	4.0000e-005		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003	0.0000	1.3365	1.3365	1.2900e-003	0.0000	1.3687
Total	**0.4611**	**0.0132**	**0.8198**	**6.0000e-005**		**4.8400e-003**	**4.8400e-003**		**4.8400e-003**	**4.8400e-003**	**0.0000**	**5.7308**	**5.7308**	**1.3700e-003**	**8.0000e-005**	**5.7892**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.3797	0.2444	5.7700e-003	10.2098
Unmitigated	2.3797	0.2444	5.7700e-003	10.2098

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.16694 / 4.51829	2.2737	0.2335	5.5100e-003	9.7554
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0.333887 / 0.0213119	0.1059	0.0109	2.6000e-004	0.4545
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.3797**	**0.2444**	**5.7700e-003**	**10.2098**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.16694 / 4.51829	2.2737	0.2335	5.5100e-003	9.7554
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0.333887 / 0.0213119	0.1059	0.0109	2.6000e-004	0.4545
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.3797**	**0.2444**	**5.7700e-003**	**10.2098**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.8432	0.7590	0.0000	31.8186
Unmitigated	12.8432	0.7590	0.0000	31.8186

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	50.6	10.2713	0.6070	0.0000	25.4468
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	12.67	2.5719	0.1520	0.0000	6.3718
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**12.8432**	**0.7590**	**0.0000**	**31.8186**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	50.6	10.2713	0.6070	0.0000	25.4468
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	12.67	2.5719	0.1520	0.0000	6.3718
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**12.8432**	**0.7590**	**0.0000**	**31.8186**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number

11.0 Vegetation

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	112.00	Space	0.00	21,088.00	0
Other Non-Asphalt Surfaces	16.60	1000sqft	0.38	16,600.00	0
Fast Food Restaurant w/o Drive Thru	1.10	1000sqft	0.03	1,100.00	0
Apartments Mid Rise	110.00	Dwelling Unit	0.99	92,812.00	273

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	City of Palo Alto Utilities Department				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses same as proposed project - CalEEMod run for construction under Alternative 1.

Construction Phase - Based on construction schedule for Alternative 1 and assumes a 2-week overlap between each phase.

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information. Reduced crane usage for traditional construction method.

Off-road Equipment -

Off-road Equipment - Project specific information. Reduced crane usage for Alternative 1 construction methods.

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Project specific information.

Trips and VMT - Based on estimated average daily workers for Alternative 1. No modular deliveries under Alt 1.

Grading - Assumes 10,000 CY of material export.

Vehicle Trips - Alternative 1 operations is the same as proposed project.

Woodstoves - Alternative 1 operations is the same as proposed project.

Area Coating - Alternative 1 operations is the same as proposed project.

Energy Use - Alternative 1 operations is the same as proposed project.

Water And Wastewater - Alternative 1 operations is the same as proposed project.

Solid Waste - Alternative 1 operations is the same as proposed project.

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	550	0
tblAreaCoating	Area_Nonresidential_Interior	1650	0
tblAreaCoating	Area_Parking	2261	0
tblAreaCoating	Area_Residential_Exterior	62648	0
tblAreaCoating	Area_Residential_Interior	187944	0
tblConstructionPhase	NumDays	10.00	229.00
tblConstructionPhase	NumDays	200.00	121.00
tblConstructionPhase	NumDays	200.00	97.00
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	4.00	25.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblEnergyUse	LightingElect	741.44	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	LightingElect	5.35	0.00
tblEnergyUse	NT24E	3,054.10	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24E	22.30	0.00
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	147.47	0.00
tblEnergyUse	T24E	70.89	0.00
tblEnergyUse	T24E	3.50	0.00
tblEnergyUse	T24E	4.52	0.00
tblEnergyUse	T24NG	5,226.68	0.00
tblEnergyUse	T24NG	59.80	0.00
tblFireplaces	NumberGas	16.50	0.00
tblFireplaces	NumberWood	18.70	0.00
tblGrading	AcresOfGrading	0.00	4.00
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LandUseSquareFeet	44,800.00	21,088.00
tblLandUse	LandUseSquareFeet	110,000.00	92,812.00
tblLandUse	LotAcreage	1.01	0.00
tblLandUse	LotAcreage	2.89	0.99
tblLandUse	Population	315.00	273.00
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Ground Floor Concrete Work
tblOffRoadEquipment	PhaseName		Traditional Construction Method
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Ground Floor Concrete Work
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblSolidWaste	SolidWasteGenerationRate	50.60	0.00
tblSolidWaste	SolidWasteGenerationRate	12.67	0.00
tblTripsAndVMT	HaulingTripNumber	31.00	600.00
tblTripsAndVMT	HaulingTripNumber	1,250.00	2,000.00
tblTripsAndVMT	VendorTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	30.00
tblTripsAndVMT	WorkerTripNumber	95.00	60.00
tblTripsAndVMT	WorkerTripNumber	95.00	100.00
tblTripsAndVMT	WorkerTripNumber	19.00	150.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	4.91	0.00
tblVehicleTrips	ST_TR	696.00	0.00
tblVehicleTrips	SU_TR	4.09	0.00
tblVehicleTrips	SU_TR	500.00	0.00
tblVehicleTrips	WD_TR	5.44	0.00
tblVehicleTrips	WD_TR	346.23	0.00
tblWater	IndoorWaterUseRate	7,166,942.82	0.00
tblWater	IndoorWaterUseRate	333,887.08	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWater	OutdoorWaterUseRate	4,518,290.04	0.00
tblWater	OutdoorWaterUseRate	21,311.94	0.00
tblWoodstoves	NumberCatalytic	2.20	0.00
tblWoodstoves	NumberNoncatalytic	2.20	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1065	1.1691	1.1199	3.1300e-003	0.0870	0.0421	0.1291	0.0227	0.0389	0.0616	0.0000	287.8668	287.8668	0.0497	0.0175	294.3202
2023	0.7893	0.8336	1.1760	2.7900e-003	0.1592	0.0338	0.1930	0.0423	0.0311	0.0734	0.0000	251.3457	251.3457	0.0451	3.3800e-003	253.4780
Maximum	**0.7893**	**1.1691**	**1.1760**	**3.1300e-003**	**0.1592**	**0.0421**	**0.1930**	**0.0423**	**0.0389**	**0.0734**	**0.0000**	**287.8668**	**287.8668**	**0.0497**	**0.0175**	**294.3202**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1065	1.1408	1.1199	3.1300e-003	0.0837	0.0421	0.1257	0.0223	0.0389	0.0611	0.0000	287.8667	287.8667	0.0497	0.0175	294.3200
2023	0.7893	0.8336	1.1760	2.7900e-003	0.1592	0.0338	0.1930	0.0423	0.0311	0.0734	0.0000	251.3456	251.3456	0.0451	3.3800e-003	253.4778
Maximum	**0.7893**	**1.1408**	**1.1760**	**3.1300e-003**	**0.1592**	**0.0421**	**0.1930**	**0.0423**	**0.0389**	**0.0734**	**0.0000**	**287.8667**	**287.8667**	**0.0497**	**0.0175**	**294.3200**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**1.41**	**0.00**	**0.00**	**1.35**	**0.00**	**1.03**	**0.69**	**0.00**	**0.33**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-1-2022**	**8-31-2022**	0.7371	0.7089
2	**9-1-2022**	**11-30-2022**	0.4604	0.4604
3	**12-1-2022**	**2-28-2023**	0.2039	0.2039
4	**3-1-2023**	**5-31-2023**	0.5224	0.5224
5	**6-1-2023**	**8-31-2023**	0.5054	0.5054
6	**9-1-2023**	**9-30-2023**	0.1648	0.1648
		Highest	0.7371	0.7089

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3939	9.4300e-003	0.8181	4.0000e-005		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003	0.0000	1.3365	1.3365	1.2900e-003	0.0000	1.3687
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3939**	**9.4300e-003**	**0.8181**	**4.0000e-005**	**0.0000**	**4.5300e-003**	**4.5300e-003**	**0.0000**	**4.5300e-003**	**4.5300e-003**	**0.0000**	**1.3365**	**1.3365**	**1.2900e-003**	**0.0000**	**1.3687**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3939	9.4300e-003	0.8181	4.0000e-005		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003	0.0000	1.3365	1.3365	1.2900e-003	0.0000	1.3687
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3939**	**9.4300e-003**	**0.8181**	**4.0000e-005**	**0.0000**	**4.5300e-003**	**4.5300e-003**	**0.0000**	**4.5300e-003**	**4.5300e-003**	**0.0000**	**1.3365**	**1.3365**	**1.2900e-003**	**0.0000**	**1.3687**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition/Site Clearing	Demolition	6/1/2022	6/15/2022	6	13	
2	Grading and Excavation	Grading	6/16/2022	7/14/2022	6	25	
3	Underground Utilities	Trenching	6/30/2022	7/28/2022	6	25	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Ground Floor Concrete Work	Building Construction	7/14/2022	12/1/2022	6	121	
5	Traditional Construction Method	Building Construction	11/17/2022	3/9/2023	6	97	
6	Architectural Coating	Architectural Coating	2/23/2023	11/16/2023	6	229	
7	Paving	Paving	11/5/2023	11/16/2023	6	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0.38

Residential Indoor: 187,944; Residential Outdoor: 62,648; Non-Residential Indoor: 1,650; Non-Residential Outdoor: 550; Striped Parking Area: 2,261 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition/Site Clearing	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition/Site Clearing	Rubber Tired Dozers	1	8.00	247	0.40
Demolition/Site Clearing	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading and Excavation	Excavators	1	8.00	158	0.38
Grading and Excavation	Graders	0	0.00	187	0.41
Grading and Excavation	Rubber Tired Dozers	0	0.00	247	0.40
Grading and Excavation	Skid Steer Loaders	1	8.00	65	0.37
Grading and Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Excavators	1	8.00	158	0.38
Underground Utilities	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Ground Floor Concrete Work	Aerial Lifts	2	8.00	63	0.31
Ground Floor Concrete Work	Cranes	1	8.00	231	0.29
Ground Floor Concrete Work	Forklifts	1	8.00	89	0.20
Ground Floor Concrete Work	Generator Sets	0	0.00	84	0.74
Ground Floor Concrete Work	Skid Steer Loaders	1	8.00	65	0.37
Ground Floor Concrete Work	Tractors/Loaders/Backhoes	1	8.00	97	0.37

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Ground Floor Concrete Work	Welders	0	0.00	46	0.45
Traditional Construction Method	Aerial Lifts	1	8.00	63	0.31
Traditional Construction Method	Cranes	1	4.00	231	0.29
Traditional Construction Method	Forklifts	1	8.00	89	0.20
Traditional Construction Method	Generator Sets	0	0.00	84	0.74
Traditional Construction Method	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Traditional Construction Method	Welders	0	0.00	46	0.45
Architectural Coating	Aerial Lifts	2	8.00	63	0.31
Architectural Coating	Air Compressors	0	0.00	78	0.48
Architectural Coating	Cranes	1	8.00	231	0.29
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading and Excavation	Bore/Drill Rigs	1	8.00	221	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition/Site Clearing	5	30.00	0.00	600.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Excavation	5	30.00	0.00	2,000.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	2	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Ground Floor Concrete Work	7	60.00	18.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Traditional Construction Method	4	100.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	150.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition/Site Clearing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3500e-003	0.0000	3.3500e-003	5.1000e-004	0.0000	5.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1080	0.0907	1.6000e-004		5.4500e-003	5.4500e-003		5.0900e-003	5.0900e-003	0.0000	13.7005	13.7005	3.4900e-003	0.0000	13.7878
Total	**0.0110**	**0.1080**	**0.0907**	**1.6000e-004**	**3.3500e-003**	**5.4500e-003**	**8.8000e-003**	**5.1000e-004**	**5.0900e-003**	**5.6000e-003**	**0.0000**	**13.7005**	**13.7005**	**3.4900e-003**	**0.0000**	**13.7878**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition/Site Clearing - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4200e-003	0.0519	0.0109	1.9000e-004	5.0900e-003	4.7000e-004	5.5600e-003	1.4000e-003	4.5000e-004	1.8500e-003	0.0000	18.8820	18.8820	6.5000e-004	2.9900e-003	19.7899
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.8000e-004	4.7100e-003	1.0000e-005	1.5500e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2229	1.2229	4.0000e-005	4.0000e-005	1.2344
Total	**1.9400e-003**	**0.0523**	**0.0156**	**2.0000e-004**	**6.6400e-003**	**4.8000e-004**	**7.1100e-003**	**1.8100e-003**	**4.6000e-004**	**2.2700e-003**	**0.0000**	**20.1049**	**20.1049**	**6.9000e-004**	**3.0300e-003**	**21.0243**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5100e-003	0.0000	1.5100e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1080	0.0907	1.6000e-004		5.4500e-003	5.4500e-003		5.0900e-003	5.0900e-003	0.0000	13.7005	13.7005	3.4900e-003	0.0000	13.7878
Total	**0.0110**	**0.1080**	**0.0907**	**1.6000e-004**	**1.5100e-003**	**5.4500e-003**	**6.9600e-003**	**2.3000e-004**	**5.0900e-003**	**5.3200e-003**	**0.0000**	**13.7005**	**13.7005**	**3.4900e-003**	**0.0000**	**13.7878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition/Site Clearing - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4200e-003	0.0519	0.0109	1.9000e-004	5.0900e-003	4.7000e-004	5.5600e-003	1.4000e-003	4.5000e-004	1.8500e-003	0.0000	18.8820	18.8820	6.5000e-004	2.9900e-003	19.7899
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.8000e-004	4.7100e-003	1.0000e-005	1.5500e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2229	1.2229	4.0000e-005	4.0000e-005	1.2344
Total	**1.9400e-003**	**0.0523**	**0.0156**	**2.0000e-004**	**6.6400e-003**	**4.8000e-004**	**7.1100e-003**	**1.8100e-003**	**4.6000e-004**	**2.2700e-003**	**0.0000**	**20.1049**	**20.1049**	**6.9000e-004**	**3.0300e-003**	**21.0243**

3.3 Grading and Excavation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6900e-003	0.0000	2.6900e-003	3.1000e-004	0.0000	3.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.1040	0.1395	2.9000e-004		4.6700e-003	4.6700e-003		4.2900e-003	4.2900e-003	0.0000	25.1341	25.1341	8.1300e-003	0.0000	25.3373
Total	**0.0103**	**0.1040**	**0.1395**	**2.9000e-004**	**2.6900e-003**	**4.6700e-003**	**7.3600e-003**	**3.1000e-004**	**4.2900e-003**	**4.6000e-003**	**0.0000**	**25.1341**	**25.1341**	**8.1300e-003**	**0.0000**	**25.3373**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7300e-003	0.1731	0.0364	6.4000e-004	0.0170	1.5600e-003	0.0185	4.6700e-003	1.4900e-003	6.1600e-003	0.0000	62.9399	62.9399	2.1600e-003	9.9700e-003	65.9665
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**5.7300e-003**	**0.1739**	**0.0454**	**6.7000e-004**	**0.0199**	**1.5800e-003**	**0.0215**	**5.4600e-003**	**1.5000e-003**	**6.9700e-003**	**0.0000**	**65.2917**	**65.2917**	**2.2300e-003**	**0.0100**	**68.3403**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2100e-003	0.0000	1.2100e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.0757	0.1395	2.9000e-004		4.6700e-003	4.6700e-003		4.2900e-003	4.2900e-003	0.0000	25.1340	25.1340	8.1300e-003	0.0000	25.3373
Total	**0.0103**	**0.0757**	**0.1395**	**2.9000e-004**	**1.2100e-003**	**4.6700e-003**	**5.8800e-003**	**1.4000e-004**	**4.2900e-003**	**4.4300e-003**	**0.0000**	**25.1340**	**25.1340**	**8.1300e-003**	**0.0000**	**25.3373**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7300e-003	0.1731	0.0364	6.4000e-004	0.0170	1.5600e-003	0.0185	4.6700e-003	1.4900e-003	6.1600e-003	0.0000	62.9399	62.9399	2.1600e-003	9.9700e-003	65.9665
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**5.7300e-003**	**0.1739**	**0.0454**	**6.7000e-004**	**0.0199**	**1.5800e-003**	**0.0215**	**5.4600e-003**	**1.5000e-003**	**6.9700e-003**	**0.0000**	**65.2917**	**65.2917**	**2.2300e-003**	**0.0100**	**68.3403**

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5900e-003	0.0432	0.0687	1.0000e-004		2.2000e-003	2.2000e-003		2.0200e-003	2.0200e-003	0.0000	9.0861	9.0861	2.9400e-003	0.0000	9.1595
Total	**4.5900e-003**	**0.0432**	**0.0687**	**1.0000e-004**		**2.2000e-003**	**2.2000e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**9.0861**	**9.0861**	**2.9400e-003**	**0.0000**	**9.1595**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**1.0000e-003**	**7.4000e-004**	**9.0500e-003**	**3.0000e-005**	**2.9700e-003**	**2.0000e-005**	**2.9900e-003**	**7.9000e-004**	**1.0000e-005**	**8.1000e-004**	**0.0000**	**2.3518**	**2.3518**	**7.0000e-005**	**7.0000e-005**	**2.3738**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5900e-003	0.0432	0.0687	1.0000e-004		2.2000e-003	2.2000e-003		2.0200e-003	2.0200e-003	0.0000	9.0861	9.0861	2.9400e-003	0.0000	9.1595
Total	**4.5900e-003**	**0.0432**	**0.0687**	**1.0000e-004**		**2.2000e-003**	**2.2000e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**9.0861**	**9.0861**	**2.9400e-003**	**0.0000**	**9.1595**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**1.0000e-003**	**7.4000e-004**	**9.0500e-003**	**3.0000e-005**	**2.9700e-003**	**2.0000e-005**	**2.9900e-003**	**7.9000e-004**	**1.0000e-005**	**8.1000e-004**	**0.0000**	**2.3518**	**2.3518**	**7.0000e-005**	**7.0000e-005**	**2.3738**

3.5 Ground Floor Concrete Work - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0480	0.5423	0.5360	9.6000e-004		0.0235	0.0235		0.0217	0.0217	0.0000	84.1783	84.1783	0.0272	0.0000	84.8590
Total	**0.0480**	**0.5423**	**0.5360**	**9.6000e-004**		**0.0235**	**0.0235**		**0.0217**	**0.0217**	**0.0000**	**84.1783**	**84.1783**	**0.0272**	**0.0000**	**84.8590**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Ground Floor Concrete Work - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4100e-003	0.0614	0.0180	2.3000e-004	7.1700e-003	6.4000e-004	7.8100e-003	2.0700e-003	6.2000e-004	2.6900e-003	0.0000	22.5873	22.5873	5.1000e-004	3.3300e-003	23.5932
Worker	9.7200e-003	7.1300e-003	0.0876	2.5000e-004	0.0288	1.5000e-004	0.0289	7.6600e-003	1.4000e-004	7.8000e-003	0.0000	22.7649	22.7649	7.0000e-004	6.6000e-004	22.9785
Total	**0.0121**	**0.0685**	**0.1056**	**4.8000e-004**	**0.0360**	**7.9000e-004**	**0.0368**	**9.7300e-003**	**7.6000e-004**	**0.0105**	**0.0000**	**45.3522**	**45.3522**	**1.2100e-003**	**3.9900e-003**	**46.5717**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0480	0.5423	0.5360	9.6000e-004		0.0235	0.0235		0.0217	0.0217	0.0000	84.1782	84.1782	0.0272	0.0000	84.8589
Total	**0.0480**	**0.5423**	**0.5360**	**9.6000e-004**		**0.0235**	**0.0235**		**0.0217**	**0.0217**	**0.0000**	**84.1782**	**84.1782**	**0.0272**	**0.0000**	**84.8589**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Ground Floor Concrete Work - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4100e-003	0.0614	0.0180	2.3000e-004	7.1700e-003	6.4000e-004	7.8100e-003	2.0700e-003	6.2000e-004	2.6900e-003	0.0000	22.5873	22.5873	5.1000e-004	3.3300e-003	23.5932
Worker	9.7200e-003	7.1300e-003	0.0876	2.5000e-004	0.0288	1.5000e-004	0.0289	7.6600e-003	1.4000e-004	7.8000e-003	0.0000	22.7649	22.7649	7.0000e-004	6.6000e-004	22.9785
Total	**0.0121**	**0.0685**	**0.1056**	**4.8000e-004**	**0.0360**	**7.9000e-004**	**0.0368**	**9.7300e-003**	**7.6000e-004**	**0.0105**	**0.0000**	**45.3522**	**45.3522**	**1.2100e-003**	**3.9900e-003**	**46.5717**

3.6 Traditional Construction Method - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.5600e-003	0.0723	0.0623	1.2000e-004		3.2600e-003	3.2600e-003		3.0000e-003	3.0000e-003	0.0000	10.4383	10.4383	3.3800e-003	0.0000	10.5227
Total	**6.5600e-003**	**0.0723**	**0.0623**	**1.2000e-004**		**3.2600e-003**	**3.2600e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**10.4383**	**10.4383**	**3.3800e-003**	**0.0000**	**10.5227**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Traditional Construction Method - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2200e-003	3.8300e-003	0.0471	1.3000e-004	0.0155	8.0000e-005	0.0156	4.1100e-003	7.0000e-005	4.1900e-003	0.0000	12.2291	12.2291	3.8000e-004	3.5000e-004	12.3438
Total	**5.2200e-003**	**3.8300e-003**	**0.0471**	**1.3000e-004**	**0.0155**	**8.0000e-005**	**0.0156**	**4.1100e-003**	**7.0000e-005**	**4.1900e-003**	**0.0000**	**12.2291**	**12.2291**	**3.8000e-004**	**3.5000e-004**	**12.3438**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.5600e-003	0.0723	0.0623	1.2000e-004		3.2600e-003	3.2600e-003		3.0000e-003	3.0000e-003	0.0000	10.4383	10.4383	3.3800e-003	0.0000	10.5227
Total	**6.5600e-003**	**0.0723**	**0.0623**	**1.2000e-004**		**3.2600e-003**	**3.2600e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**10.4383**	**10.4383**	**3.3800e-003**	**0.0000**	**10.5227**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Traditional Construction Method - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2200e-003	3.8300e-003	0.0471	1.3000e-004	0.0155	8.0000e-005	0.0156	4.1100e-003	7.0000e-005	4.1900e-003	0.0000	12.2291	12.2291	3.8000e-004	3.5000e-004	12.3438
Total	**5.2200e-003**	**3.8300e-003**	**0.0471**	**1.3000e-004**	**0.0155**	**8.0000e-005**	**0.0156**	**4.1100e-003**	**7.0000e-005**	**4.1900e-003**	**0.0000**	**12.2291**	**12.2291**	**3.8000e-004**	**3.5000e-004**	**12.3438**

3.6 Traditional Construction Method - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.0700e-003	0.0986	0.0915	1.8000e-004		4.3000e-003	4.3000e-003		3.9500e-003	3.9500e-003	0.0000	15.5235	15.5235	5.0200e-003	0.0000	15.6490
Total	**9.0700e-003**	**0.0986**	**0.0915**	**1.8000e-004**		**4.3000e-003**	**4.3000e-003**		**3.9500e-003**	**3.9500e-003**	**0.0000**	**15.5235**	**15.5235**	**5.0200e-003**	**0.0000**	**15.6490**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Traditional Construction Method - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2500e-003	5.0500e-003	0.0649	1.9000e-004	0.0230	1.1000e-004	0.0231	6.1200e-003	1.1000e-004	6.2200e-003	0.0000	17.7294	17.7294	5.1000e-004	4.9000e-004	17.8873
Total	**7.2500e-003**	**5.0500e-003**	**0.0649**	**1.9000e-004**	**0.0230**	**1.1000e-004**	**0.0231**	**6.1200e-003**	**1.1000e-004**	**6.2200e-003**	**0.0000**	**17.7294**	**17.7294**	**5.1000e-004**	**4.9000e-004**	**17.8873**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.0700e-003	0.0986	0.0915	1.8000e-004		4.3000e-003	4.3000e-003		3.9500e-003	3.9500e-003	0.0000	15.5235	15.5235	5.0200e-003	0.0000	15.6490
Total	**9.0700e-003**	**0.0986**	**0.0915**	**1.8000e-004**		**4.3000e-003**	**4.3000e-003**		**3.9500e-003**	**3.9500e-003**	**0.0000**	**15.5235**	**15.5235**	**5.0200e-003**	**0.0000**	**15.6490**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Traditional Construction Method - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2500e-003	5.0500e-003	0.0649	1.9000e-004	0.0230	1.1000e-004	0.0231	6.1200e-003	1.1000e-004	6.2200e-003	0.0000	17.7294	17.7294	5.1000e-004	4.9000e-004	17.8873
Total	**7.2500e-003**	**5.0500e-003**	**0.0649**	**1.9000e-004**	**0.0230**	**1.1000e-004**	**0.0231**	**6.1200e-003**	**1.1000e-004**	**6.2200e-003**	**0.0000**	**17.7294**	**17.7294**	**5.1000e-004**	**4.9000e-004**	**17.8873**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6669					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0599	0.6689	0.5912	1.2200e-003		0.0271	0.0271		0.0250	0.0250	0.0000	107.2059	107.2059	0.0347	0.0000	108.0727
Total	**0.7268**	**0.6689**	**0.5912**	**1.2200e-003**		**0.0271**	**0.0271**		**0.0250**	**0.0250**	**0.0000**	**107.2059**	**107.2059**	**0.0347**	**0.0000**	**108.0727**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0429	0.0299	0.3844	1.1300e-003	0.1362	6.8000e-004	0.1369	0.0362	6.2000e-004	0.0369	0.0000	105.0007	105.0007	2.9900e-003	2.8900e-003	105.9361
Total	**0.0429**	**0.0299**	**0.3844**	**1.1300e-003**	**0.1362**	**6.8000e-004**	**0.1369**	**0.0362**	**6.2000e-004**	**0.0369**	**0.0000**	**105.0007**	**105.0007**	**2.9900e-003**	**2.8900e-003**	**105.9361**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6669					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0599	0.6689	0.5912	1.2200e-003		0.0271	0.0271		0.0250	0.0250	0.0000	107.2058	107.2058	0.0347	0.0000	108.0726
Total	**0.7268**	**0.6689**	**0.5912**	**1.2200e-003**		**0.0271**	**0.0271**		**0.0250**	**0.0250**	**0.0000**	**107.2058**	**107.2058**	**0.0347**	**0.0000**	**108.0726**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0429	0.0299	0.3844	1.1300e-003	0.1362	6.8000e-004	0.1369	0.0362	6.2000e-004	0.0369	0.0000	105.0007	105.0007	2.9900e-003	2.8900e-003	105.9361
Total	**0.0429**	**0.0299**	**0.3844**	**1.1300e-003**	**0.1362**	**6.8000e-004**	**0.1369**	**0.0362**	**6.2000e-004**	**0.0369**	**0.0000**	**105.0007**	**105.0007**	**2.9900e-003**	**2.8900e-003**	**105.9361**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2200e-003**	**0.0312**	**0.0440**	**7.0000e-005**		**1.5400e-003**	**1.5400e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.8862**	**5.8862**	**1.8700e-003**	**0.0000**	**5.9329**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2200e-003**	**0.0312**	**0.0440**	**7.0000e-005**		**1.5400e-003**	**1.5400e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.8862**	**5.8862**	**1.8700e-003**	**0.0000**	**5.9329**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Fast Food Restaurant w/o Drive	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Enclosed Parking with Elevator	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Fast Food Restaurant w/o Drive Thru	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Other Non-Asphalt Surfaces	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3939	9.4300e-003	0.8181	4.0000e-005		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003	0.0000	1.3365	1.3365	1.2900e-003	0.0000	1.3687
Unmitigated	0.3939	9.4300e-003	0.8181	4.0000e-005		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003	0.0000	1.3365	1.3365	1.2900e-003	0.0000	1.3687

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0247	9.4300e-003	0.8181	4.0000e-005		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003	0.0000	1.3365	1.3365	1.2900e-003	0.0000	1.3687
Total	**0.3939**	**9.4300e-003**	**0.8181**	**4.0000e-005**		**4.5300e-003**	**4.5300e-003**		**4.5300e-003**	**4.5300e-003**	**0.0000**	**1.3365**	**1.3365**	**1.2900e-003**	**0.0000**	**1.3687**

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0247	9.4300e-003	0.8181	4.0000e-005		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003	0.0000	1.3365	1.3365	1.2900e-003	0.0000	1.3687
Total	**0.3939**	**9.4300e-003**	**0.8181**	**4.0000e-005**		**4.5300e-003**	**4.5300e-003**		**4.5300e-003**	**4.5300e-003**	**0.0000**	**1.3365**	**1.3365**	**1.2900e-003**	**0.0000**	**1.3687**

7.0 Water Detail

7.1 Mitigation Measures Water

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

231 Grant Educator Workforce Housing - Alt 1 Traditional Construction - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number

11.0 Vegetation

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

231 Grant Educator Workforce Housing Alt 2

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	39.00	Space	0.00	7,343.00	0
Other Non-Asphalt Surfaces	16.60	1000sqft	0.38	16,600.00	0
Parking Lot	25.00	Space	0.22	10,000.00	0
Fast Food Restaurant w/o Drive Thru	1.00	1000sqft	0.02	1,000.00	0
Apartments Mid Rise	63.00	Dwelling Unit	1.00	66,657.00	156

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	City of Palo Alto Utilities Department				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses based on applicant provided information. Square footage for residential land use includes community spaces/leasing office/etc. Parking garage acreage included withing total acreage for the site of 1.4 acres. Fast food restaurant w/out drive thru to represent flex space.

Construction Phase - Based on project specific info and assumes a 2-week overlap between each phase.

Off-road Equipment - Default equipment for demolition.

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information.

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Project specific information.

Off-road Equipment - Project specific information, with reduction in mobile crane usage due to fewer building stories/units.

Off-road Equipment - Default equipment for paving.

Grading - Approximately 8,000 CY of material export.

Demolition - Demolition of existing 6,800 sq. ft. building.

Trips and VMT - Based on estimated average daily workers per phase. Project specific haul truck trips during demolition and grading. Haul trucks during modular placement assumes modular delivery from Vallejo.

Vehicle Trips - Adjusted residential trip rates to account for 9% reduction consistent with TIA due to VTA's guidelines for TOD housing.

Woodstoves - Assumes no woodstoves or wood-burning or natural gas fireplaces per Reg 6, Rule 3.

Energy Use - Includes project design feature of all electric building (no natural gas infrastructure).

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	199.00
tblConstructionPhase	NumDays	200.00	121.00
tblConstructionPhase	NumDays	200.00	43.00
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	4.00	25.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblEnergyUse	NT24E	3,054.10	4,058.24
tblEnergyUse	NT24E	22.30	69.24
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	147.47	0.00
tblEnergyUse	T24E	70.89	1,734.38

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblEnergyUse	T24E	4.52	23.55
tblEnergyUse	T24NG	5,226.68	0.00
tblEnergyUse	T24NG	59.80	0.00
tblFireplaces	NumberGas	9.45	0.00
tblFireplaces	NumberWood	10.71	0.00
tblGrading	AcresOfGrading	0.00	4.00
tblGrading	MaterialExported	0.00	8,000.00
tblLandUse	LandUseSquareFeet	15,600.00	7,343.00
tblLandUse	LandUseSquareFeet	63,000.00	66,657.00
tblLandUse	LotAcreage	0.35	0.00
tblLandUse	LotAcreage	1.66	1.00
tblLandUse	Population	180.00	156.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Ground Floor Concrete Work
tblOffRoadEquipment	PhaseName		Modular Placement Framing and Connect
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	PhaseName		Ground Floor Concrete Work
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Grading and Excavation
tblOffRoadEquipment	PhaseName		Ground Floor Concrete Work
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	70.00
tblTripsAndVMT	HaulingTripNumber	31.00	600.00
tblTripsAndVMT	HaulingTripNumber	1,000.00	1,600.00
tblTripsAndVMT	HaulingTripNumber	0.00	110.00
tblTripsAndVMT	VendorTripNumber	12.00	0.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	MHDT
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	25.00	30.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00
tblTripsAndVMT	WorkerTripNumber	12.00	130.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	4.91	4.40
tblVehicleTrips	SU_TR	4.09	3.70
tblVehicleTrips	WD_TR	5.44	4.90
tblVehicleTrips	WD_TR	346.23	346.00
tblWoodstoves	NumberCatalytic	1.26	0.00
tblWoodstoves	NumberNoncatalytic	1.26	0.00

2.0 Emissions Summary

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1535	1.3830	1.3601	3.4100e-003	0.0828	0.0555	0.1383	0.0216	0.0513	0.0729	0.0000	310.5291	310.5291	0.0603	0.0154	316.6345
2023	0.5254	0.3907	0.6335	1.5000e-003	0.0992	0.0167	0.1159	0.0264	0.0154	0.0418	0.0000	135.8630	135.8630	0.0211	2.2600e-003	137.0650
Maximum	**0.5254**	**1.3830**	**1.3601**	**3.4100e-003**	**0.0992**	**0.0555**	**0.1383**	**0.0264**	**0.0513**	**0.0729**	**0.0000**	**310.5291**	**310.5291**	**0.0603**	**0.0154**	**316.6345**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1535	1.3830	1.3601	3.4100e-003	0.0795	0.0555	0.1350	0.0212	0.0513	0.0725	0.0000	310.5289	310.5289	0.0603	0.0154	316.6343
2023	0.5254	0.3907	0.6335	1.5000e-003	0.0992	0.0167	0.1159	0.0264	0.0154	0.0418	0.0000	135.8629	135.8629	0.0211	2.2600e-003	137.0649
Maximum	**0.5254**	**1.3830**	**1.3601**	**3.4100e-003**	**0.0992**	**0.0555**	**0.1350**	**0.0264**	**0.0513**	**0.0725**	**0.0000**	**310.5289**	**310.5289**	**0.0603**	**0.0154**	**316.6343**

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**1.79**	**0.00**	**1.28**	**0.94**	**0.00**	**0.39**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-1-2022**	**8-31-2022**	0.8293	0.8293
2	**9-1-2022**	**11-30-2022**	0.5233	0.5233
3	**12-1-2022**	**2-28-2023**	0.4185	0.4185
4	**3-1-2023**	**5-31-2023**	0.3595	0.3595
5	**6-1-2023**	**8-31-2023**	0.3125	0.3125
		Highest	0.8293	0.8293

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3288	5.4000e-003	0.4686	2.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	0.7656	0.7656	7.4000e-004	0.0000	0.7840
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.2685	0.2781	2.3904	4.6800e-003	0.4995	3.4300e-003	0.5030	0.1333	3.1900e-003	0.1365	0.0000	436.1857	436.1857	0.0309	0.0218	443.4382
Waste						0.0000	0.0000		0.0000	0.0000	8.2211	0.0000	8.2211	0.4859	0.0000	20.3675
Water						0.0000	0.0000		0.0000	0.0000	1.3985	0.0000	1.3985	0.1436	3.3900e-003	6.0003
Total	**0.5973**	**0.2835**	**2.8591**	**4.7000e-003**	**0.4995**	**6.0200e-003**	**0.5055**	**0.1333**	**5.7800e-003**	**0.1391**	**9.6197**	**436.9512**	**446.5709**	**0.6611**	**0.0251**	**470.5901**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3288	5.4000e-003	0.4686	2.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	0.7656	0.7656	7.4000e-004	0.0000	0.7840
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.2685	0.2781	2.3904	4.6800e-003	0.4995	3.4300e-003	0.5030	0.1333	3.1900e-003	0.1365	0.0000	436.1857	436.1857	0.0309	0.0218	443.4382
Waste						0.0000	0.0000		0.0000	0.0000	8.2211	0.0000	8.2211	0.4859	0.0000	20.3675
Water						0.0000	0.0000		0.0000	0.0000	1.1188	0.0000	1.1188	0.1149	2.7100e-003	4.8003
Total	**0.5973**	**0.2835**	**2.8591**	**4.7000e-003**	**0.4995**	**6.0200e-003**	**0.5055**	**0.1333**	**5.7800e-003**	**0.1391**	**9.3400**	**436.9512**	**446.2912**	**0.6324**	**0.0245**	**469.3900**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.91**	**0.00**	**0.06**	**4.35**	**2.70**	**0.26**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition/Site Clearing	Demolition	6/1/2022	6/15/2022	6	13	
2	Grading and Excavation	Grading	6/16/2022	7/14/2022	6	25	
3	Underground Utilities	Trenching	6/30/2022	7/28/2022	6	25	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Ground Floor Concrete Work	Building Construction	7/14/2022	12/1/2022	6	121	
5	Modular Placement Framing and Connect	Building Construction	11/17/2022	1/5/2023	6	43	
6	Architectural Coating	Architectural Coating	12/22/2022	8/10/2023	6	199	
7	Paving	Paving	7/30/2023	8/10/2023	6	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0.6

Residential Indoor: 134,980; Residential Outdoor: 44,993; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 500; Striped Parking Area: 2,037 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition/Site Clearing	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition/Site Clearing	Rubber Tired Dozers	1	8.00	247	0.40
Demolition/Site Clearing	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading and Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Grading and Excavation	Excavators	2	8.00	158	0.38
Grading and Excavation	Graders	0	0.00	187	0.41
Grading and Excavation	Other Construction Equipment	1	8.00	172	0.42
Grading and Excavation	Rollers	1	8.00	80	0.38
Grading and Excavation	Rubber Tired Dozers	0	0.00	247	0.40
Grading and Excavation	Skid Steer Loaders	1	8.00	65	0.37
Grading and Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Excavators	1	8.00	158	0.38
Underground Utilities	Plate Compactors	2	8.00	8	0.43
Underground Utilities	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Ground Floor Concrete Work	Aerial Lifts	2	8.00	63	0.31
Ground Floor Concrete Work	Cranes	1	8.00	231	0.29

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Ground Floor Concrete Work	Forklifts	2	8.00	89	0.20
Ground Floor Concrete Work	Generator Sets	0	0.00	84	0.74
Ground Floor Concrete Work	Plate Compactors	1	8.00	8	0.43
Ground Floor Concrete Work	Skid Steer Loaders	1	8.00	65	0.37
Ground Floor Concrete Work	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Ground Floor Concrete Work	Welders	0	0.00	46	0.45
Modular Placement Framing and Connect	Aerial Lifts	1	8.00	63	0.31
Modular Placement Framing and Connect	Cranes	1	8.00	231	0.29
Modular Placement Framing and Connect	Forklifts	2	8.00	89	0.20
Modular Placement Framing and Connect	Generator Sets	0	8.00	84	0.74
Modular Placement Framing and Connect	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Modular Placement Framing and Connect	Welders	0	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	0	0.00	78	0.48
Architectural Coating	Cranes	1	4.00	231	0.29
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition/Site Clearing	5	30.00	0.00	600.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Excavation	10	30.00	0.00	1,600.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Underground Utilities	4	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Ground Floor Concrete Work	9	60.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	MHDT	HHDT
Modular Placement Framing and Connect	4	60.00	0.00	110.00	10.80	7.30	70.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	130.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition/Site Clearing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3500e-003	0.0000	3.3500e-003	5.1000e-004	0.0000	5.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1080	0.0907	1.6000e-004		5.4500e-003	5.4500e-003		5.0900e-003	5.0900e-003	0.0000	13.7005	13.7005	3.4900e-003	0.0000	13.7878
Total	**0.0110**	**0.1080**	**0.0907**	**1.6000e-004**	**3.3500e-003**	**5.4500e-003**	**8.8000e-003**	**5.1000e-004**	**5.0900e-003**	**5.6000e-003**	**0.0000**	**13.7005**	**13.7005**	**3.4900e-003**	**0.0000**	**13.7878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition/Site Clearing - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4200e-003	0.0519	0.0109	1.9000e-004	5.0900e-003	4.7000e-004	5.5600e-003	1.4000e-003	4.5000e-004	1.8500e-003	0.0000	18.8820	18.8820	6.5000e-004	2.9900e-003	19.7899
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.8000e-004	4.7100e-003	1.0000e-005	1.5500e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2229	1.2229	4.0000e-005	4.0000e-005	1.2344
Total	**1.9400e-003**	**0.0523**	**0.0156**	**2.0000e-004**	**6.6400e-003**	**4.8000e-004**	**7.1100e-003**	**1.8100e-003**	**4.6000e-004**	**2.2700e-003**	**0.0000**	**20.1049**	**20.1049**	**6.9000e-004**	**3.0300e-003**	**21.0243**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5100e-003	0.0000	1.5100e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1080	0.0907	1.6000e-004		5.4500e-003	5.4500e-003		5.0900e-003	5.0900e-003	0.0000	13.7005	13.7005	3.4900e-003	0.0000	13.7878
Total	**0.0110**	**0.1080**	**0.0907**	**1.6000e-004**	**1.5100e-003**	**5.4500e-003**	**6.9600e-003**	**2.3000e-004**	**5.0900e-003**	**5.3200e-003**	**0.0000**	**13.7005**	**13.7005**	**3.4900e-003**	**0.0000**	**13.7878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition/Site Clearing - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4200e-003	0.0519	0.0109	1.9000e-004	5.0900e-003	4.7000e-004	5.5600e-003	1.4000e-003	4.5000e-004	1.8500e-003	0.0000	18.8820	18.8820	6.5000e-004	2.9900e-003	19.7899
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.8000e-004	4.7100e-003	1.0000e-005	1.5500e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2229	1.2229	4.0000e-005	4.0000e-005	1.2344
Total	**1.9400e-003**	**0.0523**	**0.0156**	**2.0000e-004**	**6.6400e-003**	**4.8000e-004**	**7.1100e-003**	**1.8100e-003**	**4.6000e-004**	**2.2700e-003**	**0.0000**	**20.1049**	**20.1049**	**6.9000e-004**	**3.0300e-003**	**21.0243**

3.3 Grading and Excavation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5700e-003	0.0000	2.5700e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1955	0.2537	4.6000e-004		9.4700e-003	9.4700e-003		8.7200e-003	8.7200e-003	0.0000	40.4706	40.4706	0.0131	0.0000	40.7978
Total	**0.0196**	**0.1955**	**0.2537**	**4.6000e-004**	**2.5700e-003**	**9.4700e-003**	**0.0120**	**3.0000e-004**	**8.7200e-003**	**9.0200e-003**	**0.0000**	**40.4706**	**40.4706**	**0.0131**	**0.0000**	**40.7978**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.7800e-003	0.1385	0.0291	5.1000e-004	0.0136	1.2500e-003	0.0148	3.7300e-003	1.1900e-003	4.9300e-003	0.0000	50.3519	50.3519	1.7300e-003	7.9800e-003	52.7732
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**4.7800e-003**	**0.1393**	**0.0382**	**5.4000e-004**	**0.0165**	**1.2700e-003**	**0.0178**	**4.5200e-003**	**1.2000e-003**	**5.7400e-003**	**0.0000**	**52.7037**	**52.7037**	**1.8000e-003**	**8.0500e-003**	**55.1470**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1600e-003	0.0000	1.1600e-003	1.3000e-004	0.0000	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1955	0.2537	4.6000e-004		9.4700e-003	9.4700e-003		8.7200e-003	8.7200e-003	0.0000	40.4706	40.4706	0.0131	0.0000	40.7978
Total	**0.0196**	**0.1955**	**0.2537**	**4.6000e-004**	**1.1600e-003**	**9.4700e-003**	**0.0106**	**1.3000e-004**	**8.7200e-003**	**8.8500e-003**	**0.0000**	**40.4706**	**40.4706**	**0.0131**	**0.0000**	**40.7978**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.7800e-003	0.1385	0.0291	5.1000e-004	0.0136	1.2500e-003	0.0148	3.7300e-003	1.1900e-003	4.9300e-003	0.0000	50.3519	50.3519	1.7300e-003	7.9800e-003	52.7732
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**4.7800e-003**	**0.1393**	**0.0382**	**5.4000e-004**	**0.0165**	**1.2700e-003**	**0.0178**	**4.5200e-003**	**1.2000e-003**	**5.7400e-003**	**0.0000**	**52.7037**	**52.7037**	**1.8000e-003**	**8.0500e-003**	**55.1470**

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5900e-003	0.0494	0.0739	1.2000e-004		2.4400e-003	2.4400e-003		2.2700e-003	2.2700e-003	0.0000	9.8681	9.8681	3.0200e-003	0.0000	9.9435
Total	**5.5900e-003**	**0.0494**	**0.0739**	**1.2000e-004**		**2.4400e-003**	**2.4400e-003**		**2.2700e-003**	**2.2700e-003**	**0.0000**	**9.8681**	**9.8681**	**3.0200e-003**	**0.0000**	**9.9435**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**1.0000e-003**	**7.4000e-004**	**9.0500e-003**	**3.0000e-005**	**2.9700e-003**	**2.0000e-005**	**2.9900e-003**	**7.9000e-004**	**1.0000e-005**	**8.1000e-004**	**0.0000**	**2.3518**	**2.3518**	**7.0000e-005**	**7.0000e-005**	**2.3738**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5900e-003	0.0494	0.0739	1.2000e-004		2.4400e-003	2.4400e-003		2.2700e-003	2.2700e-003	0.0000	9.8680	9.8680	3.0200e-003	0.0000	9.9435
Total	**5.5900e-003**	**0.0494**	**0.0739**	**1.2000e-004**		**2.4400e-003**	**2.4400e-003**		**2.2700e-003**	**2.2700e-003**	**0.0000**	**9.8680**	**9.8680**	**3.0200e-003**	**0.0000**	**9.9435**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	9.0500e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.1000e-004	0.0000	2.3518	2.3518	7.0000e-005	7.0000e-005	2.3738
Total	**1.0000e-003**	**7.4000e-004**	**9.0500e-003**	**3.0000e-005**	**2.9700e-003**	**2.0000e-005**	**2.9900e-003**	**7.9000e-004**	**1.0000e-005**	**8.1000e-004**	**0.0000**	**2.3518**	**2.3518**	**7.0000e-005**	**7.0000e-005**	**2.3738**

3.5 Ground Floor Concrete Work - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0573	0.6214	0.6185	1.0800e-003		0.0284	0.0284		0.0261	0.0261	0.0000	94.1954	94.1954	0.0301	0.0000	94.9466
Total	**0.0573**	**0.6214**	**0.6185**	**1.0800e-003**		**0.0284**	**0.0284**		**0.0261**	**0.0261**	**0.0000**	**94.1954**	**94.1954**	**0.0301**	**0.0000**	**94.9466**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Ground Floor Concrete Work - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5100e-003	0.0275	8.2000e-003	1.3000e-004	5.0500e-003	4.4000e-004	5.4900e-003	1.5200e-003	4.2000e-004	1.9400e-003	0.0000	12.2791	12.2791	8.0000e-005	1.6200e-003	12.7631
Worker	9.7200e-003	7.1300e-003	0.0876	2.5000e-004	0.0288	1.5000e-004	0.0289	7.6600e-003	1.4000e-004	7.8000e-003	0.0000	22.7649	22.7649	7.0000e-004	6.6000e-004	22.9785
Total	**0.0112**	**0.0347**	**0.0958**	**3.8000e-004**	**0.0338**	**5.9000e-004**	**0.0344**	**9.1800e-003**	**5.6000e-004**	**9.7400e-003**	**0.0000**	**35.0440**	**35.0440**	**7.8000e-004**	**2.2800e-003**	**35.7416**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0573	0.6213	0.6185	1.0800e-003		0.0284	0.0284		0.0261	0.0261	0.0000	94.1952	94.1952	0.0301	0.0000	94.9465
Total	**0.0573**	**0.6213**	**0.6185**	**1.0800e-003**		**0.0284**	**0.0284**		**0.0261**	**0.0261**	**0.0000**	**94.1952**	**94.1952**	**0.0301**	**0.0000**	**94.9465**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Ground Floor Concrete Work - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5100e-003	0.0275	8.2000e-003	1.3000e-004	5.0500e-003	4.4000e-004	5.4900e-003	1.5200e-003	4.2000e-004	1.9400e-003	0.0000	12.2791	12.2791	8.0000e-005	1.6200e-003	12.7631
Worker	9.7200e-003	7.1300e-003	0.0876	2.5000e-004	0.0288	1.5000e-004	0.0289	7.6600e-003	1.4000e-004	7.8000e-003	0.0000	22.7649	22.7649	7.0000e-004	6.6000e-004	22.9785
Total	**0.0112**	**0.0347**	**0.0958**	**3.8000e-004**	**0.0338**	**5.9000e-004**	**0.0344**	**9.1800e-003**	**5.6000e-004**	**9.7400e-003**	**0.0000**	**35.0440**	**35.0440**	**7.8000e-004**	**2.2800e-003**	**35.7416**

3.6 Modular Placement Framing and Connect - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0124	0.1337	0.1032	2.0000e-004		6.3200e-003	6.3200e-003		5.8100e-003	5.8100e-003	0.0000	17.9999	17.9999	5.8200e-003	0.0000	18.1454
Total	**0.0124**	**0.1337**	**0.1032**	**2.0000e-004**		**6.3200e-003**	**6.3200e-003**		**5.8100e-003**	**5.8100e-003**	**0.0000**	**17.9999**	**17.9999**	**5.8200e-003**	**0.0000**	**18.1454**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Modular Placement Framing and Connect - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.1000e-004	0.0279	4.7000e-003	1.1000e-004	2.9600e-003	2.7000e-004	3.2300e-003	8.1000e-004	2.6000e-004	1.0700e-003	0.0000	10.6754	10.6754	3.7000e-004	1.6900e-003	11.1889
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1300e-003	2.3000e-003	0.0282	8.0000e-005	9.2800e-003	5.0000e-005	9.3300e-003	2.4700e-003	4.0000e-005	2.5100e-003	0.0000	7.3375	7.3375	2.3000e-004	2.1000e-004	7.4063
Total	**3.8400e-003**	**0.0302**	**0.0329**	**1.9000e-004**	**0.0122**	**3.2000e-004**	**0.0126**	**3.2800e-003**	**3.0000e-004**	**3.5800e-003**	**0.0000**	**18.0128**	**18.0128**	**6.0000e-004**	**1.9000e-003**	**18.5952**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0124	0.1337	0.1032	2.0000e-004		6.3200e-003	6.3200e-003		5.8100e-003	5.8100e-003	0.0000	17.9999	17.9999	5.8200e-003	0.0000	18.1454
Total	**0.0124**	**0.1337**	**0.1032**	**2.0000e-004**		**6.3200e-003**	**6.3200e-003**		**5.8100e-003**	**5.8100e-003**	**0.0000**	**17.9999**	**17.9999**	**5.8200e-003**	**0.0000**	**18.1454**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Modular Placement Framing and Connect - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.1000e-004	0.0279	4.7000e-003	1.1000e-004	2.9600e-003	2.7000e-004	3.2300e-003	8.1000e-004	2.6000e-004	1.0700e-003	0.0000	10.6754	10.6754	3.7000e-004	1.6900e-003	11.1889
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1300e-003	2.3000e-003	0.0282	8.0000e-005	9.2800e-003	5.0000e-005	9.3300e-003	2.4700e-003	4.0000e-005	2.5100e-003	0.0000	7.3375	7.3375	2.3000e-004	2.1000e-004	7.4063
Total	**3.8400e-003**	**0.0302**	**0.0329**	**1.9000e-004**	**0.0122**	**3.2000e-004**	**0.0126**	**3.2800e-003**	**3.0000e-004**	**3.5800e-003**	**0.0000**	**18.0128**	**18.0128**	**6.0000e-004**	**1.9000e-003**	**18.5952**

3.6 Modular Placement Framing and Connect - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1800e-003	0.0125	0.0104	2.0000e-005		5.7000e-004	5.7000e-004		5.3000e-004	5.3000e-004	0.0000	1.8461	1.8461	6.0000e-004	0.0000	1.8611
Total	**1.1800e-003**	**0.0125**	**0.0104**	**2.0000e-005**		**5.7000e-004**	**5.7000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.8461**	**1.8461**	**6.0000e-004**	**0.0000**	**1.8611**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Modular Placement Framing and Connect - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	2.2100e-003	3.8000e-004	1.0000e-005	3.0000e-004	2.0000e-005	3.2000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.0414	1.0414	4.0000e-005	1.7000e-004	1.0915
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.1000e-004	2.6900e-003	1.0000e-005	9.5000e-004	0.0000	9.6000e-004	2.5000e-004	0.0000	2.6000e-004	0.0000	0.7336	0.7336	2.0000e-005	2.0000e-005	0.7402
Total	**3.3000e-004**	**2.4200e-003**	**3.0700e-003**	**2.0000e-005**	**1.2500e-003**	**2.0000e-005**	**1.2800e-003**	**3.3000e-004**	**2.0000e-005**	**3.6000e-004**	**0.0000**	**1.7751**	**1.7751**	**6.0000e-005**	**1.9000e-004**	**1.8317**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1800e-003	0.0125	0.0104	2.0000e-005		5.7000e-004	5.7000e-004		5.3000e-004	5.3000e-004	0.0000	1.8461	1.8461	6.0000e-004	0.0000	1.8611
Total	**1.1800e-003**	**0.0125**	**0.0104**	**2.0000e-005**		**5.7000e-004**	**5.7000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.8461**	**1.8461**	**6.0000e-004**	**0.0000**	**1.8611**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Modular Placement Framing and Connect - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	2.2100e-003	3.8000e-004	1.0000e-005	3.0000e-004	2.0000e-005	3.2000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.0414	1.0414	4.0000e-005	1.7000e-004	1.0915
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.1000e-004	2.6900e-003	1.0000e-005	9.5000e-004	0.0000	9.6000e-004	2.5000e-004	0.0000	2.6000e-004	0.0000	0.7336	0.7336	2.0000e-005	2.0000e-005	0.7402
Total	**3.3000e-004**	**2.4200e-003**	**3.0700e-003**	**2.0000e-005**	**1.2500e-003**	**2.0000e-005**	**1.2800e-003**	**3.3000e-004**	**2.0000e-005**	**3.6000e-004**	**0.0000**	**1.7751**	**1.7751**	**6.0000e-005**	**1.9000e-004**	**1.8317**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5100e-003	0.0167	0.0144	3.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	2.4088	2.4088	7.8000e-004	0.0000	2.4283
Total	**0.0233**	**0.0167**	**0.0144**	**3.0000e-005**		**7.5000e-004**	**7.5000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.4088**	**2.4088**	**7.8000e-004**	**0.0000**	**2.4283**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5700e-003	1.1500e-003	0.0141	4.0000e-005	4.6400e-003	2.0000e-005	4.6600e-003	1.2300e-003	2.0000e-005	1.2600e-003	0.0000	3.6687	3.6687	1.1000e-004	1.1000e-004	3.7032
Total	**1.5700e-003**	**1.1500e-003**	**0.0141**	**4.0000e-005**	**4.6400e-003**	**2.0000e-005**	**4.6600e-003**	**1.2300e-003**	**2.0000e-005**	**1.2600e-003**	**0.0000**	**3.6687**	**3.6687**	**1.1000e-004**	**1.1000e-004**	**3.7032**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5100e-003	0.0167	0.0144	3.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	2.4088	2.4088	7.8000e-004	0.0000	2.4283
Total	**0.0233**	**0.0167**	**0.0144**	**3.0000e-005**		**7.5000e-004**	**7.5000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.4088**	**2.4088**	**7.8000e-004**	**0.0000**	**2.4283**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5700e-003	1.1500e-003	0.0141	4.0000e-005	4.6400e-003	2.0000e-005	4.6600e-003	1.2300e-003	2.0000e-005	1.2600e-003	0.0000	3.6687	3.6687	1.1000e-004	1.1000e-004	3.7032
Total	**1.5700e-003**	**1.1500e-003**	**0.0141**	**4.0000e-005**	**4.6400e-003**	**2.0000e-005**	**4.6600e-003**	**1.2300e-003**	**2.0000e-005**	**1.2600e-003**	**0.0000**	**3.6687**	**3.6687**	**1.1000e-004**	**1.1000e-004**	**3.7032**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4597					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0297	0.3231	0.2996	5.8000e-004		0.0141	0.0141		0.0130	0.0130	0.0000	50.8529	50.8529	0.0165	0.0000	51.2641
Total	**0.4895**	**0.3231**	**0.2996**	**5.8000e-004**		**0.0141**	**0.0141**		**0.0130**	**0.0130**	**0.0000**	**50.8529**	**50.8529**	**0.0165**	**0.0000**	**51.2641**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0309	0.0215	0.2764	8.1000e-004	0.0980	4.9000e-004	0.0984	0.0261	4.5000e-004	0.0265	0.0000	75.5027	75.5027	2.1500e-003	2.0800e-003	76.1753
Total	**0.0309**	**0.0215**	**0.2764**	**8.1000e-004**	**0.0980**	**4.9000e-004**	**0.0984**	**0.0261**	**4.5000e-004**	**0.0265**	**0.0000**	**75.5027**	**75.5027**	**2.1500e-003**	**2.0800e-003**	**76.1753**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4597					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0297	0.3231	0.2996	5.8000e-004		0.0141	0.0141		0.0130	0.0130	0.0000	50.8528	50.8528	0.0165	0.0000	51.2640
Total	**0.4895**	**0.3231**	**0.2996**	**5.8000e-004**		**0.0141**	**0.0141**		**0.0130**	**0.0130**	**0.0000**	**50.8528**	**50.8528**	**0.0165**	**0.0000**	**51.2640**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0309	0.0215	0.2764	8.1000e-004	0.0980	4.9000e-004	0.0984	0.0261	4.5000e-004	0.0265	0.0000	75.5027	75.5027	2.1500e-003	2.0800e-003	76.1753
Total	**0.0309**	**0.0215**	**0.2764**	**8.1000e-004**	**0.0980**	**4.9000e-004**	**0.0984**	**0.0261**	**4.5000e-004**	**0.0265**	**0.0000**	**75.5027**	**75.5027**	**2.1500e-003**	**2.0800e-003**	**76.1753**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	2.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.5100e-003**	**0.0312**	**0.0440**	**7.0000e-005**		**1.5400e-003**	**1.5400e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.8862**	**5.8862**	**1.8700e-003**	**0.0000**	**5.9329**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	2.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.5100e-003**	**0.0312**	**0.0440**	**7.0000e-005**		**1.5400e-003**	**1.5400e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.8862**	**5.8862**	**1.8700e-003**	**0.0000**	**5.9329**

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2685	0.2781	2.3904	4.6800e-003	0.4995	3.4300e-003	0.5030	0.1333	3.1900e-003	0.1365	0.0000	436.1857	436.1857	0.0309	0.0218	443.4382
Unmitigated	0.2685	0.2781	2.3904	4.6800e-003	0.4995	3.4300e-003	0.5030	0.1333	3.1900e-003	0.1365	0.0000	436.1857	436.1857	0.0309	0.0218	443.4382

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	308.70	277.20	233.10	677,639	677,639
Enclosed Parking with Elevator	0.00	0.00	0.00		
Fast Food Restaurant w/o Drive Thru	346.00	696.00	500.00	674,054	674,054
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	654.70	973.20	733.10	1,351,692	1,351,692

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Fast Food Restaurant w/o Drive	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Enclosed Parking with Elevator	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Fast Food Restaurant w/o Drive Thru	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Other Non-Asphalt Surfaces	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838
Parking Lot	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	411646	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	39945.9	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	98140	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3500	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	411646	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	39945.9	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	98140	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3500	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3288	5.4000e-003	0.4686	2.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	0.7656	0.7656	7.4000e-004	0.0000	0.7840
Unmitigated	0.3288	5.4000e-003	0.4686	2.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	0.7656	0.7656	7.4000e-004	0.0000	0.7840

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0482					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2664					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0142	5.4000e-003	0.4686	2.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	0.7656	0.7656	7.4000e-004	0.0000	0.7840
Total	**0.3288**	**5.4000e-003**	**0.4686**	**2.0000e-005**		**2.5900e-003**	**2.5900e-003**		**2.5900e-003**	**2.5900e-003**	**0.0000**	**0.7656**	**0.7656**	**7.4000e-004**	**0.0000**	**0.7840**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0482					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2664					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0142	5.4000e-003	0.4686	2.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	0.7656	0.7656	7.4000e-004	0.0000	0.7840
Total	**0.3288**	**5.4000e-003**	**0.4686**	**2.0000e-005**		**2.5900e-003**	**2.5900e-003**		**2.5900e-003**	**2.5900e-003**	**0.0000**	**0.7656**	**0.7656**	**7.4000e-004**	**0.0000**	**0.7840**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.1188	0.1149	2.7100e-003	4.8003
Unmitigated	1.3985	0.1436	3.3900e-003	6.0003

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	4.1047 / 2.58775	1.3022	0.1338	3.1600e-003	5.5872
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0.303534 / 0.0193745	0.0963	9.8900e-003	2.3000e-004	0.4132
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.3985**	**0.1436**	**3.3900e-003**	**6.0003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.28376 / 2.4299	1.0418	0.1070	2.5300e-003	4.4697
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0.242827 / 0.0181926	0.0770	7.9100e-003	1.9000e-004	0.3305
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.1188**	**0.1149**	**2.7200e-003**	**4.8003**

8.0 Waste Detail

8.1 Mitigation Measures Waste

231 Grant Educator Workforce Housing Alt 2 - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.2211	0.4859	0.0000	20.3675
Unmitigated	8.2211	0.4859	0.0000	20.3675

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	28.98	5.8827	0.3477	0.0000	14.5741
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	11.52	2.3385	0.1382	0.0000	5.7934
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.2211**	**0.4859**	**0.0000**	**20.3675**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	28.98	5.8827	0.3477	0.0000	14.5741
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	11.52	2.3385	0.1382	0.0000	5.7934
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.2211**	**0.4859**	**0.0000**	**20.3675**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

231 Grant Educator Workforce Housing - Existing Land Use

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	6.80	1000sqft	1.40	6,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	City of Palo Alto Utilities Department				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operations only run to estimate existing emissions.

Land Use - Information based on existing office on the project site.

Construction Phase - Phases entered as placeholders; operations only run.

Off-road Equipment - Operations only run.

Off-road Equipment - Operations only run.

Grading -

Architectural Coating - Operations only run.

Vehicle Trips - Existing trips based on ITE code and land use in TIA Analysis of 3.28/employee.

Energy Use - Use of historical energy data (building was built in 1956)

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	3,400.00	0.00

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	ConstArea_Nonresidential_Interior	10,200.00	0.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	2.00	1.00
tblLandUse	LotAcreage	0.16	1.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblVehicleTrips	WD_TR	22.59	4.82

2.0 Emissions Summary

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0301	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Energy	7.3000e-004	6.6500e-003	5.5900e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2430	7.2430	1.4000e-004	1.3000e-004	7.2860
Mobile	0.0102	0.0120	0.0867	1.5000e-004	0.0148	1.7000e-004	0.0150	3.9600e-003	1.6000e-004	4.1200e-003	0.0000	14.1284	14.1284	1.1600e-003	7.9000e-004	14.3917
Waste						0.0000	0.0000		0.0000	0.0000	1.2829	0.0000	1.2829	0.0758	0.0000	3.1783
Water						0.0000	0.0000		0.0000	0.0000	0.4286	0.0000	0.4286	0.0440	1.0400e-003	1.8388
Total	**0.0411**	**0.0186**	**0.0924**	**1.9000e-004**	**0.0148**	**6.8000e-004**	**0.0155**	**3.9600e-003**	**6.7000e-004**	**4.6300e-003**	**1.7115**	**21.3715**	**23.0830**	**0.1211**	**1.9600e-003**	**26.6949**

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0301	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Energy	7.3000e-004	6.6500e-003	5.5900e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2430	7.2430	1.4000e-004	1.3000e-004	7.2860
Mobile	0.0102	0.0120	0.0867	1.5000e-004	0.0148	1.7000e-004	0.0150	3.9600e-003	1.6000e-004	4.1200e-003	0.0000	14.1284	14.1284	1.1600e-003	7.9000e-004	14.3917
Waste						0.0000	0.0000		0.0000	0.0000	1.2829	0.0000	1.2829	0.0758	0.0000	3.1783
Water						0.0000	0.0000		0.0000	0.0000	0.4286	0.0000	0.4286	0.0440	1.0400e-003	1.8388
Total	**0.0411**	**0.0186**	**0.0924**	**1.9000e-004**	**0.0148**	**6.8000e-004**	**0.0155**	**3.9600e-003**	**6.7000e-004**	**4.6300e-003**	**1.7115**	**21.3715**	**23.0830**	**0.1211**	**1.9600e-003**	**26.6949**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/29/2019	1/29/2019	5	1	
2	Architectural Coating	Architectural Coating	11/27/2019	11/27/2019	5	1	

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	0.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Architectural Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0102	0.0120	0.0867	1.5000e-004	0.0148	1.7000e-004	0.0150	3.9600e-003	1.6000e-004	4.1200e-003	0.0000	14.1284	14.1284	1.1600e-003	7.9000e-004	14.3917
Unmitigated	0.0102	0.0120	0.0867	1.5000e-004	0.0148	1.7000e-004	0.0150	3.9600e-003	1.6000e-004	4.1200e-003	0.0000	14.1284	14.1284	1.1600e-003	7.9000e-004	14.3917

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government Office Building	32.78	0.00	0.00	40,148	40,148
Total	32.78	0.00	0.00	40,148	40,148

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	50	34	16

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Government Office Building	0.566081	0.054633	0.191878	0.117238	0.020772	0.004815	0.008393	0.006391	0.000990	0.000417	0.024374	0.000959	0.003058

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	7.3000e-004	6.6500e-003	5.5900e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2430	7.2430	1.4000e-004	1.3000e-004	7.2860
NaturalGas Unmitigated	7.3000e-004	6.6500e-003	5.5900e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2430	7.2430	1.4000e-004	1.3000e-004	7.2860

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government Office Building	135728	7.3000e-004	6.6500e-003	5.5900e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2430	7.2430	1.4000e-004	1.3000e-004	7.2860
Total		**7.3000e-004**	**6.6500e-003**	**5.5900e-003**	**4.0000e-005**		**5.1000e-004**	**5.1000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**7.2430**	**7.2430**	**1.4000e-004**	**1.3000e-004**	**7.2860**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government Office Building	135728	7.3000e-004	6.6500e-003	5.5900e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2430	7.2430	1.4000e-004	1.3000e-004	7.2860
Total		**7.3000e-004**	**6.6500e-003**	**5.5900e-003**	**4.0000e-005**		**5.1000e-004**	**5.1000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**7.2430**	**7.2430**	**1.4000e-004**	**1.3000e-004**	**7.2860**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government Office Building	139876	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government Office Building	139876	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0301	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Unmitigated	0.0301	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0266					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Total	**0.0301**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0266					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Total	**0.0301**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.4286	0.0440	1.0400e-003	1.8388
Unmitigated	0.4286	0.0440	1.0400e-003	1.8388

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government Office Building	1.35089 / 0.827962	0.4286	0.0440	1.0400e-003	1.8388
Total		**0.4286**	**0.0440**	**1.0400e-003**	**1.8388**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government Office Building	1.35089 / 0.827962	0.4286	0.0440	1.0400e-003	1.8388
Total		**0.4286**	**0.0440**	**1.0400e-003**	**1.8388**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.2829	0.0758	0.0000	3.1783
Unmitigated	1.2829	0.0758	0.0000	3.1783

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government Office Building	6.32	1.2829	0.0758	0.0000	3.1783
Total		**1.2829**	**0.0758**	**0.0000**	**3.1783**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government Office Building	6.32	1.2829	0.0758	0.0000	3.1783
Total		**1.2829**	**0.0758**	**0.0000**	**3.1783**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

231 Grant Educator Workforce Housing - Existing Land Use - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C – Historical Resources Supporting Documentation

Contains:

- List of Archaeological Studies within 0.25-mile radius of the Project Site
- Letter Report – 231 Grant Avenue, Palo Alto Historic Resource Evaluation, October 14, 2020

LIST OF ARCHAEOLOGICAL STUDIES WITHIN 0.25-MILE RADIUS OF THE PROJECT SITE

Table C-1 Archaeological Studies within 0.25-mile Radius of the Project Site

Study Number	Report Title	Author(s)	Year of Study	Identified Resources within 0.25 Mile of Project Site?
S-003163	An Archaeological Reconnaissance of the Proposed Dumbarton Bridge Replacement Project	Treganza, Adan	1973	No
S-004883	Historic Property Survey Report, Oregon-Page Mill Expressway Intersection Improvements at El Camino Real, Palo Alto, California	Sullivan, Francis and Theodore A. Cicoletti	1977	No
S-011396	Technical Report of Cultural Resources Studies for the Proposed WTG-WEST, Inc., Los Angeles to San Francisco and Sacramento, California: Fiber Optic Cable Project	BioSystems Analysis, Inc.	1989	No
S-025174	Cultural Resources Report for San Bruno to Mountain View Internodal Level 3 Fiber Optics Project in San Mateo and Santa Clara Counties, California	Holson, John, Sutch, Cordelia, and Stephanie Pau	2002	No
S-026045	Cultural Resources Reconnaissance Survey and Inventory Report for the Metromedia Fiberoptic Cable Project, San Francisco Bay Area and Los Angeles Basin Networks	Carrico, Richard, Cooley, Theodore, and William Eckhardt	2000	No
S-029233	Nextel Communications Wireless Telecommunications Service Facility-Santa Clara County, Nextel Site No. (CA- 0871A)/Oregon Expressway	Billat, Lorna	2000	No
S-029657	Archaeological Inventory for the Caltrain Electrification Program Alternative in San Francisco, San Mateo, and Santa Clara Counties, California	Nelson, Wendy Jl, Norton, Tammara, Chiea, Larry, and Reinhard Pribish	2002	No
S-030233	Cultural Resources Analysis for Cingular Wireless Site BA-350 02, “California Avenue Caltrain Station”, Palo Alto, California	Losee, Carolyn	2004	No
S-032250	Historic Property Survey Report, Mission Bells Project, State Route 82/Interstate 101, San Mateo and Santa Clara Counties, California	Lapin, Philippe	2003	No
S-039469	Historical Resources Compliance Report for the San Mateo County SMART Corridors Project, Segment III, Redwood City, Atherton, Menlo Park, East Palo Alto, and Palo Alto, San Mateo County & Santa Clara County, California; EA #4A9201; EFIS #0400001169, Caltrans District 4; SR 82 PM SM 0/4.8, SCL 24.1/26.4; SR 84 PM 24.6/28.7; US-101 PM 0.7/5.5; SR 109 PM 1.10/1.87; SR 114 PM 5.0/5.93	Kaptain, Neal	2012	Yes

Source: Compiled by AECOM in 2021.

AECOM

300 California Street, Suite 600
San Francisco, CA 94104
aecom.com

To:
Emily Chen, County of Santa Clara, Facilities and Fleets Department

From:
Heather Miller, MA, Architectural Historian, AECOM
Chandra Miller, MA, Architectural Historian, AECOM

Project Name:
231 Grant Avenue Housing Project

Date:
October 14, 2020

Letter Report – 231 Grant Avenue, Palo Alto Historic Resource Evaluation

Introduction

AECOM Technical Services, Inc. (AECOM) has been retained by the County of Santa Clara to complete a historic resource evaluation on the 1956-constructed office building at 231 Grant Avenue in Palo Alto. This letter report describes the current condition of the building with recent photographs of existing conditions and evaluates the building for eligibility for listing in the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), and the Santa Clara County Landmark Designation Criteria.

Project Description

The 231 Grant Avenue Housing project is sponsored by the County of Santa Clara, County of Santa Clara Board of Supervisors, represented by Supervisor Simitian, Facebook, four Santa Clara County School Districts (Los Altos, Palo Alto, Mountain View Whisman, Mountain View Los Altos) and the Foothill-De Anza Community College District to serve teachers and classified staff from the participating school districts. The project site has an existing approximately 6,800 square foot (SF) office building constructed in 1956, that would be demolished as part of this project. The four-story proposed development would include approximately 110 residential units, office area, and community and retail spaces, laid out in two C-shape buildings to form three courtyards. A parking structure will provide both car and bicycle parking.

Archival Research and Survey Results

The background investigation for this historic resource evaluation includes research to develop a general historic context relative to the building's location and land use, to establish the property's physical history, and to place the 1956-constructed office building within the appropriate historical context.

AECOM examined standard sources of information that identify known and potential historical resources to determine whether any buildings, structures, objects, districts, or sites had been previously recorded or evaluated on the subject property. This included the California Historical Landmarks and Points of Interest publications and updates, National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and the Office of Historic Preservation (OHP) Built Environment Resource Directory (BERD), California Historical Landmarks, California Points of Historical Interest, California

Historical Interest, the Santa Clara County Heritage Resource Inventory, and the Palo Alto Historic Inventory. AECOM also reviewed online sources of information including historic newspapers and architectural journals, historic Sanborn Fire Insurance maps, historic and modern aerial photography, United States Geographical Survey (USGS) maps, architect directories, and other relevant sources of information. AECOM also reviewed records on file at the Northwest Information Center (NWIC) of the California Historic Resource Inventory System to identify previously conducted cultural resources investigations and resources that may have been recorded on the subject property. These investigations did not identify any previously inventoried or evaluated NRHP, CRHR, or local register qualifying built environment resources. The office building at 231 Grant Avenue is not listed in the City of Palo Alto Historic Inventory, or the Santa Clara County Heritage Resource Inventory.

An intensive-level pedestrian survey was conducted under direction of AECOM Architectural Historian Heather Miller by AECOM Cultural Resources Specialist Annamarie Guerrero on September 23, 2020. Contextual and detailed photographs and notes were taken to observe and assess the current conditions of the 231 Grant Avenue building and was subsequently recorded and described on Department of Parks and Recreation (DPR) 523 series forms (see attached).

Historic Evaluation

Although the property is located within the city limits of Palo Alto, the building is owned by the County of Santa Clara, therefore it has been evaluated for eligibility against Santa Clara County Designation criteria instead of Palo Alto Historic Inventory Criteria for Designation. Regardless, the building at 231 Grant Avenue does not appear to meet the criteria for designation for listing in the Palo Alto Historic Inventory.

National Register of Historic Places

The National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) use four similar criteria for eligibility. To be considered eligible for the NRHP, a resource must be significant at the local, state, or national level, under one or more of the following four criteria:

A. are associated with events that have made a significant contribution to the broad patterns of our history; or

B. are associated with the lives of persons significant to our past; or

C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master; or that possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. have yielded, or may be likely to yield, information important in prehistory or history.

California Register of Historical Resources Significance

The criteria for listing historical resources in the California Register are consistent with those developed for listing in the National Register but have been modified for state use in order to include a range of historical resources which better reflect the history of California. An historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. is associated with the lives of persons important in our past;

3. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. has yielded, or may be likely to yield, information important in prehistory or history.

Santa Clara County Landmark Designation Criteria

Because the building at 231 Grant Avenue in Palo Alto is owned by the County, the building is being evaluated under the Santa Clara County Landmark Designation Criteria. For the county landmark criteria to apply, the building must be 50 years or older, must retain historic integrity, and meet one of the following criteria of significance:

1. Associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2. Associated with the lives of persons important to local, California or national history;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. Yielded or has the potential to yield information important to the pre-history or history of the local area, California, or the nation.

Evaluation Summary

The 1956-constructed office building at 231 Grant Avenue does not appear individually eligible for the NRHP or CRHR, or as a Santa Clara County Landmark. The building is not associated with significant historic events (NRHP Criterion A / CRHR Criterion 1 / Santa Clara County Landmark Designation Criterion 1) and it is not associated with any individuals who played a significant role in local, state, or national history (NRHP Criterion B / CRHR Criterion 2). Furthermore, the building does not embody distinctive characteristics of a type, period, or method of construction, nor does it appear to be a significant example of the work of a master architect (NRHP Criterion C / CRHR Criterion 3 / Santa Clara County Landmark Designation Criterion 3) and it is unlikely to yield information important to history (NRHP Criterion D / CRHR Criterion 4 / Santa Clara County Landmark Designation Criterion 4). The property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code (which mirror the criteria used in this assessment). The building at 231 Grant Avenue in Palo Alto does not appear to meet the criteria as a historical resource for the purposes of CEQA. Because the building is not historically significant, it does not have any character-defining features.

See attached DPR 523 forms prepared for 231 Grant Avenue, Palo Alto for full historical context and evaluation statements.

Attachment: DPR 523 Forms, 231 Grant Avenue, Palo Alto (12 pages)

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

*Resource Name or #: (Assigned by recorder) 231 Grant Avenue,Palo Alto

P1. Other Identifier: Santa Clara County Office of the Public Defender
*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County: Santa Clara
*b.USGS 7.5' Quad Palo Alto, Calif. Date 1961 (photorevised 1973) T 3W; R 6S; M.D. B.M.
c. Address 231 Grant Avenue City Palo Alto Zip 94306
d. UTM: (Give more than one for large and/or linear resources) Zone_____ ;_____mE/_____mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
Assessor's Parcel Number (APN): 132-31-074

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This 1.46-acre lot in the city of Palo Alto contains an approximately 6,800-square-foot office building completed in 1956. The Contemporary style single-story building is oriented northwest towards Grant Avenue on a rectangular shaped parcel with surface parking lots on the north and south ends (see Sketch Map and Photograph 1). Mature landscaping including Camphor, Redwood, Eucalyptus, and Magnolia trees and numerous shrubs are on the boundary and within the parcel boundary. The building rests on a concrete slab foundation with an irregular L-shaped plan that forms a rear courtyard area. A flat roof system with wide wood eaves tops the building with a slightly taller roof on the south section of the building. Rough stucco siding covers much of the exterior with a stack-course Roman brick wall section on the façade and stack-course concrete masonry units on the slightly taller roof on the south section of the building. The stepped façade contains the primary entrance into the building which consists of a non-original recessed single anodized-frame glass door flanked by sidelights (Photographs 1 and 2). North of the entrance is a stack-course Roman brick wall that wraps around to the façade. Much of the remainder of the façade is lined with two-part metal-frame windows separated by narrow wood pilasters and perpendicular louvered wood screens (Photographs 3 and 4).

The northeast side of the building has a two-part stepped façade with a central recessed glazed metal door (Photograph 4). Two utility equipment enclosures are sited on the west end of the northeast side. One is integrated into the building and the other is adjacent to the building on a separate concrete pad. Much of the northwest side of the building is lined with the same two-part metal frame windows, but two are infilled with the same stucco as the exterior (Photograph 5). [see Continuation Sheet]

*P3b. Resource Attributes: (List attributes and codes) HP6 – Commercial Building
*P4. Resources Present: ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: (view, date, accession #) Photograph 1. Façade of 231 Grant Avenue, camera facing southeast, September 23, 2020

*P6. Date Constructed/Age and Source:
☒Historic ☐Prehistoric ☐Both
1956 (Santa Clara Co./Luck 1999: 32)

*P7. Owner and Address:
Santa Clara County Capital Programs/ Property Management/ Sustainability
2310 N. 1st Street
San Jose, CA 95131

*P8. Recorded by: (Name, affiliation, address)
C. Miller and H. Miller, AECOM
2020 L Street, Suite 400
Sacramento, CA 95811

*P9. Date Recorded: September 23, 2020

*P10. Survey Type: Intensive

*P11. Report Citation: AECOM. "Letter Report – 231 Grant Avenue, Palo Alto Historic Resource Evaluation." Prepared for County of Santa Clara, 2020.

*Attachments: ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) 231 Grant Avenue, Palo Alto

B1. Historic Name: Annual Reviews, Inc.
B2. Common Name: Santa Clara County Office of the Public Defender
B3. Original Use: Publishing Company Office
B4. Present Use: County Department Offices
***B5. Architectural Style:** Contemporary
***B6. Construction History:** (Construction date, alterations, and date of alterations) 1956 (Santa Clara County/Luck 1999: 32); Primary entry configuration likely replaced circa 1990s.

***B7. Moved?** X **No** ____ **Yes** ____ **Unknown** **Date:** _____ **Original Location:**_____
***B8. Related Features:** n/a

B9a. Architect: unknown b. Builder: unknown

***B10. Significance: Theme** Post-war commercial/office development **Area** Palo Alto
Period of Significance 1956 **Property Type** Office Building **Applicable Criteria** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Although the property is located within the city limits of Palo Alto, the building is owned by the County of Santa Clara, therefore it has been evaluated for eligibility against Santa Clara County Designation criteria instead of Palo Alto Historic Inventory Criteria for Designation. Regardless, the building at 231 Grant Avenue does not appear to meet the criteria for designation for listing in the Palo Alto Historic Inventory. The property at 231 Grant Avenue in Palo Alto does not meet National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR) criteria, or Santa Clara County Landmark Designation criteria, nor does it appear to be a historical resource for purposes of the California Environmental Quality Act (CEQA) or a historic property under Section 106 of the National Historic Preservation Act (NHPA). The property generally retains integrity to its original construction (1956) but does not meet any of the significance criteria necessary for eligibility for listing in the NRHP, CRHR, or as a county landmark. The property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** SEE CONTINUATION SHEET

B13. Remarks:

***B14. Evaluator:** H. Miller, AECOM

***Date of Evaluation:** September 2020

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

P3a. Description (continued) & P5a. Photographs (continued):

Photograph 2: Detail of primary entry, camera facing east, September 23, 2020.

Photograph 3: Detail of windows and wood screens along façade, camera facing south, September 23, 2020.

Photograph 4: North end of façade and northeast side, camera facing south, September 23, 2020.

Photograph 5: Northeast (rear) side, camera facing southwest, September 23, 2020.

The northeast side of the north end of the building lacks wall openings (Photograph 6). The rear (northeast) side of the building reveals a courtyard area formed by the southeast side of the north building section and the northeast and southeast sides of the south building section (Photograph 7). The rear of the north building section has a metal glazed door with a fixed transom above and is lined with seven two-part metal frame windows. The northwest side of the courtyard also has a metal glazed door with a fixed transom above and seven two-part metal frame windows, plus one window opening has been infilled with stucco (Photograph 8). The northeast side of the south building section lacks wall openings and is constructed of stack-course concrete masonry units (Photographs 8 and 9).

Photograph 6: Northeast corner, camera facing southwest, September 23, 2020

Photograph 7: View of rear courtyard and north building section, camera facing north, September 23, 2020.

Photograph 8: View of rear courtyard, camera facing west, September 23, 2020.

Photograph 9: Northeast corner of south building section. Note the stack-course concrete masonry units, camera facing southwest, September 23, 2020.

The southeast side of the building contains a metal glazed door and a ribbon of five two-part metal frame windows, but the middle window has been infilled with stucco (Photographs 9 and 10). Stack-course concrete masonry units wrap around this side of the building and abut the door and the northernmost window.

The southwest and northwest sides of the south building section are also constructed of stack-course concrete masonry units (Photographs 10 and 11). The only wall openings on these two planes are a metal glazed door with transom above on the southwest side.

Photograph 10: Southwest and southeast sides of building, camera facing north, September 23, 2020.

Photograph 11: Façade and southeast sides of building, camera facing east, September 23, 2020.

***B10. Significance (continued):**

HISTORICAL CONTEXT

Mayfield and Palo Alto

This property is within the former community of Mayfield that was initially settled as "Mayfield Farm" in 1853 by Elisha O. Crosby near El Camino Real. A Mayfield post office was erected in 1855 and when the Southern Pacific Railroad built the line and depot through the area a decade later, the depot was also named Mayfield. In 1867, three years after the railroad line and depot were established, the town was officially platted. Sited between the railroad on the north and El Camino Real on the south, the small town was only four blocks long and five blocks wide (Plate 1) (Stanford University Libraries 2020; Gudde 1960: 196; *San Jose Mercury* 1901 Dec 22).

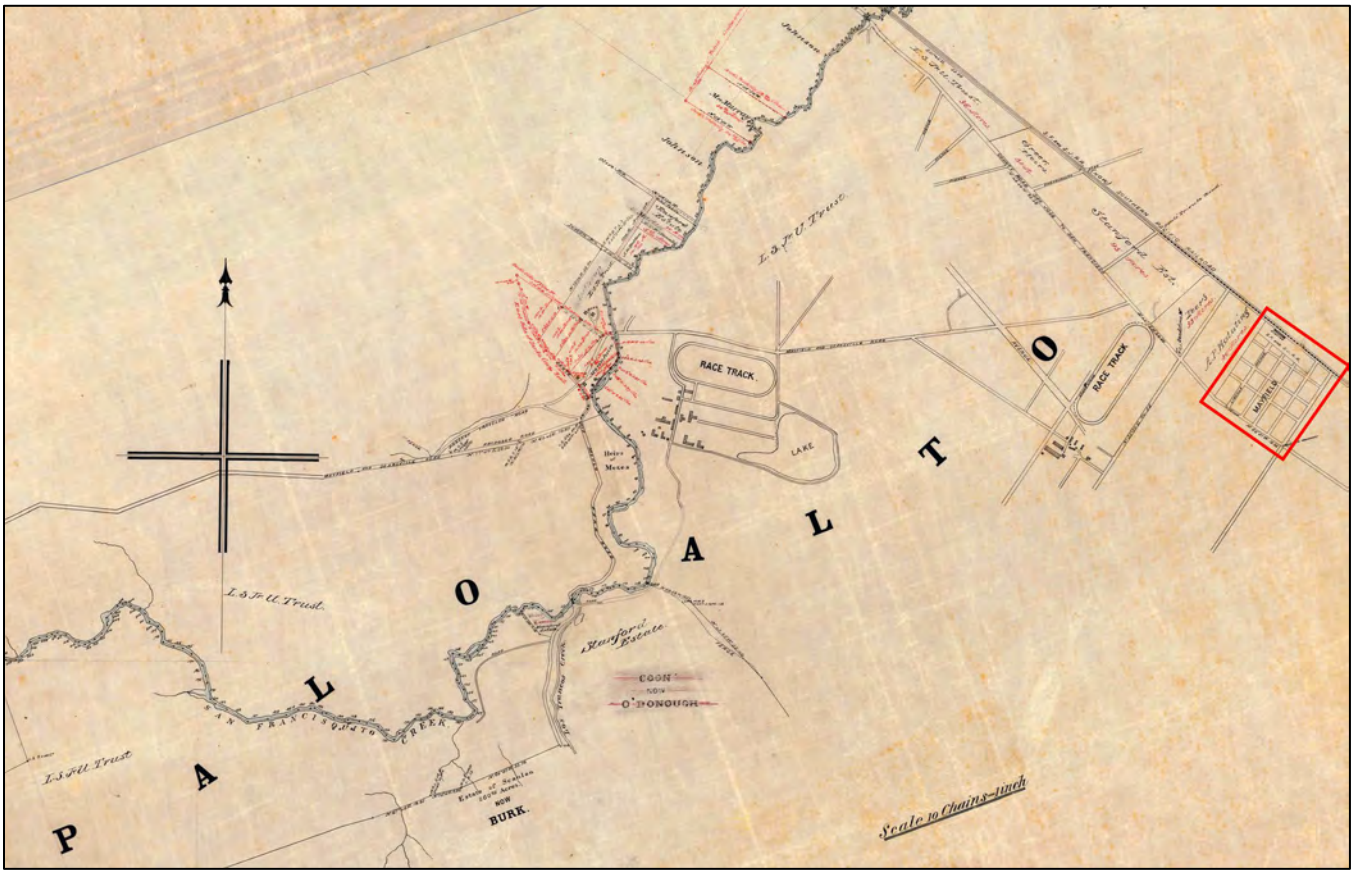

Plate 1: Circa 1880 map with Mayfield shown in red box sited between the Southern Pacific Railroad and El Camino Real. Note "Stanford Estate" near center (Source: Stanford University Libraries 2020).

Like many other sections of Santa Clara County, the early residents of Mayfield were involved in hay, grain, and livestock raising, but soon cultivated the land with orchards, vegetable fields, and wineries. By the turn of the century agricultural shipments out of Mayfield station ranged from 300,000 to 1,500,000 pounds per month (*San Jose Mercury* 1901 Dec 22).

A small commercial district grew on Lincoln Avenue (now S. California Avenue) just north of El Camino Real and the small town grew after the establishment of nearby Stanford University in 1891. By 1924, Mayfield's western boundary abutted the University grounds and spread south beyond El Camino Real with residential tract called College Terrace, expanded east six blocks, and expanded a few blocks north of the railroad tracks (Plate 2). In July 1925, the citizens of Mayfield voted to annex their town into the city Palo Alto (*San Jose Mercury* 1901 Dec 22; Sanborn 1924; City of Palo Alto 1952).

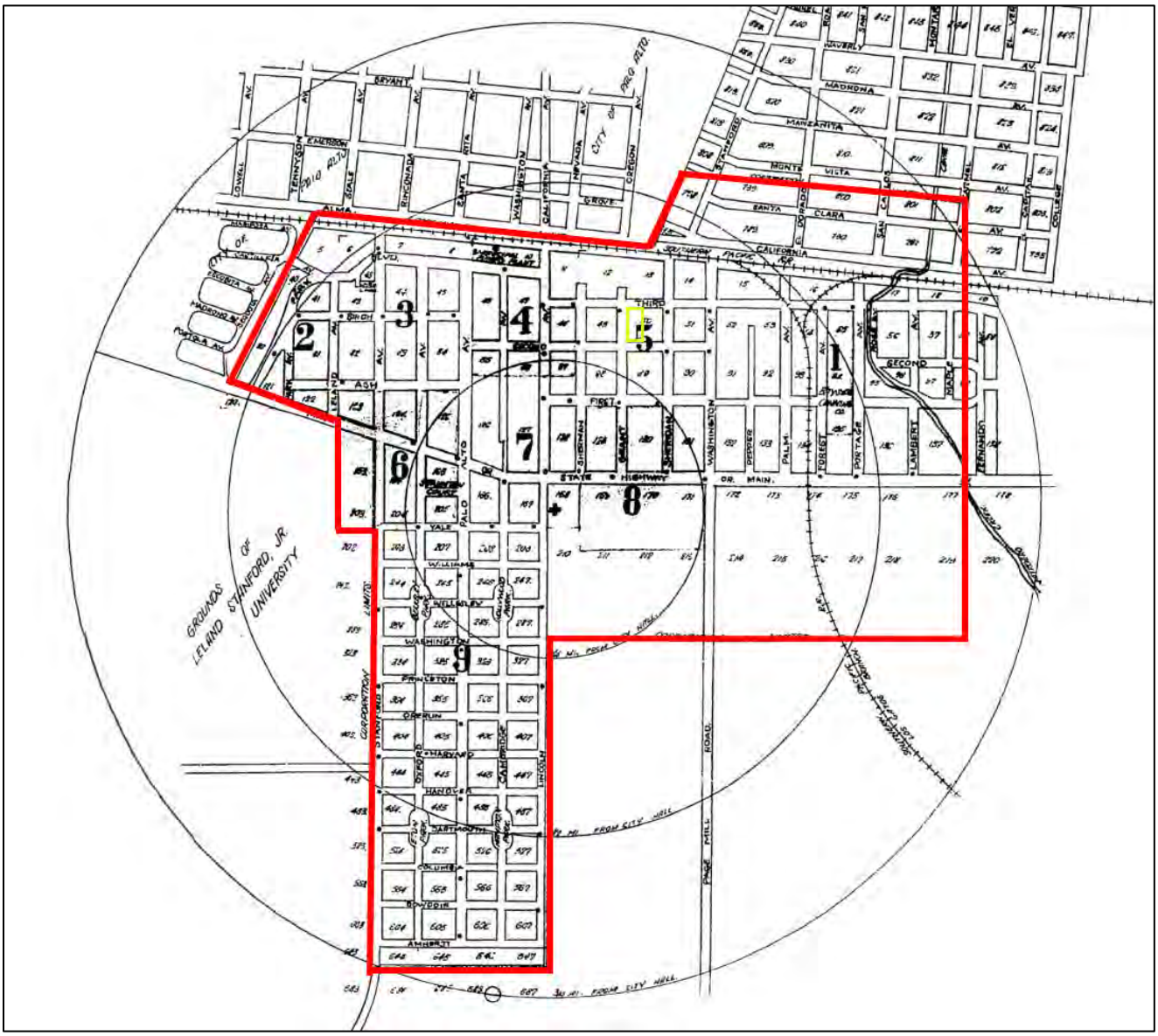

Plate 2: 1924 Sanborn map with expanded Mayfield town boundary shown by red border and subject property shown by yellow box. (Source: Sanborn 1924)

When this office building was completed in 1956, this block and the immediate vicinity were comprised of older residential building stock. Its construction served as a catalyst to transform this section of the city from single-family residence into offices and apartment buildings to serve the expanding influence of Stanford as a research and technology center (Plate 3). By 1960, ground was broken across the street for the Santa Clara County Office Building and the Oregon Expressway cut through the adjacent parcels to the east that connected the Bayshore Freeway to El Camino Real that required demolition of 90 residences (Sanborn 1945; HistoricAerials.com 1948, 1956, 1958, 1960; Heritage Services 2016 Nov 3: 8). Between 1960 and 1968 the majority of the remaining residences on the block with 231 Grant Avenue, and the adjacent residential parcel to the east, were razed to make way for parking lots and a four-story office building. By 1980, nearly all of the older residential and commercial buildings on the nine blocks bound by Park Avenue on the north, Sherman Avenue on the west, El Camino Real to the south, and the Oregon Expressway on the east were demolished and replaced with multi-story office buildings and large apartment complexes (HistoricAerials.com-1968, 1980).

Plate 3: 1956 oblique photograph showing subject property shown by yellow box in relationship to Stanford University campus and the newly developed Stanford Industrial Park (Source: Stanford University, Planning Office 1956)

Property History

This building was originally constructed in 1956 to house the offices of Annual Review, Inc. a non-profit publishing entity associated with Stanford University (Luck 1999: 32). Annual Reviews, Inc. began its partnership with Stanford University in 1931 and was granted free office space on the campus. The first Annual Review publication, *Annual Review of Biology*, was released the following year (Luck 1999: 28, 32). By the early 1950s, Annual Reviews, Inc. was responsible for the publication of books for eight scientific fields of study including microbiology, physiology, biochemistry, medicine, psychology, physical chemistry, plant physiology, and nuclear science (*Berkeley Daily Gazette* 1952 Mar 15).

A herculean building program was underway at Stanford in the mid-1950s including three new dorms to accommodate more than a thousand students. As the student population grew, Stanford needed any and all classrooms and offices spaces and asked the Annual Review to find a new location off campus (*Stanford Daily* 1955 Sep 27; Luck 1999: 32). Annual Review purchased two large empty lots on a residential block approximately 1.5-miles east from the main Stanford campus and a quarter-mile north from Stanford's 138-acre Industrial Park. Stanford set aside the initial 138-acres in 1951 just south of El Camino Real, as part of a long-range development plan to attract technology and research firms to the area. The first two companies to lease land and build in the Stanford Industrial Park was Varian Associates and Kodak in 1953, followed by two publishing companies with buildings designed by architect John S. Bolles in 1956 (none of the buildings are extant) (HistoricAerials.com 1948, 1956; *Stanford Daily* 1953 May 7; *Stanford Daily* 1955 Mar 28; *Architect and Engineer* 1955 Aug: 7)

Annual Review, Inc. moved into their new building at 231 Grant Avenue in 1956, but research did not reveal the architect or builder. In 1963 the four-story Santa Clara County Office Building was completed directly across the street from 231 Grant Avenue and housed County offices for the Clerk, Jury Commissioner, Juvenile Probation, Municipal Court Clerk, Civil Defense Substation of the Sheriff Department, Welfare Department, Health Department, and a Holding Facility for the jail (R.L. Polk 1962; 1963). In 1967, Santa Clara County declared eminent domain on the Annual Review, Inc.'s building at 231 Grant Avenue and the company relocated to 4139 El Camino Way in 1968. Once the building was vacant, the county transferred the Juvenile Probation Department, Civil Defense Substation of the Sheriff Department, Branch Office of the District Attorney, Adult Probation Department, and Weights & Measures from across the street into 231 Grant Avenue (Luck 1999: 32; R.L. Polk Co. 1967, 1968).

Between 1972 and 1974, only three county departments were housed in 231 Grant Avenue: the branch office for the District Attorney, Juvenile Probation Department, and the Adult Probation Department, and by 1976 the three departments moved out of the building to make way for the North Santa Clara County Mental Health Center (later changed to North County Community Mental Health Center) that took over the entire building (R.L. Polk 1972; 1974, 1976). By the 1990s, the North County Treatment & Recovery for drug and alcohol rehabilitation also moved into the building at 231 Grant Avenue (Santa Clara County 1999: 271).

In 2011, North County Community Mental Health Center vacated the building and was replaced with the Office of the Alternate Defender and the County of Santa Clara/North County Offices of the Office of the Public Defender (Google Maps Street View 2011 Mar, 2011 Dec). The departments shared the building for approximately five years and the current occupants, the Santa Clara County Office of the Public Defender and its Kurt E. Kumli Resource Center have been in the building since 2016 (Google Maps Street View 2014 Nov and 2016 Apr).

Contemporary Architecture

The office building at 231 Grant Avenue utilizes elements of the Contemporary style, popular between circa 1940 and 1980. The style is generally characterized by strong roof forms including flat, gabled, shed, or butterfly, typically with deep overhangs and/or exposed beams; large windows, and non-traditional exterior finishes. This architectural style emerged and proliferated through innovations in building materials that occurred in the late 1930s, including creation of exterior-grade plywood, laminated engineered wood with industrial glues, and large plate glass windows. These building materials allowed architects to create designs that blurred the line between indoor and outdoor spaces, utilizing large windows further highlighted through large spans of uninterrupted wall space. Exterior cladding materials could also include vertical wood siding, concrete block, pre-cast concrete panels, stucco, flagstone, and mullion-free glass; angular massing; sun shades, screens, or shadow block accents. Entrances into Contemporary style buildings are most often restrained or hidden from view with privacy screens. The Contemporary style was relatively inexpensive to build and was applied to single-family, multi-family, religious, commercial, school, and government buildings. More exaggerated roof forms like triangular, parabolic, or arched forms were used on commercial buildings rather than residential construction (McAlester 2013: 628-632).

EVALUATION

Under NRHP Criterion A / CRHR Criterion 1 / Santa Clara County Landmark Designation Criterion 1, the property at 231 Grant Avenue has no significant association with important historic events. While the building on this parcel, constructed in 1956, is associated with the transformation of the area from single-family residential to commercial and multi-family housing as part of the growth in response to the nearby Stanford Industrial Park; the building itself did not play a distinct or important role in this development in Palo Alto. It was one of many office buildings constructed in the area to meet increased demands for office, research, and warehouse space.

Under NRHP Criterion B / CRHR Criterion 2 / Santa Clara County Landmark Designation Criterion 2, the property at 231 Grant Avenue is not significant for any associations with the lives of persons important to history. Annual Reviews, Inc. commissioned construction of the building. The scientific journal and book publishing company was operated by a number of employees and no single individual is closely associated with the building. Nor have any individuals directly associated with the use of the building as a County-owned and operated facility have been found to have made a significant contribution to history at this property.

Under NRHP Criterion C / CRHR Criterion 3 / Santa Clara County Landmark Designation Criterion 3, this building is not significant because it is not an important example of a type, period, or method of construction, nor does it appear to represent the work of a master. The building's strong roof lines, ribbons of metal-framed windows, recessed entry, window screens, and the stylistic choice of a combination of exterior cladding materials generally reflects the aesthetic of the Contemporary style the period; however, it is a modest example of this style. The building does not appear to be a significant example of the work of a master architect. Architectural journals and local newspapers did not mention the construction of the building, so the architect and the builder could not be determined. Given that it is not an exemplary example of its style of architecture, it would not be a good candidate to best represent a master's work if it is later found that a master was responsible for its design or construction.

Under NRHP Criterion D / CRHR Criterion 4 / Santa Clara County Landmark Designation Criterion 4, this building is not significant as a source (or likely source) of important information regarding history. It does not appear to have any likelihood of yielding important information about historic construction materials or technologies.

While the property generally retains integrity of location, setting, design, materials, workmanship, feeling, and association to its date of construction (1956), with the exception of the primary entry configuration, it does not meet any of the significance criteria necessary for eligibility for listing in the NRHP, CRHR or as a Santa Clara County Landmark.

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Appendix D – Noise and Vibration Supporting Documentation

Project-Generated Construction Source Noise Prediction Model

60642412 - Santa Clara Grant Ave CEQA

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (Leq dBA)	
Threshold*	813	Daytime	60
	4,574	Nighttime	45
From Apartment	50	84	
From Office	50	84	

Assumptions:	Reference Emission Noise Levels (Lmax) at 50 feet1	Usage Factor1
Excavator	81	0.4
Front End Loader	79	0.4
Tractor	84	0.4
Front End Loader	79	0.4
Auger Drill Rig	84	0.2

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level 2	Leq dBA at 50 feet2
Excavator	77.0
Front End Loader	75.0
Tractor	80.0
Front End Loader	75.0
Auger Drill Rig	77.0

Combined Predicted Noise Level (Leq dBA at 50 feet)
84.2

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

Leq(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60642412 - Santa Clara Grant Ave CEQA

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)	
Threshold*	378	Daytime	60
	2,123	Nighttime	45
From Apartment	50	78	
From Office	50	78	

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Backhoe	78	0.4
Front End Loader	79	0.4

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Backhoe	74.0
Front End Loader	75.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
77.6

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60642412 - Santa Clara Grant Ave CEQA

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)	
Threshold*	474	Daytime	60
	2,665	Nighttime	45
From Apartment	50	80	
From Office	50	80	

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Man Lift	75	0.2
Crane	81	0.16
Man Lift	75	0.2
Backhoe	78	0.4
Front End Loader	79	0.4

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Man Lift	68.0
Crane	73.0
Man Lift	68.0
Backhoe	74.0
Front End Loader	75.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
79.5

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

$L_{eq}(equip) = E.L.+10*\log (U.F.) - 20*\log (D/50) - 10*G*\log (D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60642412 - Santa Clara Grant Ave CEQA

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)	
Threshold*	286	Daytime	60
	1,610	Nighttime	45
From Apartment	50	75	
From Office	50	75	

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Man Lift	75	0.2
Man Lift	75	0.2
Crane	81	0.16

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Man Lift	68.0
Man Lift	68.0
Crane	73.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
75.2

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

$L_{eq}(equip) = E.L.+10*\log (U.F.) - 20*\log (D/50) - 10*G*\log (D/50)$

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Crane	81	0.16

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Man Lift	68.0
Man Lift	68.0
Crane	73.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
75.2

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

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	4,574	Nighttime	45
From Apartment	50	84	
From Office	50	84	

Assumptions:	Reference Emission Noise Levels (Lmax) at 50 feet1	Usage Factor1
Excavator	81	0.4
Front End Loader	79	0.4
Tractor	84	0.4
Front End Loader	79	0.4
Auger Drill Rig	84	0.2

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level 2	Leq dBA at 50 feet2
Excavator	77.0
Front End Loader	75.0
Tractor	80.0
Front End Loader	75.0
Auger Drill Rig	77.0

Combined Predicted Noise Level (Leq dBA at 50 feet)
84.2

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

Leq(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

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U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

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Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)	
Threshold*	378	Daytime	60
	2,123	Nighttime	45
From Apartment	50	78	
From Office	50	78	

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Backhoe	78	0.4
Front End Loader	79	0.4

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Backhoe	74.0
Front End Loader	75.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
77.6

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

$L_{eq}(equip) = E.L.+10*\log (U.F.) - 20*\log (D/50) - 10*G*\log (D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

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60642412 - Santa Clara Grant Ave CEQA

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)	
Threshold*	474	Daytime	60
	2,665	Nighttime	45
From Apartment	50	80	
From Office	50	80	

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Man Lift	75	0.2
Crane	81	0.16
Man Lift	75	0.2
Backhoe	78	0.4
Front End Loader	79	0.4

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Man Lift	68.0
Crane	73.0
Man Lift	68.0
Backhoe	74.0
Front End Loader	75.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
79.5

Sources:

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[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60642412 - Santa Clara Grant Ave CEQA

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)	
Threshold*	286	Daytime	60
	1,610	Nighttime	45
From Apartment	50	75	
From Office	50	75	

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Man Lift	75	0.2
Man Lift	75	0.2
Crane	81	0.16

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Man Lift	68.0
Man Lift	68.0
Crane	73.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
75.2

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

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G = Constant that accounts for topography and ground effects; and

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Ground Type	Hard
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Sources:

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Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Measurement Site	Address	Date		Start Time	Duration	Daytime		Nighttime		Ldn
		From	To			Leq	Lmax	L50	L90	
LT-01	Within the Project Site, Middle Area	2/3/2021	2/4/2021	15:00	24 Hour	57.7	87.5	52.2	70.3	55.4
ST-01	Northwestern corner of Project Site, along Grant Avenue	Wednesday, February 03, 2021		14:32	20:12	58.5	69.8	NA	NA	NA
ST-02	Southwestern corner of Project Site, along Grant Avenue	Wednesday, February 03, 2021		14:55	20:02	59.3	76.9	NA	NA	NA
ST-03	Southeastern corner of Project Site, along Birch Street	Wednesday, February 03, 2021		15:16	20:01	58.8	71.3	NA	NA	NA

C:\LARDAV 03FEB_14.bin Interv al Data

Site	Locati	Meas Numbe	r -	Date	---	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk
0		0		3-Feb	21	14:10:28	2971.2	53.7	88.5	75.9	42.9	108.5	108
0		0		3-Feb	21	15:00:00	3600	56.1	91.7	74.3	44.4	89.1	97.7
0		0		3-Feb	21	16:00:00	3600	53.4	89	66.3	45.1	82.3	92.9
0		0		3-Feb	21	17:00:00	3600	56.1	91.7	80	44.8	93.9	99.9
0		0		3-Feb	21	18:00:00	3600	51.9	87.5	65.2	43.2	85.1	90.4
0		0		3-Feb	21	19:00:00	3600	51.8	87.3	68.6	42.4	81.5	92.9
0		0		3-Feb	21	20:00:00	3600	57	92.6	87.5	41.6	100.7	104.9
0		0		3-Feb	21	21:00:00	3600	48.9	84.5	63.5	39.2	79.7	0
0		0		3-Feb	21	22:00:00	3600	46.8	82.4	61.5	37.4	75.8	0
0		0		3-Feb	21	23:00:00	3600	45.6	81.2	67.1	36	76.8	0
0		0		4-Feb	21	0:00:00	3600	42.2	77.7	58.4	34.5	76.2	94.8
0		0		4-Feb	21	1:00:00	3600	41	76.6	58.9	34.2	75	0
0		0		4-Feb	21	2:00:00	3600	38.7	74.3	56.6	34	71.5	0
0		0		4-Feb	21	3:00:00	3600	40.6	76.2	61.7	35.6	81.1	0
0		0		4-Feb	21	4:00:00	3600	43.8	79.4	61.6	37.9	79.1	90.4
0		0		4-Feb	21	5:00:00	3600	47.2	82.8	67.7	40.2	83.1	92.9
0		0		4-Feb	21	6:00:00	3600	52.2	87.8	70.3	42.6	83.7	90.4
0		0		4-Feb	21	7:00:00	3600	57.2	92.8	79.4	46	96.3	99.9
0		0		4-Feb	21	8:00:00	3600	57.7	93.2	80.3	45	91.1	108.4
0		0		4-Feb	21	9:00:00	3600	54.2	89.8	75.6	42.5	88.3	93.9
0		0		4-Feb	21	10:00:00	3600	52.5	88	75.3	43	93.6	99.9
0		0		4-Feb	21	11:00:00	3600	54	89.6	74.4	42.9	85.9	94.8
0		0		4-Feb	21	12:00:00	3600	54.4	90	72.2	43.7	88.8	96.4
0		0		4-Feb	21	13:00:00	3600	54.5	90.1	72.6	44.1	95.4	102
0		0		4-Feb	21	14:00:00	3600	55.2	90.7	72.6	44.3	89.1	94.8
0		0		4-Feb	21	15:00:00	3464	54.6	90	75.1	45.2	89.3	99.9

L(2)	L(8)	L(25)	Wind Av L(50)	Wind g L(90)	Wind Min L(95)	RMS Max * *	Peak Uwpk Avg *	Min * *	Max *	Avg * *	Min *	Max Hz Hz
60.7	56.5	53.5	51	46.8	46.1	0	0	0	0	0	0	0
64.8	57.8	54.9	52.9	48.9	47.9	0	0	0	0	0	0	0
59.6	56.6	54	51.8	48.3	47.5	0	0	0	0	0	0	0
63.4	58.7	55.1	52.6	48.2	47.4	0	0	0	0	0	0	0
58.6	55.5	52.5	49.8	45.7	45.1	0	0	0	0	0	0	0
59.3	55.5	52.1	48.7	44.6	44.1	0	0	0	0	0	0	0
59.4	55	51.2	47.2	43.3	42.7	0	0	0	0	0	0	0
56.3	53.6	49.2	45.3	42.2	41.4	0	0	0	0	0	0	0
55.5	50.9	45.2	42.4	39.8	39.2	0	0	0	0	0	0	0
54.4	48.4	42.9	40.8	38.2	37.4	0	0	0	0	0	0	0
50.6	46.5	40.4	38.7	36.3	35.7	0	0	0	0	0	0	0
49.1	42.9	39.2	37.8	35.6	35.2	0	0	0	0	0	0	0
44	39.9	38.5	37.4	35.5	35.2	0	0	0	0	0	0	0
44.2	41.7	40.4	39.5	37.4	36.9	0	0	0	0	0	0	0
48.4	45.1	43.6	42.3	40	39.3	0	0	0	0	0	0	0
53.3	48.5	46.3	45	43	42.3	0	0	0	0	0	0	0
59.8	56.2	50.8	48.1	45.2	44.6	0	0	0	0	0	0	0
65.4	58.8	53.4	50.6	48.1	47.5	0	0	0	0	0	0	0
64.6	60.9	56.6	53.7	50.1	49.1	0	0	0	0	0	0	0
62.1	57.8	53.1	49.6	45.7	45.1	0	0	0	0	0	0	0
59.6	55.7	52.2	49.3	45.7	45.1	0	0	0	0	0	0	0
61.7	57.4	54	51	46.5	45.7	0	0	0	0	0	0	0
62.6	57.2	53.8	51	46.6	45.8	0	0	0	0	0	0	0
61.7	58	54.5	51.6	46.9	46.1	0	0	0	0	0	0	0
63.8	58	54.2	51.3	46.8	46.1	0	0	0	0	0	0	0
60.6	57.5	54.7	51.9	47.5	46.7	0	0	0	0	0	0	0

Avg @ Ma	Max x Count	Dir Co	Excd Count	Excd loads	E	xcd	Over			
0	0		0	0	N		4	11	0	0
0	0		0	0	N		14	0	0	0
0	0		0	0	N		2	0	0	0
0	0		0	0	N		11	1	0	0
0	0		0	0	N		1	0	0	0
0	0		0	0	N		2	0	0	0
0	0		0	0	N		5	3	0	0
0	0		0	0	N		0	0	0	0
0	0		0	0	N		0	0	0	0
0	0		0	0	N		1	0	0	0
0	0		0	0	N		0	0	0	0
0	0		0	0	N		0	0	0	0
0	0		0	0	N		0	0	0	0
0	0		0	0	N		0	0	0	0
0	0		0	0	N		0	0	0	0
0	0		0	0	N		1	0	0	0
0	0		0	0	N		1	0	0	0
0	0		0	0	N		10	9	0	0
0	0		0	0	N		11	1	0	0
0	0		0	0	N		5	0	0	0
0	0		0	0	N		3	1	0	0
0	0		0	0	N		6	0	0	0
0	0		0	0	N		7	0	0	0
0	0		0	0	N		6	3	0	0
0	0		0	0	N		7	0	0	0
0	0		0	0	N		3	0	0	0

Long-Term 24 Hour Continuous Noise Monitoring

Model Input Sheet

Project: 60642412 - Santa Clara Grant Ave CEQA

Date: **Wednesday, February 03, 2021** **to** **Thursday, February 04, 2021**

Site: LT-01

Hour	Leq	Lmax	L50	L90
15:00	56.1	74.3	52.9	48.9
16:00	53.4	66.3	51.8	48.3
17:00	56.1	80.0	52.6	48.2
18:00	51.9	65.2	49.8	45.7
19:00	51.8	68.6	48.7	44.6
20:00	57.0	87.5	47.2	43.3
21:00	48.9	63.5	45.3	42.2
22:00	46.8	61.5	42.4	39.8
23:00	45.6	67.1	40.8	38.2
0:00	42.2	58.4	38.7	36.3
1:00	41.0	58.9	37.8	35.6
2:00	38.7	56.6	37.4	35.5
3:00	40.6	61.7	39.5	37.4
4:00	43.8	61.6	42.3	40.0
5:00	47.2	67.7	45.0	43.0
6:00	52.2	70.3	48.1	45.2
7:00	57.2	79.4	50.6	48.1
8:00	57.7	80.3	53.7	50.1
9:00	54.2	75.6	49.6	45.7
10:00	52.5	75.3	49.3	45.7
11:00	54.0	74.4	51.0	46.5
12:00	54.4	72.2	51.0	46.6
13:00	54.5	72.6	51.6	46.9
14:00	55.2	72.6	51.3	46.8

Averages

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	54.9	73.9	50.4	46.5
Nighttime (10 p.m. - 7 a.m.)	46.2	62.6	41.3	39.0

Uppermost-Level

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	57.7	87.5	53.7	50.1
Nighttime (10 p.m. - 7 a.m.)	52.2	70.3	48.1	45.2

Percentage of Energy

Daytime	92%
Nighttime	8%

Calculated L_{dn}, dBA

55.4

Long-Term 24 Hour Continuous Noise Monitoring

Model Input Sheet

Project: 60642412 - Santa Clara Grant Ave CEQA

Date: **Wednesday, February 03, 2021** **to** **Thursday, February 04, 2021**

Site: LT-01

Hour	Leq	Lmax	L50	L90
15:00	56.1	91.7	52.9	48.9
16:00	53.4	89.0	51.8	48.3
17:00	56.1	91.7	52.6	48.2
18:00	51.9	87.5	49.8	45.7
19:00	51.8	87.3	48.7	44.6
20:00	57.0	92.6	47.2	43.3
21:00	48.9	84.5	45.3	42.2
22:00	46.8	82.4	42.4	39.8
23:00	45.6	81.2	40.8	38.2
0:00	42.2	77.7	38.7	36.3
1:00	41.0	76.6	37.8	35.6
2:00	38.7	74.3	37.4	35.5
3:00	40.6	76.2	39.5	37.4
4:00	43.8	79.4	42.3	40.0
5:00	47.2	82.8	45.0	43.0
6:00	52.2	87.8	48.1	45.2
7:00	57.2	92.8	50.6	48.1
8:00	57.7	93.2	53.7	50.1
9:00	54.2	89.8	49.6	45.7
10:00	52.5	88.0	49.3	45.7
11:00	54.0	89.6	51.0	46.5
12:00	54.4	90.0	51.0	46.6
13:00	54.5	90.1	51.6	46.9
14:00	55.2	90.7	51.3	46.8

Averages

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 7 p.m.)	55.1	90.3	51.3	47.3
Evening (7 p.m. - 9 p.m.)	53.9	88.1	47.1	43.4
Nighttime (9 p.m. - 7 a.m.)	46.2	79.8	41.3	39.0

Uppermost-Level

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 7 p.m.)	57.7	93.2	53.7	50.1
Evening (7 p.m. - 9 p.m.)	57.0	92.6	48.7	44.6
Nighttime (9 p.m. - 7 a.m.)	52.2	87.8	48.1	45.2

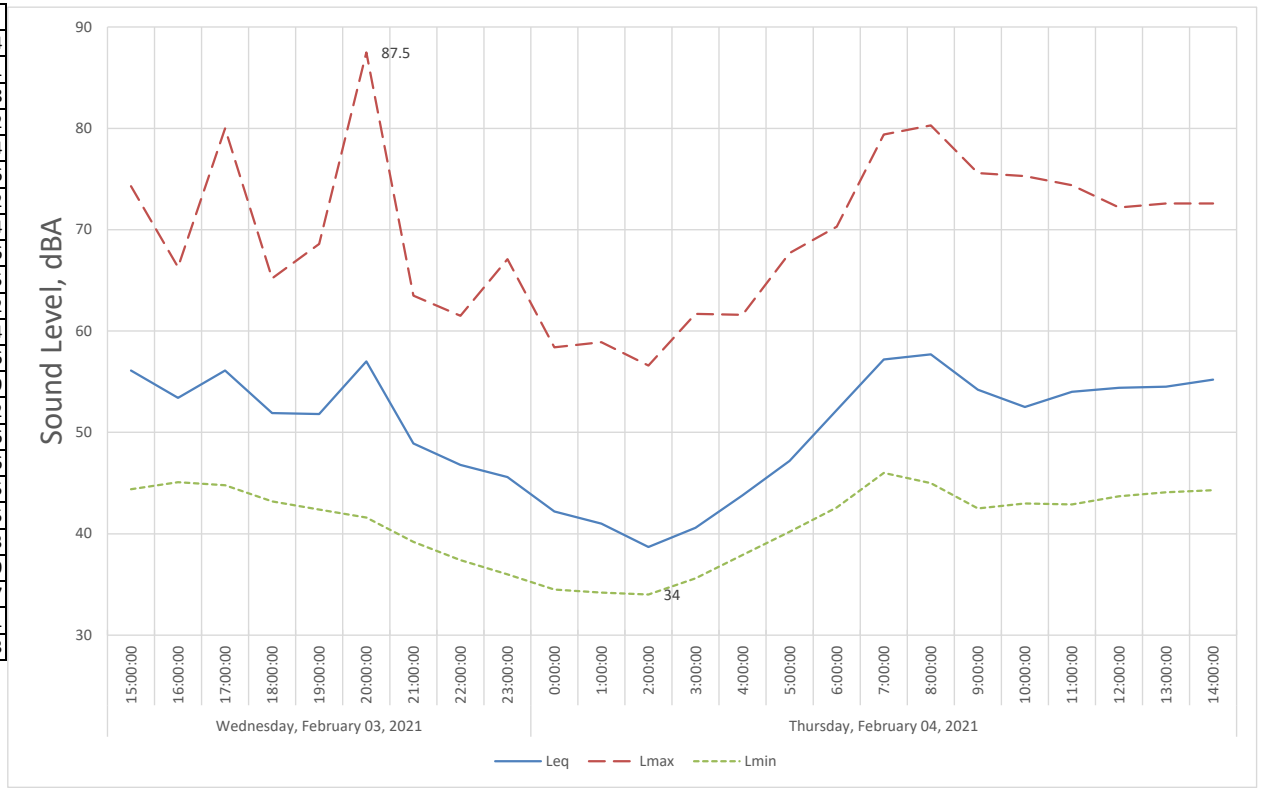
Percentage of Energy

Daytime	78%
Evening	15%
Nighttime	8%

Calculated CNEL, dBA

56.1

Date	Time	Leq	Lmax	Lmin
Wednesday, February 03, 2021	15:00:00	56.1	74.3	44.4
	16:00:00	53.4	66.3	45.1
	17:00:00	56.1	80	44.8
	18:00:00	51.9	65.2	43.2
	19:00:00	51.8	68.6	42.4
	20:00:00	57	87.5	41.6
	21:00:00	48.9	63.5	39.2
	22:00:00	46.8	61.5	37.4
	23:00:00	45.6	67.1	36
Thursday, February 04, 2021	0:00:00	42.2	58.4	34.5
	1:00:00	41	58.9	34.2
	2:00:00	38.7	56.6	34
	3:00:00	40.6	61.7	35.6
	4:00:00	43.8	61.6	37.9
	5:00:00	47.2	67.7	40.2
	6:00:00	52.2	70.3	42.6
	7:00:00	57.2	79.4	46
	8:00:00	57.7	80.3	45
	9:00:00	54.2	75.6	42.5
	10:00:00	52.5	75.3	43
	11:00:00	54	74.4	42.9
	12:00:00	54.4	72.2	43.7
	13:00:00	54.5	72.6	44.1
	14:00:00	55.2	72.6	44.3



Summary					
Filename	831_Data.001				
Serial Number	3940				
Model	Model 831				
Firmware Version	2.314				
User	Issa				
Location	Grant Ave Project				
Job Description	Ambient Air Noise Survey				
Note					
Measurement Description	GRAANT-AVE				
Start	2021/02/03 14:32:38				
Stop	2021/02/03 14:52:50				
Duration	0:20:11.7				
Run Time	0:20:11.7				
Pause	0:00:00.0				
Pre Calibration	2021/02/03 14:24:11				
Post Calibration	None				
Calibration Deviation	---				
Overall Settings					
RMS Weight	A Weighting				
Peak Weight	A Weighting				
Detector	Slow				
Preamp	PRM831				
Microphone Correction	Off				
Integration Method	Linear				
OBA Range	Low				
OBA Bandwidth	1/1 and 1/3				
OBA Freq. Weighting	A Weighting				
OBA Max Spectrum	Bin Max				
Gain	0.0	dB			
Overload	143.9	dB			
	A		**C**	**Z**	
Under Range Peak	**76.5**		73.5	78.5	dB
Under Range Limit	**26.4**		26.8	32.5	dB
Noise Floor	17.3		17.6	23.0	dB
Results					
LAeq	58.5	dB			
LAE	89.4	dB			
EA	96.136	µPa²h			
LApeak (max)	2021/02/03 14:37:52		92.7	dB	
LASmax	2021/02/03 14:37:04		69.8	dB	
LASmin	2021/02/03 14:33:21		43.2	dB	
SEA	-99.9	dB			

ST-01 Summary

LAS > 60.0 dB (Exceedence Counts / Duration)	46	356.7 s
LAS > 70.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 90.0 dB (Exceedence Counts / Duration)	12	9.6 s
LApeak > 100.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 120.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**
	58.5	58.5	-99.9	58.5	58.5	-99.9	-99.9

LCeq	67.6	dB
LAeq	58.5	dB
LCeq - LAeq	9.1	dB
LAIeq	62.3	dB
LAeq	58.5	dB
LAIeq - LAeq	3.8	dB
# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS2.00	66.1	dB
LAS8.00	63.2	dB
LAS25.00	59.6	dB
LAS50.00	54.7	dB
LAS90.00	47.5	dB
LAS95.00	46.6	dB

Record #	Record Type	Date	Time	LAeq	LAS	LASmax	LASmin
1	Run	2021/02/03	14:32:38	0.0	0.0	0.0	0.0
2		2021/02/03	14:32:38	61.0	52.3	65.2	52.0
3		2021/02/03	14:33:00	47.4	47.4	53.1	43.2
4		2021/02/03	14:34:00	59.2	57.8	67.4	47.1
5		2021/02/03	14:35:00	56.0	45.9	63.9	45.9
6		2021/02/03	14:36:00	53.6	54.9	62.8	43.5
7		2021/02/03	14:37:00	60.8	60.5	69.8	47.2
8		2021/02/03	14:38:00	59.4	53.3	66.6	52.2
9		2021/02/03	14:39:00	58.7	51.7	68.0	49.6
10		2021/02/03	14:40:00	59.9	64.0	67.0	51.5
11		2021/02/03	14:41:00	59.3	62.9	64.8	49.5
12		2021/02/03	14:42:00	63.0	58.3	68.7	54.1
13		2021/02/03	14:43:00	58.6	58.4	67.4	46.8
14		2021/02/03	14:44:00	60.0	53.7	67.8	48.3
15		2021/02/03	14:45:00	54.6	46.9	64.3	46.1
16		2021/02/03	14:46:00	52.9	49.9	58.9	46.6
17		2021/02/03	14:47:00	55.1	46.1	65.9	46.1
18		2021/02/03	14:48:00	55.9	59.3	63.3	45.8
19		2021/02/03	14:49:00	58.8	52.3	66.6	50.1
20		2021/02/03	14:50:00	59.8	60.8	67.4	51.1
21		2021/02/03	14:51:00	58.5	58.4	65.8	50.4
22		2021/02/03	14:52:00	57.2	57.5	67.9	48.5
23	Stop	2021/02/03	14:52:50	0.0	0.0	0.0	0.0

1/1 LAS 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000	1/1 LAeq 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-19.6	-0.8	18.5	29.4	35.2	40.5	44.6	48.1	47.3	37.4	26.4	10.3	-19.6	2.5	21.5	35.9	44.6	49.5	52.1	57.4	54.9	49.2	41.8	26.9
-16.6	-1.0	19.3	30.6	35.4	35.1	38.9	44.3	40.4	28.6	15.6	7.2	-15.9	3.3	18.9	29.2	35.3	36.2	39.4	43.1	40.9	33.9	31.2	20.1
-21.6	4.7	26.0	36.1	39.2	41.3	46.7	55.3	52.1	43.3	32.8	18.6	-18.7	7.0	31.4	40.5	46.8	47.9	49.1	55.5	53.5	47.1	37.8	23.6
-20.2	2.1	19.9	29.4	35.2	36.1	37.3	42.5	38.7	28.6	16.4	7.7	-20.0	4.7	25.0	34.4	39.6	43.9	46.3	52.4	50.3	44.3	37.2	22.3
-18.2	2.7	26.2	30.5	36.2	38.6	43.9	52.1	49.7	37.9	25.2	8.8	-20.2	3.2	20.1	31.0	37.1	41.0	44.5	50.2	47.7	40.9	31.5	17.7
-15.6	3.0	21.7	32.4	39.5	45.6	50.8	58.3	54.2	42.7	31.7	13.4	-9.1	8.3	22.5	33.6	40.3	46.7	51.4	57.5	55.4	48.6	40.1	29.2
-11.5	4.4	28.6	44.6	39.8	41.2	44.8	48.7	46.1	38.2	26.8	12.2	-6.4	8.8	30.5	41.4	44.4	48.8	51.0	55.7	53.0	46.3	37.1	21.9
-11.7	2.3	20.0	35.4	43.0	41.5	44.4	47.4	44.0	33.6	18.8	7.6	-15.2	3.8	27.1	43.5	43.2	45.1	49.9	54.3	53.1	46.5	45.0	23.1
-10.0	5.1	21.5	48.4	49.4	51.6	54.2	59.2	58.6	54.4	47.0	35.5	-12.5	5.3	31.1	40.7	43.6	47.3	51.4	56.6	53.8	46.6	38.0	24.4
-8.1	6.5	28.7	46.9	52.5	54.2	53.9	58.0	56.7	50.8	39.3	24.7	-11.0	5.2	29.5	40.6	43.3	48.0	51.1	55.6	53.4	46.0	36.7	21.6
-8.8	5.8	31.0	33.6	42.9	49.0	51.6	53.4	52.0	44.5	36.1	22.9	-2.2	16.4	33.6	42.6	47.6	50.8	54.6	58.7	57.2	51.9	47.0	28.7
-17.9	2.7	29.4	41.6	47.0	43.9	48.5	53.9	52.3	48.4	39.9	29.6	-16.7	2.7	27.9	37.7	42.7	45.4	49.5	54.9	53.1	46.4	38.4	39.4
-12.0	4.4	25.4	34.2	39.6	40.2	43.9	50.5	48.2	38.9	28.1	13.4	-17.0	4.5	24.6	37.8	43.4	47.0	51.4	56.1	54.6	48.9	40.6	35.0
-19.8	1.9	21.1	29.7	35.6	36.2	38.2	42.8	40.1	31.6	22.7	8.5	-18.9	2.4	21.7	35.5	39.0	42.7	45.1	51.0	49.1	41.3	33.2	18.1
-20.5	-0.9	17.8	31.2	35.6	37.2	40.6	46.7	44.3	32.9	21.3	8.9	-13.4	3.2	21.7	32.6	40.1	42.1	44.6	48.2	46.3	43.3	36.0	21.5
-11.4	1.9	20.5	30.3	36.0	36.8	37.7	42.5	38.0	30.3	23.3	13.4	-14.3	3.7	21.5	33.7	38.7	41.8	44.8	51.0	50.3	43.2	34.1	39.8
-7.7	8.0	26.6	44.8	43.1	53.5	50.0	51.9	52.8	48.5	42.9	29.0	-5.8	10.0	24.7	34.8	39.0	44.2	47.2	52.3	50.0	43.2	35.0	21.5
-16.5	4.2	21.9	30.4	35.5	40.4	42.6	49.1	46.8	36.3	26.7	13.3	-12.3	4.9	24.7	37.5	43.6	48.5	49.7	55.3	52.6	46.0	38.9	22.2
-14.7	5.2	19.7	36.2	48.5	52.8	56.7	56.1	48.7	41.7	35.9	24.4	-10.6	5.6	22.5	34.5	45.4	50.9	53.5	55.9	51.0	44.3	35.6	22.0
-18.4	2.2	21.2	33.7	38.7	42.6	48.5	56.0	52.3	42.8	33.0	16.3	-9.0	9.0	21.9	36.2	44.3	47.5	51.5	54.6	51.5	45.5	38.1	22.7
-3.7	8.8	19.9	38.6	40.6	42.9	49.5	54.8	50.4	40.1	30.7	16.1	-4.6	10.4	21.7	36.3	42.6	44.4	49.5	53.4	50.9	45.0	37.0	23.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/1 LASmax 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000	1/1 LASmin 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-17.3	6.4	27.1	42.0	50.7	57.1	57.2	61.1	58.6	54.9	48.2	33.4	-23.2	-1.1	18.2	29.4	35.2	40.1	44.5	48.0	45.9	37.1	25.6	8.5
-8.7	8.7	22.2	31.5	39.1	42.5	44.5	48.1	49.8	47.2	48.2	37.0	-24.3	-2.0	14.7	26.7	33.2	33.0	35.5	38.6	35.6	26.3	14.9	7.1
-12.1	15.6	42.2	51.5	57.5	56.7	55.6	64.8	62.5	56.2	46.2	32.0	-24.3	-1.1	17.0	27.7	34.5	34.5	38.3	43.8	40.0	28.5	14.3	7.1
-12.4	14.2	31.9	43.0	48.6	54.9	55.4	61.0	58.6	54.6	48.0	33.0	-24.3	-0.6	17.6	28.9	34.8	35.2	36.7	42.4	38.6	27.9	15.2	7.4
-15.6	12.2	26.6	37.0	44.0	50.5	53.6	59.3	57.6	50.9	42.3	30.1	-24.3	-1.6	16.0	27.8	33.7	32.8	35.5	38.9	34.9	26.6	15.0	7.3
-3.4	20.0	30.0	39.0	46.9	54.5	60.1	66.5	64.6	58.8	50.6	39.1	-21.6	0.7	16.9	29.1	34.8	35.6	38.5	43.4	39.3	33.5	23.8	9.0
-0.2	14.4	40.1	48.8	54.3	59.7	59.6	62.3	59.8	55.3	45.3	31.6	-15.8	1.2	17.8	29.5	35.7	37.9	42.0	47.6	43.8	34.0	21.3	8.6
-7.1	9.9	33.3	48.5	47.7	52.2	56.5	63.3	64.8	55.8	59.4	31.5	-23.7	-0.3	17.5	32.9	38.7	39.4	42.3	45.0	41.1	30.9	17.5	7.3
-8.2	10.3	43.1	49.5	51.1	54.3	58.9	64.5	60.8	55.0	47.1	36.0	-17.8	1.0	18.2	30.9	37.5	38.2	43.1	47.1	44.0	33.4	18.3	7.5
-4.7	12.2	41.8	52.1	53.2	57.5	58.2	61.1	58.8	54.3	46.9	35.3	-21.1	0.7	15.8	30.5	36.5	35.5	39.8	46.2	43.5	32.1	20.3	8.4
8.8	29.8	44.5	52.1	53.8	58.8	62.6	64.6	63.9	58.3	60.7	36.7	-17.2	2.7	21.6	32.6	39.4	41.0	45.1	49.6	48.2	39.7	28.6	11.4
-6.3	8.0	37.1	47.0	47.8	52.5	57.8	63.8	63.5	55.4	45.2	54.9	-24.3	-1.4	15.4	28.3	34.9	34.7	38.4	43.2	38.8	28.0	15.3	7.2
-9.7	12.5	33.6	47.7	51.6	54.4	58.7	63.8	63.8	57.1	48.8	50.5	-23.5	-1.9	15.4	28.3	34.6	37.5	40.3	43.8	40.3	30.3	17.1	7.3
-12.1	6.4	28.3	46.1	47.2	52.2	53.9	60.7	59.4	52.8	44.6	29.3	-24.2	-0.6	17.4	28.1	33.5	34.7	37.9	42.0	38.9	29.3	17.3	7.3
-3.0	6.9	28.5	36.1	49.2	50.5	51.4	53.1	52.4	49.4	47.0	36.4	-24.3	-1.7	16.2	29.1	34.0	35.9	38.1	42.8	37.8	31.7	20.9	7.5
-4.6	13.0	28.9	39.2	45.4	49.3	54.8	61.3	62.3	55.0	44.9	56.0	-23.5	-2.2	15.1	28.1	33.9	34.2	37.6	42.4	37.9	28.3	17.6	7.5
2.0	16.1	31.7	44.9	44.7	53.7	54.5	61.2	58.1	53.6	45.8	33.3	-20.3	-0.1	15.0	28.6	34.9	34.8	37.1	41.9	37.2	28.1	19.1	8.4
-5.9	10.3	31.8	45.7	51.5	57.8	58.5	63.1	60.5	58.5	53.5	34.7	-21.2	-0.6	19.0	29.8	35.4	38.6	41.2	46.8	42.0	32.0	20.3	8.3
-4.0	9.8	28.1	40.0	48.8	56.2	58.9	65.6	59.2	52.8	45.3	33.6	-19.0	1.2	17.9	29.9	35.4	39.8	42.4	47.5	42.0	28.0	16.8	7.4
0.5	19.8	30.5	43.8	52.4	56.4	59.8	61.2	58.0	52.9	45.9	30.5	-20.0	-0.2	16.8	30.7	35.9	39.4	43.2	45.7	40.0	30.9	18.2	7.6
1.6	15.7	27.2	41.8	51.7	53.4	59.9	63.8	62.4	57.1	49.8	36.4	-22.6	1.5	16.3	30.4	36.0	36.5	40.6	44.5	39.7	31.0	20.4	8.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ST-01 Interval

1/3 LAS 6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-30.1	-29.2	-19.4	-13.0	-7.4	-2.1	8.3	11.5	16.2	23.6	25.1	25.7	28.6	32.3	30.5	36.4	35.5	34.5	38.7	40.3	39.9	42.7	44.1	43.3	44.9	42.2	38.4	35.1	31.7	28.4	24.9	19.7	14.7	8.3	3.9	0.0
-30.1	-28.7	-16.8	-12.0	-3.1	-2.0	8.0	11.8	17.3	22.0	26.9	27.9	29.6	32.1	28.3	29.3	30.2	31.1	32.1	33.2	35.8	38.6	40.3	39.6	38.1	35.1	31.0	26.6	22.8	18.3	13.7	9.3	6.1	4.2	2.4	-0.2
-30.1	-29.2	-22.7	-15.8	-0.7	2.8	24.1	17.2	18.8	33.5	28.7	31.4	33.6	34.4	35.4	34.0	37.3	37.9	37.8	41.1	44.6	49.3	52.1	49.7	49.2	47.3	43.7	41.7	37.6	33.4	29.9	28.2	23.3	17.6	9.0	3.7
-30.1	-29.2	-25.3	-15.8	-9.1	-1.6	6.3	12.5	19.0	21.3	23.3	26.8	29.5	31.3	29.3	31.7	31.2	30.6	30.7	31.5	34.3	36.7	38.4	37.7	36.1	33.1	30.9	26.1	23.2	19.0	14.1	10.7	7.0	4.8	2.6	-0.3
-30.1	-29.2	-21.9	-10.1	-5.0	3.1	9.2	13.5	24.2	23.6	24.6	28.3	32.5	31.7	30.7	32.2	34.4	34.0	37.1	37.3	41.3	45.9	46.6	49.0	47.2	44.1	41.0	36.0	31.9	27.4	23.7	19.0	11.6	6.5	3.0	-0.1
-27.6	-23.4	-17.0	-11.8	-5.6	2.6	9.9	15.0	19.8	23.7	25.9	30.9	35.2	34.6	34.6	38.2	40.6	42.7	44.4	45.1	47.9	53.2	55.0	52.5	51.2	49.8	45.4	40.5	36.9	33.1	30.1	25.7	18.5	11.7	6.2	3.4
-27.1	-19.5	-13.0	-7.0	-1.2	1.5	7.8	18.8	28.0	33.0	44.2	32.8	34.7	34.0	35.9	35.9	36.4	36.8	36.9	39.1	42.0	44.5	44.6	43.5	42.8	41.2	39.4	35.6	33.0	29.2	24.7	21.2	16.1	10.0	6.5	0.7
-29.2	-20.4	-16.0	-8.5	-4.1	0.7	9.0	12.4	18.1	26.4	31.3	32.2	33.2	42.0	35.5	33.1	35.9	39.4	38.3	38.8	40.7	41.7	43.3	42.4	41.3	39.0	35.4	32.2	27.1	22.0	17.2	12.2	7.7	4.7	2.3	-0.1
-29.3	-19.9	-11.3	-6.9	1.2	4.7	9.5	16.7	19.7	26.4	44.0	42.2	36.6	47.7	44.6	48.2	44.2	45.8	48.1	48.0	51.0	53.6	55.6	54.0	52.9	54.0	54.5	51.4	48.6	47.1	43.5	42.4	39.5	33.7	29.9	19.0
-25.3	-18.6	-12.3	-9.0	1.0	5.5	17.7	24.6	18.6	24.8	47.4	35.2	38.5	51.6	45.3	50.4	50.0	48.9	47.5	49.2	50.7	49.7	54.7	53.9	52.2	51.6	52.0	49.3	43.5	40.8	37.3	33.3	29.0	23.5	17.0	8.7
-29.4	-19.3	-11.2	-5.7	-3.0	5.6	7.9	22.8	30.5	24.9	27.3	31.4	35.2	38.5	39.3	40.0	45.9	45.3	47.7	47.0	46.0	47.4	48.0	50.2	48.4	47.2	45.0	42.4	38.3	35.7	33.0	32.0	26.6	21.1	17.0	7.3
-30.1	-27.0	-17.2	-9.4	-5.9	1.4	8.8	23.1	29.2	23.4	30.9	38.8	44.3	41.2	40.7	39.0	39.8	38.2	39.8	43.8	45.9	47.9	50.0	49.6	48.8	47.4	46.1	46.2	42.6	39.5	37.8	34.6	29.3	24.1	18.0	27.7
-30.1	-17.1	-11.8	-9.0	-0.4	1.7	8.6	11.6	24.2	23.1	28.5	32.1	35.5	34.6	33.4	34.8	34.9	36.4	36.4	38.2	41.3	44.4	46.9	45.7	45.4	43.3	40.0	36.8	33.3	29.0	26.2	22.2	17.8	12.0	5.9	0.7
-30.1	-27.0	-19.6	-17.5	-5.2	0.2	6.2	17.9	17.0	21.2	24.7	27.2	29.2	33.4	28.9	29.7	32.2	32.0	31.9	32.5	35.5	38.6	38.3	37.5	37.9	34.2	32.0	29.4	26.0	22.3	20.6	16.9	11.5	5.7	3.3	-0.2
-27.7	-25.2	-24.9	-17.9	-8.7	-2.2	4.6	10.4	16.0	22.1	27.6	28.1	30.5	31.8	30.7	31.5	32.8	33.0	34.0	36.7	37.0	38.9	41.1	44.3	41.6	38.5	34.0	30.4	27.7	23.6	19.1	16.5	9.8	6.4	3.6	0.1
-22.9	-14.0	-11.2	-9.9	-5.3	1.6	8.9	12.0	19.0	20.2	26.9	27.3	30.3	33.4	28.9	30.1	33.7	32.1	32.0	32.5	34.7	37.1	38.5	37.3	34.9	32.6	30.2	27.4	25.0	22.8	21.2	18.0	13.6	10.9	8.5	2.8
-19.4	-17.3	-10.7	-4.4	1.8	7.6	13.7	21.0	25.8	36.6	43.9	33.6	34.9	37.7	40.2	42.6	46.7	52.3	47.0	42.6	44.3	46.8	46.9	48.1	48.0	49.5	45.7	44.9	43.5	42.6	41.1	37.1	31.2	27.4	22.8	13.3
-27.3	-20.5	-16.0	-10.3	0.8	0.5	9.4	18.8	18.3	23.5	24.1	27.7	30.0	30.8	30.7	31.2	36.3	37.0	36.3	37.0	39.4	43.2	44.0	45.5	44.7	41.2	37.7	33.7	31.1	28.1	24.9	20.0	16.8	11.7	6.7	1.5
-25.1	-20.9	-15.0	-12.2	-3.2	2.0	8.2	15.1	17.6	30.1	28.3	33.0	42.2	42.7	44.8	43.0	51.1	47.1	51.8	51.4	51.5	52.7	51.0	49.7	46.2	43.4	40.5	37.8	37.6	34.6	32.3	31.5	27.4	23.7	14.1	8.5
-30.1	-29.1	-18.3	-13.3	-4.0	-0.3	9.4	12.1	20.6	21.3	25.3	32.8	34.3	33.8	34.8	35.1	37.5	39.3	40.0	41.7	46.4	49.5	53.2	50.2	49.5	47.9	43.1	40.1	37.4	35.2	31.3	26.0	21.7	14.6	9.3	2.3
-17.2	-10.7	-6.0	-2.6	4.3	6.8	11.3	12.5	19.3	22.2	26.2	38.4	35.8	34.5	36.8	36.4	38.5	39.1	41.5	42.8	47.1	48.4	49.8	51.6	47.8	45.2	41.0	37.9	34.3	31.0	28.7	25.4	19.0	14.6	9.0	4.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/3 LAeq 6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-30.1	-28.2	-20.4	-12.4	-4.7	1.5	9.2	16.6	19.5	27.2	29.8	33.7	42.1	38.6	37.8	42.0	45.4	46.0	45.7	46.9	48.7	51.5	53.7	52.6	51.6	50.2	47.9	46.3	43.7	42.2	40.2	35.4	31.0	25.5	20.1	10.1
-28.8	-24.3	-16.8	-10.4	-3.7	2.2	7.4	12.3	17.5	21.2	24.9	25.7	29.8	32.0	29.1	32.3	30.8	31.1	33.8	33.3	36.3	37.9	38.8	38.2	37.9	36.2	32.9	30.3	29.0	27.5	28.9	26.3	22.1	18.4	14.1	6.8
-29.3	-25.8	-19.8	-11.0	1.5	5.2	15.9	21.4	30.7	34.0	37.8	34.5	35.6	40.6	45.1	40.6	41.5	45.6	41.9	44.4	46.0	50.1	51.5	50.2	49.5	48.6	47.5	44.9	41.5	38.8	35.9	32.0	27.3	22.3	16.4	8.1
-30.1	-28.0	-21.1	-13.2	-3.2	3.8	19.9	19.3	21.5	24.0	27.8	32.8	32.0	35.6	36.1	37.6	40.7	38.8	39.8	40.6	43.3	45.8	48.5	48.1	47.2	45.0	43.9	41.7	38.6	36.7	35.3	31.5	26.8	21.0	14.7	7.2
-29.9	-27.7	-21.5	-12.0	-4.9	2.3	7.8	12.2	19.0	22.0	25.8	28.8	32.4	32.9	31.7	35.2	36.8	36.8	36.9	39.5	41.5	44.3	46.5	45.5	44.6	42.8	40.2	38.0	35.3	34.2	29.1	25.8	21.6	16.3	10.5	3.3
-22.4	-15.5	-10.6	-5.0	0.7	7.3	12.0	17.0	20.4	26.3	27.3	31.2	36.9	34.4	35.4	41.5	42.2	42.2	44.1	45.5	49.0	52.3	53.2	52.6	52.3	50.5	48.2	46.2	42.6	40.3	37.9	34.7	30.4	24.9	26.9	10.5
-18.4	-13.1	-7.8	-2.0	3.1	6.9	12.1	26.7	27.8	32.5	37.5	38.1	41.6	37.4	39.4	45.2	43.6	43.3	43.5	46.2	47.9	50.5	51.6	50.4	49.5	48.5	46.2	43.4	41.1	38.6	35.3	31.0	26.0	20.6	14.4	7.0
-27.0	-22.7	-16.4	-9.8	-3.6	2.7	10.3	22.8	25.0	31.7	41.9	37.6	37.4	39.9	37.7	39.0	40.6	41.1	42.2	44.7	47.0	49.4	49.9	49.3	49.8	48.6	45.7	43.4	41.7	38.6	45.1	32.1	27.6	21.8	15.7	8.5
-23.4	-19.2	-14.1	-7.3	-1.2	3.9	9.4	22.7	30.4	31.4	36.7	36.8	37.0	39.8	39.2	42.2	42.5	42.9	44.1	45.3	48.9	51.6	52.3	51.3	50.6	49.0	46.7	44.1	41.0	38.6	35.5	32.7	28.4	22.9	18.1	9.1
-23.5	-17.5	-12.6	-7.3	-1.4	3.8	11.3	20.9	28.7	28.7	37.0	38.1	35.7	40.3	38.2	43.3	43.0	43.7	44.5	46.4	47.7	49.8	51.4	51.1	50.1	48.5	46.3	44.0	39.8	37.1	34.7	31.2	26.2	20.3	14.1	6.8
-21.2	-12.4	-2.8	4.1	5.6	15.7	25.1	27.7	31.2	33.3	35.7	40.9	43.2	41.9	43.4	45.7	45.9	46.5	48.3	49.7	51.0	53.4	54.7	53.8	53.3	52.5	51.3	49.2	46.7	44.0	41.6	44.6	38.0	27.2	22.0	13.2
-26.4	-22.6	-17.7	-11.9	-4.9	1.8	8.7	21.8	26.7	26.9	34.3	34.0	37.5	39.0	37.0	39.0	41.4	41.3	42.8	44.1	46.7	49.0	51.2	50.0	49.9	48.2	45.4	44.0	41.1	37.9	36.1	33.4	28.3	23.3	17.4	39.5
-28.8	-25.0	-18.2	-12.3	-4.0	3.7	14.6	17.6	22.9	25.3	28.9	37.1	35.6	39.7	39.5	39.9	42.0	43.7	44.7	45.8	48.2	50.7	52.1	51.1	50.2	50.6	48.2	46.3	43.7	40.7	38.8	34.5	30.2	25.1	33.9	26.7
-29.8	-26.3	-19.7	-12.2	-3.8	1.1	9.1	16.2	20.0	24.5	33.7	29.7	34.0	34.7	34.4	36.3	39.2	37.8	37.7	40.0	42.1	45.2	46.9	46.3	45.3	44.7	42.5	38.5	35.9	33.6	31.2	27.6	22.3	16.7	10.8	3.9
-25.7	-19.9	-14.9	-9.1	-3.8	1.7	10.0	15.5	20.2	24.7	27.5	29.8	33.0	36.0	36.3	35.5	38.1	38.0	39.7	38.8	40.8	43.6	43.6	43.3	42.7	41.5	40.2	38.7	38.7	38.0	33.7	27.7	30.4	15.7	9.6	2.9
-26.4	-21.2	-15.6	-10.6	-4.6	2.9	8.6	13.1	20.7	24.3	27.1	32.0	32.9	33.1	35.2	35.9	37.5	37.7	37.9	39.7	41.8	43.9	47.3	46.9	46.8	45.7	43.3	40.7	37.9	34.9	32.1	28.2	23.9	19.4	39.1	32.6
-16.6	-11.9	-7.7	-2.5	4.8	8.0	12.4	18.3	23.4	26.8	31.2	30.7	33.5	34.4	34.5	37.9	39.1	40.8	40.1	41.8	44.3	48.0	47.3	47.4	46.8	45.1	43.0	40.6	37.9	35.2	32.9	29.4	24.7	20.0	14.8	7.2
-23.1	-19.0	-13.5	-8.6	-1.8	3.5	10.6	17.6	23.6	26.1	32.0	35.8	37.1	39.6	39.7	40.7	42.9	46.2	44.1	44.0	46.3	49.3	51.6	50.4	49.4	47.9	45.0	43.2	40.6	38.8	37.3	32.2	26.4	21.1	14.1	7.0
-23.5	-18.5	-11.7	-6.4	-1.8	4.3	12.4	16.0	20.9	26.5	30.0	31.3	37.9	41.0	42.1	43.7	47.1	46.9	48.1	48.6	49.2	50.7	52.6	49.9	47.7	45.9	44.4	41.5	38.5	36.8	33.1	30.0	26.6	20.8	14.0	5.5
-23.7	-17.5	-9.8	-5.7	4.4	7.1	12.4	14.8	20.5	31.1	28.9	33.5	38.6	37.5	41.9	41.6	42.3	43.8	45.9	46.7	47.6	49.8	50.1	49.8	48.1	46.5	44.9	42.5	40.1	38.5	35.8	32.0	29.8	21.2	15.5	7.4
-16.8	-11.5	-6.0	-0.3	5.2	8.1	13.2	14.8	19.9	28.6	28.6	34.5	37.9	39.2	36.0	38.6	40.0	40.1	42.0	44.4	46.3	49.3	48.2	48.6	47.7	45.9	44.0	42.5	40.0	36.4	34.2	32.3	27.8	22.0	16.8	8.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

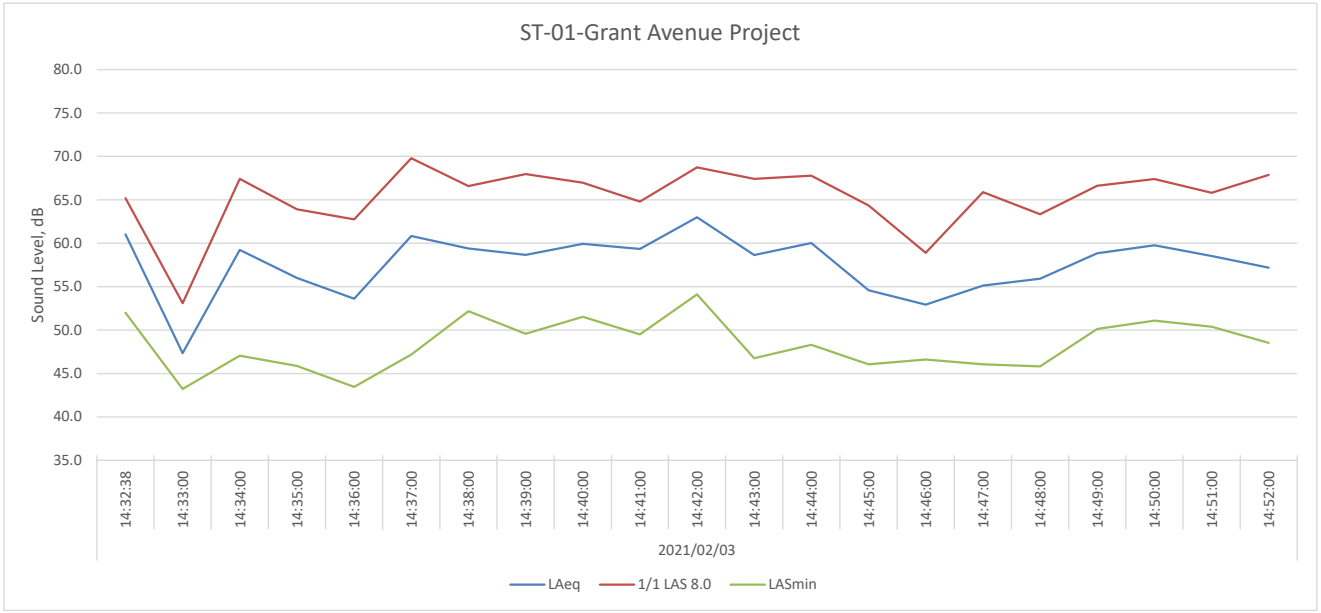
1/3 LASmax	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	-30.1	-25.5	-17.9	-8.8	-0.3	5.6	12.8	23.4	26.4	33.6	36.2	41.4	50.1	43.5	42.3	48.9	52.8	54.4	50.6	51.3	54.2	55.2	57.3	56.5	55.2	53.9	51.6	51.6	50.1	48.4	46.7	41.9	36.5	31.8	27.6	17.4
	-23.3	-16.7	-8.9	-2.9	3.2	7.5	12.4	16.8	21.5	25.4	27.9	28.1	37.3	36.0	34.3	40.9	36.4	34.4	40.7	40.2	40.2	43.1	44.1	43.3	47.2	46.4	42.7	40.7	42.8	43.2	45.9	43.4	39.2	35.4	30.9	23.1
	-23.5	-18.2	-13.3	-0.2	12.7	13.7	24.5	30.7	42.3	45.5	51.4	45.1	41.6	48.5	57.3	50.0	48.9	55.7	49.3	50.4	53.2	61.0	60.1	58.5	58.0	58.3	56.8	52.5	51.7	48.8	44.8	39.7	36.1	30.9	24.5	16.8
	-30.1	-25.5	-12.7	-6.8	7.5	13.9	26.1	27.8	31.8	34.2	35.4	43.1	39.3	43.1	47.8	46.8	53.1	49.4	51.2	49.1	52.0	53.3	58.4	56.4	54.1	53.2	54.3	51.9	49.1	47.1	46.2	42.3	37.8	31.6	25.7	18.1
	-26.4	-23.8	-16.1	-2.3	3.4	11.5	15.2	18.1	25.8	28.6	33.5	33.7	40.3	41.9	37.9	46.8	46.7	47.0	46.0	48.9	50.9	53.0	56.1	55.1	55.0	52.1	49.8	48.3	45.6	44.2	39.6	36.9	33.7	28.9	22.5	14.4
	-15.4	-6.7	-4.1	1.8	10.3	19.4	23.4	27.8	26.2	36.8	33.9	37.5	45.1	40.6	42.7	50.7	49.8	50.6	53.4	54.3	57.7	61.8	62.1	61.2	61.1	59.4	59.0	56.3	53.1	50.8	48.2	45.7	41.5	35.4	39.1	20.9
	-10.5	-5.2	-1.3	7.4	10.1	13.3	19.2	36.4	37.4	42.2	47.6	45.1	52.1	44.7	50.1	58.3	52.3	52.7	52.5	55.1	56.5	58.1	58.2	56.6	55.0	55.0	56.2	52.2	50.4	46.1	43.5	38.9	34.9	30.5	24.1	14.9
	-20.8	-14.5	-7.7	-2.9	4.2	9.3	18.5	31.9	33.6	38.8	47.9	43.9	43.3	46.4	45.2	47.2	48.4	47.8	49.1	51.2	53.9	58.3	58.7	58.0	61.7	60.3	56.6	52.5	51.3	47.0	59.9	39.0	35.2	30.6	23.5	15.4
	-17.3	-11.7	-10.2	-1.2	4.6	10.2	14.3	35.6	43.0	45.9	48.0	46.6	47.4	47.9	45.9	50.9	50.1	48.9	50.9	53.0	57.5	60.0	60.5	58.9	58.2	55.9	55.2	52.5	49.1	48.7	43.6	42.5	39.9	34.2	30.7	20.0
	-14.2	-10.3	-6.8	-0.8	3.9	11.7	22.2	33.2	41.8	38.0	49.3	50.8	42.2	52.1	48.1	53.3	52.1	54.8	53.5	53.9	55.1	55.6	56.6	58.7	56.1	54.2	54.5	52.0	48.6	47.1	43.4	42.3	39.4	33.6	29.7	18.8
	-12.0	-2.2	8.5	17.0	18.0	29.2	38.0	38.0	42.5	41.2	47.2	51.7	51.9	51.4	51.0	56.7	54.3	53.6	59.6	58.4	57.1	59.8	60.7	60.7	61.0	59.1	57.4	56.0	54.0	50.5	48.3	60.2	51.7	35.4	30.4	21.4
	-15.7	-12.5	-7.6	-4.8	1.4	6.5	16.4	33.2	36.4	35.9	46.5	41.4	46.0	46.4	42.9	46.3	47.7	49.1	50.1	50.4	56.9	57.9	59.0	58.4	60.9	56.8	53.5	52.8	51.6	45.5	43.9	41.1	36.1	31.0	25.6	55.1
	-20.1	-16.9	-11.7	-6.9	2.8	12.4	23.0	25.9	33.0	35.0	37.0	47.7	44.1	48.5	49.5	49.0	51.7	52.0	52.5	52.6	56.1	58.3	59.8	58.3	57.4	60.6	57.3	54.5	52.6	47.9	47.3	42.1	38.0	33.7	50.0	42.6
	-27.7	-16.6	-11.9	-3.7	1.8	5.3	16.7	25.3	27.8	31.2	45.6	37.5	43.5	45.8	42.3	45.0	50.0	46.4	45.7	49.2	51.1	55.4	56.2	56.6	55.2	54.7	54.3	50.0	47.6	45.3	42.6	39.0	33.8	28.2	21.5	12.6
	-18.3	-9.7	-4.9	-4.4	1.4	6.4	17.4	23.0	27.5	32.1	34.4	35.2	39.5	47.2	48.2	43.1	47.7	46.2	49.3	44.2	46.9	49.5	48.7	47.8	48.2	48.1	47.4	46.1	44.8	43.4	40.4	37.2	46.5	24.3	17.8	10.0
	-16.3	-12.5	-6.1	-3.0	3.8	12.4	14.1	19.8	28.8	31.9	31.9	38.8	38.7	37.2	44.1	42.8	45.5	45.7	47.2	48.9	52.8	52.9	58.8	56.8	58.4	57.9	54.9	52.4	50.3	45.5	43.4	38.5	33.8	29.1	55.5	48.6
	-7.7	-3.4	-0.8	4.7	13.7	13.5	17.2	27.6	30.4	37.3	43.9	36.7	40.4	40.7	40.4	46.0	47.0	52.5	48.1	49.5	53.2	58.8	55.7	54.2	54.1	53.3	53.1	51.1	48.3	45.3	43.7	40.2	36.4	31.8	26.9	19.5
	-14.1	-12.6	-7.4	-2.2	3.4	9.0	14.5	28.6	31.5	36.4	43.9	45.4	47.1	49.7	48.2	49.7	51.9	56.1	54.3	53.2	55.3	58.1	59.4	57.4	57.0	55.2	55.7	55.5	53.3	51.7	52.3	46.2	39.8	33.8	25.9	18.1
	-16.1	-10.6	-4.4	-0.2	2.5	8.5	19.3	21.4	27.6	34.8	37.0	35.5	43.0	46.2	47.0	49.3	53.5	52.0	54.8	53.8	54.8	57.5	64.8	57.1	55.2	55.1	53.9	49.9	47.5	45.7	42.4	40.0	38.1	32.4	26.0	15.5
	-15.1	-10.7	0.1	5.1	15.6	18.4	21.6	22.1	29.4	39.9	39.8	41.3	47.4	45.8	50.5	49.4	52.8	52.2	54.7	55.3	55.9	57.5	56.8	57.3	54.6	52.7	52.3	49.7	47.5	46.4	43.8	39.5	41.0	28.9	24.3	16.0
	-9.0	-4.2	-0.1	7.7	13.6	13.6	18.5	20.3	26.5	41.0	35.2	40.3	46.2	49.6	44.4	46.8	49.3	49.9	51.4	53.8	57.2	61.5	57.7	58.1	59.0	57.2	55.4	54.9	52.2	48.4	47.2	45.1	40.6	35.0	29.7	21.2
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/3 LASmin 6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-30.1	-29.2	-24.8	-16.4	-8.0	-2.4	6.2	10.3	16.1	20.9	25.0	25.6	28.6	31.6	30.5	32.8	35.4	34.4	36.1	40.2	39.7	42.7	44.1	43.3	43.0	40.6
-30.1	-29.2	-27.3	-21.7	-10.9	-2.9	3.4	7.6	12.7	18.3	21.1	23.3	26.4	29.8	26.9	26.4	28.3	28.5	29.3	29.8	31.8	33.2	34.3	33.6	33.0	29.8
-30.1	-29.2	-26.5	-20.8	-10.3	-3.2	4.7	9.0	15.8	18.5	21.7	24.4	27.7	30.9	28.3	28.3	29.7	29.7	30.7	32.3	35.4	38.1	39.6	38.7	37.5	34.5
-30.1	-29.2	-27.3	-18.3	-9.8	-1.6	3.2	9.7	13.3	18.4	22.9	25.7	27.7	30.8	27.2	29.1	30.9	30.2	29.8	31.3	33.3	36.5	38.3	37.7	36.0	33.0
-30.1	-29.2	-28.2	-20.5	-11.7	-2.6	1.7	7.5	14.2	17.2	22.2	24.5	27.9	29.2	27.3	27.1	28.0	27.8	28.9	29.8	32.1	34.0	34.6	33.7	32.1	29.0
-30.1	-29.2	-22.5	-15.3	-8.2	-0.7	5.8	10.5	14.1	18.5	22.5	26.2	29.4	30.3	28.3	29.8	30.3	30.9	31.5	33.3	35.3	38.3	39.1	37.8	36.8	33.7
-30.1	-25.2	-18.0	-13.2	-5.4	-1.4	5.4	8.9	15.9	21.2	22.6	28.8	32.0	29.8	28.8	30.8	33.0	34.0	35.4	36.1	38.6	42.5	43.3	42.4	41.0	38.6
-30.1	-29.2	-25.2	-16.6	-9.9	-1.4	5.3	10.3	15.6	19.8	24.5	31.2	31.3	31.0	30.8	31.5	33.2	35.9	36.0	37.2	38.8	40.2	40.6	39.7	38.2	35.9
-30.1	-26.8	-19.4	-14.3	-8.7	-1.6	4.5	10.2	16.1	20.4	24.2	28.3	29.6	34.1	30.8	31.5	34.0	33.8	34.6	36.4	40.6	41.6	42.7	42.1	41.3	39.1
-30.1	-29.0	-22.6	-14.7	-8.5	-1.4	4.7	10.2	13.7	21.3	23.2	29.3	30.1	33.5	29.2	30.0	30.3	31.1	32.5	34.6	37.2	39.9	41.9	41.7	41.1	38.2
-30.1	-26.6	-18.9	-15.0	-5.5	0.4	6.9	14.7	17.8	20.9	26.9	27.9	32.2	34.4	34.3	35.1	35.7	36.0	37.7	39.0	41.9	44.1	45.7	45.0	44.1	43.6
-30.1	-29.2	-25.9	-19.1	-11.6	-2.4	4.1	8.5	13.0	18.3	21.3	26.6	29.0	31.2	27.8	28.9	29.5	30.9	31.6	32.9	35.1	37.9	39.4	37.9	36.2	33.3
-30.1	-29.2	-24.0	-19.0	-9.9	-3.7	2.9	8.8	13.3	18.6	22.9	26.1	27.1	30.9	29.2	31.0	33.0	33.0	33.7	34.8	37.2	37.5	40.0	38.6	37.1	35.4
-30.1	-29.2	-25.6	-19.9	-8.5	-2.8	3.8	10.0	14.9	19.1	23.2	24.5	27.9	29.1	28.8	28.9	29.9	30.2	31.2	31.9	34.5	37.0	37.6	37.1	36.5	33.4
-30.1	-29.2	-25.9	-18.0	-9.9	-3.8	3.0	7.8	14.6	19.6	23.0	26.3	28.4	29.3	28.2	29.6	31.2	30.7	31.9	32.4	35.1	37.3	38.3	37.5	35.6	31.7
-30.1	-29.2	-26.4	-18.6	-10.8	-3.4	3.9	7.7	14.0	18.3	23.3	24.9	27.9	28.9	28.1	29.1	29.2	29.6	30.7	32.1	34.2	36.8	38.3	37.2	34.7	32.6
-30.1	-27.7	-22.0	-17.3	-8.2	-1.6	5.3	8.4	12.5	18.7	22.5	25.8	29.4	30.9	27.3	28.4	29.8	30.4	30.6	31.4	34.1	36.3	38.0	36.7	34.4	31.7
-30.1	-29.2	-22.6	-16.5	-8.7	-1.9	6.5	10.2	17.0	20.5	23.3	27.1	29.3	30.3	30.5	30.6	33.6	34.2	34.7	35.5	37.4	40.9	42.7	41.8	39.5	36.6
-30.1	-29.2	-20.2	-16.3	-8.3	-0.3	7.3	11.2	14.5	18.9	23.6	26.5	29.8	29.9	30.7	31.4	35.4	35.4	35.9	36.7	38.7	40.7	42.1	43.6	40.2	35.3
-30.1	-29.2	-20.7	-16.0	-7.2	-2.5	5.6	8.5	14.7	19.4	23.5	27.1	29.7	30.3	31.5	31.9	34.3	35.3	35.9	37.1	40.1	41.7	40.3	39.0	37.1	34.0
-30.1	-29.2	-24.5	-17.1	-6.1	-0.4	5.7	8.9	14.6	18.9	23.9	28.4	30.8	31.8	29.5	31.5	31.5	31.3	33.7	36.2	36.0	39.5	40.4	38.6	37.1	34.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2500	3150	4000	5000	6300	8000	10000	12500	16000	20000	LAS2.00	LAS8.00	LAS25.00	LAS50.00	LAS90.00	LAS95.00	Ovrld.	OBA Ovrld.	Marker
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	No	No	
38.3	34.7	31.2	27.6	24.3	18.1	10.5	6.2	2.8	-0.3	65.1	64.1	62.7	60.9	53.4	53.1	No	No	
27.9	24.1	20.4	16.4	12.7	8.9	5.7	4.0	2.3	-0.4	52.6	50.2	47.8	47.2	44.1	43.6	No	No	
30.7	26.5	22.3	17.2	12.0	8.2	5.7	3.9	2.3	-0.4	65.3	63.1	61.1	56.9	47.7	47.2	No	No	
30.8	25.9	21.9	17.1	12.9	9.4	6.2	4.3	2.5	-0.4	63.3	61.8	56.4	52.6	48.1	46.5	No	No	
28.1	24.4	20.7	15.8	12.2	9.9	6.4	4.1	2.4	-0.4	62.0	59.9	52.8	48.4	44.3	43.9	No	No	
31.5	29.9	28.3	25.5	21.6	18.1	11.9	6.7	3.1	-0.1	68.6	65.0	61.5	58.6	48.7	47.9	No	No	
35.6	31.9	28.3	23.4	19.8	14.3	9.5	5.9	3.0	0.0	66.0	64.0	61.6	56.3	52.6	52.4	No	No	
32.8	28.9	24.7	20.1	15.5	11.1	6.9	4.3	2.2	-0.2	65.7	62.5	59.7	56.0	50.1	49.9	No	No	
35.3	31.8	26.6	21.7	16.6	11.9	7.4	4.5	2.3	-0.2	66.3	64.9	60.2	56.6	53.7	52.3	No	No	
34.1	30.1	26.1	22.3	18.5	14.3	9.9	5.8	2.8	0.0	64.2	63.6	61.0	57.8	50.8	49.8	No	No	
40.7	37.1	34.3	30.7	27.1	22.0	16.4	9.7	4.4	0.4	67.7	67.1	65.6	60.8	54.9	54.5	No	No	
30.0	25.9	22.0	17.5	13.3	9.2	6.1	4.0	2.1	-0.3	65.3	62.9	60.2	57.1	47.1	47.0	No	No	
32.3	28.3	24.4	20.2	15.4	10.3	6.6	4.3	2.3	-0.3	66.8	63.8	62.0	58.0	49.9	48.9	No	No	
30.1	26.8	24.0	19.2	15.4	10.4	6.8	4.1	2.3	-0.4	63.8	60.4	52.7	50.0	47.0	46.5	No	No	
28.7	26.0	26.1	22.3	19.0	11.9	7.1	4.5	2.5	-0.3	58.5	57.6	53.9	50.3	47.9	47.2	No	No	
29.4	25.8	22.6	19.6	15.2	11.8	6.7	4.4	2.6	-0.3	64.5	58.8	55.5	50.3	46.8	46.7	No	No	
28.6	25.4	22.9	19.8	16.9	13.6	9.2	5.8	2.9	-0.2	62.9	60.7	57.1	52.1	47.3	46.0	No	No	
33.1	29.8	25.9	22.4	18.6	13.7	9.2	5.6	2.8	-0.2	65.8	63.6	60.3	55.9	51.3	50.7	No	No	
30.8	25.9	21.3	17.4	14.5	10.3	6.9	4.4	2.4	-0.3	65.7	63.5	60.2	58.3	55.3	53.5	No	No	
32.2	28.7	25.1	20.3	16.4	12.0	7.7	4.7	2.4	-0.2	65.0	62.1	60.2	55.8	51.6	51.2	No	No	
31.2	27.6	25.2	21.6	18.4	14.1	9.8	5.7	2.9	-0.3	66.5	62.7	55.0	52.0	49.4	48.7	No	No	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	No	No	

ST-01 Chart

Record #	Date	Time	LAeq	1/1 LAS 8	LASmin
1	2021/02/03	14:32:38	61.0	65.2	52.0
2		14:33:00	47.4	53.1	43.2
3		14:34:00	59.2	67.4	47.1
4		14:35:00	56.0	63.9	45.9
5		14:36:00	53.6	62.8	43.5
6		14:37:00	60.8	69.8	47.2
7		14:38:00	59.4	66.6	52.2
8		14:39:00	58.7	68.0	49.6
9		14:40:00	59.9	67.0	51.5
10		14:41:00	59.3	64.8	49.5
11		14:42:00	63.0	68.7	54.1
12		14:43:00	58.6	67.4	46.8
13		14:44:00	60.0	67.8	48.3
14		14:45:00	54.6	64.3	46.1
15		14:46:00	52.9	58.9	46.6
16		14:47:00	55.1	65.9	46.1
17		14:48:00	55.9	63.3	45.8
18		14:49:00	58.8	66.6	50.1
19		14:50:00	59.8	67.4	51.1
20		14:51:00	58.5	65.8	50.4
21		14:52:00	57.2	67.9	48.5



Summary					
Filename	831_Data.002				
Serial Number	3940				
Model	Model 831				
Firmware Version	2.314				
User	Issa				
Location	Grant Ave Project				
Job Description	Ambient Air Noise Survey				
Note					
Measurement Description	GRAANT-AVE				
Start	2021/02/03 14:55:21				
Stop	2021/02/03 15:15:23				
Duration	0:20:01.8				
Run Time	0:20:01.8				
Pause	0:00:00.0				
Pre Calibration	2021/02/03 14:24:11				
Post Calibration	None				
Calibration Deviation	---				
Overall Settings					
RMS Weight	A Weighting				
Peak Weight	A Weighting				
Detector	Slow				
Preamp	PRM831				
Microphone Correction	Off				
Integration Method	Linear				
OBA Range	Low				
OBA Bandwidth	1/1 and 1/3				
OBA Freq. Weighting	A Weighting				
OBA Max Spectrum	Bin Max				
Gain	0.0	dB			
Overload	143.9	dB			
	A		**C**	**Z**	
Under Range Peak	**76.5**		73.5	78.5	dB
Under Range Limit	**26.4**		26.8	32.5	dB
Noise Floor	17.3		17.6	23.0	dB
Results					
LAeq	59.3	dB			
LAE	90.1	dB			
EA	112.901	μPa^2h			
LApeak (max)	2021/02/03 15:06:16		94.7	dB	
LASmax	2021/02/03 15:06:16		76.9	dB	
LASmin	2021/02/03 15:13:15		43.4	dB	
SEA	-99.9	dB			

ST-02 Summary

LAS > 60.0 dB (Exceedence Counts / Duration)	27	237.5 s
LAS > 70.0 dB (Exceedence Counts / Duration)	5	26.6 s
LApeak > 90.0 dB (Exceedence Counts / Duration)	1	1.0 s
LApeak > 100.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 120.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**
	59.3	59.3	-99.9	59.3	59.3	-99.9	-99.9

LCeq	70.9	dB
LAeq	59.3	dB
LCeq - LAeq	11.6	dB
LAIeq	61.1	dB
LAeq	59.3	dB
LAIeq - LAeq	1.9	dB
# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS2.00	69.5	dB
LAS8.00	61.3	dB
LAS25.00	57.8	dB
LAS50.00	54.5	dB
LAS90.00	47.6	dB
LAS95.00	46.5	dB

Record #	Record Type	Date	Time	LAeq	LAS	LASmax	LASmin
1	Run	2021/02/03	14:55:21	0.0	0.0	0.0	0.0
2		2021/02/03	14:55:21	64.0	68.3	72.5	52.1
3		2021/02/03	14:56:00	64.3	49.1	76.0	46.5
4		2021/02/03	14:57:00	59.1	70.7	70.8	48.9
5		2021/02/03	14:58:00	62.6	61.4	72.7	48.0
6		2021/02/03	14:59:00	58.4	51.7	63.8	50.6
7		2021/02/03	15:00:00	64.3	58.4	73.6	51.6
8		2021/02/03	15:01:00	56.2	55.6	62.3	47.7
9		2021/02/03	15:02:00	56.0	49.8	63.4	46.0
10		2021/02/03	15:03:00	54.9	55.3	61.7	48.1
11		2021/02/03	15:04:00	54.0	47.6	63.2	45.8
12		2021/02/03	15:05:00	55.0	55.3	60.6	47.2
13		2021/02/03	15:06:00	63.2	54.6	76.9	46.9
14		2021/02/03	15:07:00	55.1	50.2	60.5	46.3
15		2021/02/03	15:08:00	54.3	48.5	58.3	47.0
16		2021/02/03	15:09:00	56.4	50.9	62.9	46.8
17		2021/02/03	15:10:00	56.9	55.4	64.2	48.0
18		2021/02/03	15:11:00	54.0	55.4	60.3	45.5
19		2021/02/03	15:12:00	50.3	45.2	57.4	44.5
20		2021/02/03	15:13:00	54.6	61.4	61.8	43.4
21		2021/02/03	15:14:00	58.1	54.9	62.3	52.9
22		2021/02/03	15:15:00	51.3	47.4	57.7	45.5
23	Stop	2021/02/03	15:15:23	0.0	0.0	0.0	0.0

1/1 LAS 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000	1/1 LAeq 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-9.1	8.4	28.4	44.7	55.9	53.9	60.3	62.2	62.6	60.6	55.5	41.1	-12.1	7.1	25.2	39.6	49.7	50.8	58.1	58.3	56.5	53.5	53.2	32.2
-18.1	2.6	19.2	35.3	40.4	39.2	39.5	43.8	43.4	33.9	20.6	8.6	-14.1	5.4	26.1	47.0	58.8	56.2	59.7	53.8	52.3	48.7	37.8	23.7
-16.7	4.9	27.4	42.3	68.4	64.0	60.6	56.9	54.3	49.4	44.0	29.0	-16.2	5.3	25.2	37.8	54.5	51.3	50.4	51.1	49.2	43.9	35.9	21.5
-15.0	5.7	21.6	33.6	44.9	46.9	51.8	58.1	56.5	47.7	35.7	19.0	-15.9	6.8	24.7	38.4	59.2	55.8	54.3	52.5	50.7	45.2	37.0	22.9
-18.9	4.8	24.2	37.7	42.6	43.2	43.4	47.0	44.4	36.5	26.9	13.8	-17.3	6.3	26.3	38.4	47.6	47.4	50.7	54.2	51.7	44.8	37.0	22.4
-11.9	5.6	27.9	36.0	43.9	47.8	50.6	53.6	52.2	48.4	40.7	23.2	-13.2	7.3	32.4	46.2	52.5	54.5	57.1	59.0	56.6	54.9	46.0	30.1
-17.3	6.3	27.8	35.7	39.8	46.2	47.9	51.4	48.8	42.0	32.3	15.7	-16.7	5.1	25.3	36.0	41.7	45.3	48.5	51.5	50.1	45.3	37.5	22.3
-18.6	3.5	19.9	30.6	35.1	39.3	42.0	45.6	43.2	37.2	28.9	9.1	-15.0	8.2	27.7	39.4	42.0	45.0	48.0	50.7	49.7	45.8	42.9	29.4
-11.2	4.8	18.9	36.1	38.2	40.9	48.0	51.7	49.1	41.4	34.7	17.7	-16.5	3.6	22.8	33.3	37.3	42.4	48.1	50.4	48.7	43.6	37.2	20.5
-15.9	6.5	23.9	33.5	38.1	38.2	39.6	43.3	39.6	29.9	29.1	7.7	-16.1	4.5	22.7	34.7	42.3	41.7	46.3	49.8	47.5	40.9	33.7	20.1
-15.9	7.5	23.8	40.8	49.7	42.8	46.0	49.6	45.5	41.4	30.5	36.3	-17.6	4.3	22.1	36.7	47.6	47.9	47.9	48.6	46.1	39.9	32.0	24.7
-17.7	2.7	21.4	31.6	37.4	41.0	47.8	50.0	48.4	44.6	34.9	15.9	-17.6	6.4	32.6	44.7	54.4	52.3	61.1	53.3	49.1	44.1	34.9	19.9
-19.9	1.6	22.8	35.3	38.0	40.5	40.5	44.4	43.4	42.3	37.3	20.7	-13.7	5.1	24.9	35.4	40.7	45.2	47.3	50.4	49.1	43.1	34.4	19.8
-18.7	1.1	25.3	32.8	35.6	38.3	40.4	45.2	40.3	30.4	19.3	7.7	-16.5	5.2	23.9	36.2	42.1	44.7	46.6	49.7	47.6	42.1	33.6	16.3
-16.2	6.3	21.7	31.2	34.6	37.0	39.2	46.0	47.8	35.2	25.2	7.6	-18.6	4.6	25.8	36.3	39.3	45.8	48.2	51.7	50.6	44.4	43.3	20.8
-17.8	5.5	23.0	32.7	40.1	44.0	47.8	50.9	50.1	43.0	33.3	16.4	-16.1	9.7	27.1	36.3	44.2	46.2	48.5	52.3	51.0	45.4	37.1	21.4
-20.1	1.5	24.0	33.7	38.2	41.7	47.2	51.4	49.6	44.2	35.6	22.2	-18.4	2.8	23.3	38.2	43.7	42.9	45.2	49.0	48.1	43.1	33.7	21.0
-20.6	3.5	18.7	32.3	36.2	34.5	37.4	40.6	36.3	33.8	16.9	7.5	-17.0	2.7	20.0	32.0	35.5	38.3	41.9	45.8	45.0	39.2	29.5	14.0
-17.0	5.6	24.0	43.0	42.5	49.4	54.1	56.8	55.6	50.7	41.4	24.7	-16.4	5.4	23.0	35.9	40.3	41.8	46.4	50.5	48.7	43.5	34.3	18.1
-19.1	1.9	27.3	38.6	45.7	45.8	48.2	48.4	48.4	41.4	33.2	19.3	-17.5	4.0	25.8	39.6	43.3	46.2	50.1	53.6	52.3	46.9	38.1	23.1
-18.3	1.0	19.4	35.4	36.3	41.5	41.4	41.5	37.4	26.8	16.8	8.6	-18.1	2.5	19.7	42.2	44.3	44.0	42.1	45.0	42.1	32.1	23.2	11.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/1 LASmax 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000	1/1 LASmin 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-6.3	11.1	32.3	46.6	57.1	58.7	67.3	67.7	65.1	62.4	63.7	42.2	-21.8	2.8	19.9	30.8	39.4	43.3	44.0	45.7	40.1	32.3	30.6	8.6
-8.1	12.3	37.9	58.9	71.6	68.9	72.7	64.8	64.7	62.1	55.4	41.0	-20.7	1.6	18.1	27.5	33.0	36.2	37.9	42.1	39.8	32.5	20.2	8.5
-12.0	11.3	30.5	46.5	68.7	64.0	60.6	57.0	55.7	50.8	44.1	31.6	-20.2	1.1	17.5	29.4	37.3	38.2	39.0	43.2	41.5	32.0	18.4	7.6
-11.5	12.4	31.0	48.5	70.0	67.2	64.1	58.7	58.0	53.8	46.4	32.3	-20.7	2.5	19.7	30.4	37.6	37.6	39.4	42.9	39.9	31.8	17.3	7.4
-11.8	14.4	35.3	43.8	60.5	55.5	57.0	58.1	56.5	50.7	44.2	30.3	-21.7	1.4	20.2	32.2	37.7	39.5	42.3	45.6	43.3	34.2	22.3	8.7
-4.8	12.9	42.3	54.2	62.5	63.8	66.1	68.6	65.1	66.6	56.5	40.3	-22.6	2.7	23.7	35.5	39.8	43.1	43.1	46.9	43.9	36.0	25.3	11.0
-11.2	8.5	34.1	44.3	49.8	54.0	55.9	57.6	56.4	53.4	44.3	30.2	-21.6	2.1	19.3	30.3	35.3	37.2	39.9	43.7	38.8	30.2	23.7	7.4
-9.2	16.0	39.1	51.0	47.2	50.8	54.9	58.3	57.5	55.7	58.0	43.9	-20.5	0.5	17.1	28.9	34.0	35.6	38.6	41.5	38.1	31.9	25.3	7.9
-9.1	7.1	31.7	41.1	45.8	48.9	54.9	57.2	56.4	51.8	44.8	29.3	-23.7	1.2	17.7	27.9	32.4	36.0	39.7	43.4	40.3	32.4	24.5	8.3
-11.1	11.1	31.8	41.3	49.0	48.7	57.2	59.7	56.3	50.9	43.5	32.0	-21.1	0.7	17.0	27.5	32.7	35.8	36.7	40.1	35.9	28.0	19.6	7.5
-11.8	8.7	26.7	46.7	56.5	56.8	55.6	52.2	51.6	47.5	40.1	38.7	-22.9	0.7	18.2	29.8	36.9	38.0	39.6	42.3	38.4	28.8	17.2	7.5
-13.3	12.7	42.9	56.8	67.3	65.4	75.9	64.3	56.0	55.0	43.4	36.1	-22.1	2.0	19.4	31.5	35.8	36.9	39.0	41.8	37.1	30.9	18.5	7.5
-8.6	11.3	31.6	42.1	46.3	53.3	54.7	54.2	54.1	48.7	40.3	26.3	-21.1	1.1	19.5	28.3	33.3	35.7	37.3	40.9	40.1	34.2	24.5	8.2
-8.4	14.2	30.7	45.0	52.9	50.6	52.8	53.5	51.7	45.8	42.8	26.6	-23.6	0.3	17.4	28.5	33.7	38.0	38.8	42.5	39.8	30.3	19.3	7.4
-14.7	8.9	33.0	44.0	46.6	54.5	54.0	55.8	55.9	51.1	58.2	31.2	-23.6	0.6	19.0	28.7	33.7	36.6	39.1	42.6	38.2	27.7	16.1	7.4
-10.2	19.3	38.6	45.3	54.8	55.5	56.0	59.1	58.1	52.1	45.4	31.9	-22.0	2.8	19.5	29.6	33.8	36.0	38.1	43.6	42.3	32.7	21.2	7.5
-14.9	6.9	29.7	49.2	54.6	50.6	52.1	54.7	53.6	49.0	41.1	32.4	-22.4	-1.3	17.1	27.5	32.6	34.8	36.8	40.3	38.8	29.1	17.5	7.6
-10.6	7.1	27.3	37.0	40.7	45.2	50.0	53.5	51.6	46.4	39.6	25.3	-21.9	-0.3	16.8	28.0	32.3	34.3	36.6	40.2	36.3	27.9	16.0	7.4
-9.7	13.5	29.2	43.4	46.5	49.6	54.6	57.8	56.4	51.8	42.8	25.9	-22.3	0.1	16.4	28.1	32.2	33.4	36.2	38.3	35.0	29.2	14.6	7.4
-14.2	11.1	31.8	48.5	48.0	51.8	55.3	57.6	57.3	53.4	43.7	29.5	-20.5	1.1	19.6	32.7	37.2	41.6	44.3	48.3	45.8	36.6	27.0	12.9
-15.1	5.0	27.2	50.5	52.6	52.4	48.9	50.7	48.9	41.3	33.0	19.1	-22.4	0.5	17.3	29.0	32.9	34.8	37.5	41.5	37.1	26.7	16.7	8.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/3 LAS	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	-19.6	-13.2	-11.9	-5.6	0.6	5.8	11.3	21.0	27.3	31.7	38.4	43.7	51.0	53.0	49.8	45.9	50.3	50.0	53.1	55.6	57.1	56.8	57.9	57.6	58.4	57.7	57.3	56.6	55.4	55.1	53.4	50.1	45.3	39.6	34.4	25.7
	-28.5	-21.4	-22.4	-10.3	-7.3	2.9	7.8	15.8	16.6	22.3	25.1	33.7	32.2	34.4	38.8	35.1	34.2	33.6	32.9	34.2	36.3	38.9	39.8	38.8	40.7	38.9	33.6	31.9	28.5	24.0	18.8	14.5	10.0	6.1	3.2	-0.1
	-30.1	-22.1	-16.9	-12.7	-7.0	3.8	8.7	13.3	27.6	26.1	34.8	41.3	57.2	68.1	51.2	53.0	61.9	58.4	56.8	55.3	55.1	53.9	52.2	50.2	49.0	49.5	50.0	46.1	43.8	43.1	41.9	38.7	33.8	27.7	21.5	13.4
	-28.8	-24.9	-15.4	-13.1	4.0	3.9	11.7	16.8	19.5	26.8	29.5	29.2	33.9	43.3	39.0	40.6	43.0	42.8	44.7	46.3	48.6	52.8	53.7	53.1	53.2	51.8	49.3	45.6	41.8	38.4	34.1	29.1	24.2	17.7	11.1	3.3
	-28.9	-28.6	-21.4	-12.0	-4.3	1.4	7.6	13.1	21.8	22.6	34.0	35.3	36.1	38.4	39.7	37.8	38.8	38.1	37.3	37.2	40.4	41.6	42.0	42.9	41.3	39.7	36.0	33.7	32.1	28.9	25.1	21.0	16.2	12.6	6.0	0.7
	-28.3	-23.0	-14.1	-8.8	-3.1	5.7	24.1	21.0	24.9	29.5	29.2	32.7	36.7	37.4	41.6	42.2	42.9	42.6	44.2	46.3	46.3	48.0	50.2	47.8	47.9	47.6	46.7	45.0	42.8	42.6	39.4	33.6	28.3	21.7	16.1	7.2
	-28.4	-25.7	-18.8	-12.1	-4.2	3.6	9.3	14.5	26.9	34.3	27.4	30.5	32.2	34.8	35.9	38.4	42.4	41.6	41.5	42.8	44.3	46.8	47.6	45.9	46.2	43.6	41.1	39.6	36.5	33.7	30.3	26.9	19.9	14.4	8.0	2.2
	-26.3	-24.9	-19.0	-11.8	-4.9	2.7	8.7	11.8	18.3	24.1	23.6	28.1	28.1	31.1	30.4	31.1	34.5	36.7	36.6	37.2	38.0	40.3	41.5	41.1	40.2	38.4	35.8	34.3	31.6	30.3	27.9	21.7	12.8	6.8	3.3	-0.2
	-30.1	-18.2	-11.0	-6.7	-4.3	5.0	8.0	12.4	16.9	24.4	32.9	33.6	27.3	30.7	37.0	35.8	36.3	36.4	41.4	43.5	44.8	47.3	46.8	47.0	46.8	43.7	40.5	38.4	35.9	34.4	32.8	29.4	22.2	16.6	9.4	1.9
	-30.1	-25.9	-17.5	-10.9	-4.6	5.1	9.4	19.9	22.1	22.0	26.3	32.4	28.8	36.1	31.6	32.4	33.8	33.6	34.1	34.4	36.4	38.9	38.9	37.8	37.0	34.5	31.2	27.3	24.5	21.7	23.4	27.7	6.5	4.3	3.3	-0.3
	-30.1	-22.1	-19.6	-10.9	-4.6	2.6	16.1	18.3	21.9	29.3	38.1	35.4	47.9	37.5	38.2	39.1	38.0	37.6	40.2	40.3	42.8	43.7	45.9	44.3	43.1	39.9	37.0	35.3	37.1	37.1	28.9	22.5	17.5	23.2	35.9	2.5
	-29.4	-25.4	-19.5	-12.8	-3.2	2.6	7.5	17.5	19.3	24.0	23.8	29.9	27.7	31.3	35.3	35.0	36.2	37.1	39.2	43.8	44.0	44.1	45.4	45.8	45.1	43.6	41.3	41.1	38.7	39.5	33.7	25.6	20.4	14.4	8.3	1.7
	-30.1	-29.2	-19.6	-11.2	-4.8	0.8	10.1	10.5	22.5	21.1	31.5	33.3	34.4	32.1	33.0	33.5	36.8	36.3	34.5	35.4	37.2	39.5	40.1	39.4	39.5	38.9	37.7	38.1	36.6	37.1	35.5	30.6	25.4	18.9	14.0	8.7
	-30.1	-27.0	-17.6	-14.6	-4.9	-0.2	8.4	15.1	25.2	21.1	24.8	31.7	27.0	31.1	32.5	32.8	34.0	34.5	34.5	35.3	37.2	39.9	41.9	39.7	37.7	35.2	32.0	28.1	24.6	21.6	17.5	13.3	7.3	4.3	3.4	-0.3
	-30.1	-28.4	-19.4	-16.6	-8.3	6.7	8.8	14.1	19.9	20.7	26.4	29.0	27.3	30.4	30.6	31.8	32.9	32.7	33.2	33.4	36.0	38.1	39.2	44.1	45.2	43.9	35.5	32.3	30.2	27.5	24.1	17.2	8.3	4.5	2.8	-0.4
	-30.0	-27.0	-17.5	-12.9	-4.5	4.2	10.0	17.5	22.3	24.4	27.5	29.4	37.7	34.2	34.1	34.9	40.3	40.6	39.2	43.8	44.4	45.5	46.8	46.5	46.9	45.4	43.2	40.4	37.5	35.6	31.8	26.5	20.9	15.1	8.5	1.4
	-30.1	-25.8	-20.1	-12.0	-4.9	1.7	8.8	21.4	21.3	25.0	30.3	29.3	33.9	32.7	33.5	34.5	37.1	38.0	40.5	41.8	44.0	46.0	46.7	47.3	46.5	44.2	42.8	41.5	38.7	36.2	33.6	29.9	24.8	19.5	13.3	17.0
	-30.1	-27.2	-22.8	-12.3	-6.9	2.3	7.4	12.8	18.0	18.8	27.5	30.2	27.5	34.1	29.7	28.2	29.9	30.6	32.0	31.8	33.6	35.3	36.0	36.2	33.5	31.3	27.8	32.5	27.2	21.4	15.3	9.6	5.8	4.2	3.0	-0.3
	-27.1	-22.1	-18.2	-13.8	-9.3	5.3	12.9	21.1	20.4	26.5	36.8	41.8	30.6	37.6	40.5	43.3	40.7	46.4	49.9	49.4	49.2	53.1	51.7	51.3	51.6	51.4	49.0	47.6	46.2	43.1	39.1	36.4	29.7	23.3	17.4	9.2
	-30.1	-26.2	-20.8	-13.0	-9.1	2.1	7.4	18.1	27.1	25.1	29.0	37.7	41.6	36.8	43.0	41.7	41.3	39.6	42.1	43.7	44.1	42.7	44.1	43.6	44.9	44.2	41.2	39.1	35.7	33.1	31.0	27.7	23.9	18.2	11.2	3.8
	-30.1	-27.1	-16.8	-14.7	-9.4	-0.1	7.2	12.8	17.7	22.9	29.0	34.5	30.1	32.7	32.4	38.6	35.5	35.2	37.6	37.0	34.7	37.0	37.7	36.1	34.5	32.7	28.0	24.1	21.7	18.3	14.4	11.2	8.0	5.8	3.6	-0.1
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/3 LAeq	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	-23.9	-18.2	-14.1	-7.2	-0.4	5.7	12.9	18.2	24.0	27.7	33.3	37.9	44.0	45.4	45.5	43.7	44.7	48.4	53.9	52.1	54.3	54.2	53.4	53.0	52.1	51.6	51.6	50.1	48.3	47.2	47.1	51.8	36.2	30.6	25.6	16.8
	-25.4	-20.7	-15.4	-9.5	-2.6	4.5	8.8	16.1	25.7	34.3	40.3	45.8	52.1	57.0	50.5	49.3	52.5	51.7	56.1	56.2	50.9	49.4	49.5	48.2	46.9	45.2	49.5	47.4	40.0	38.4	35.6	32.3	28.4	22.3	16.6	8.2
	-28.4	-24.1	-17.2	-10.1	-2.5	4.1	10.6	17.2	24.1	31.8	32.0	34.5	46.6	53.3	40.7	43.7	48.2	46.4	44.9	45.9	46.0	47.1	46.4	45.5	45.4	44.4	43.3	40.9	38.7	36.3	34.3	29.5	24.9	18.6	17.4	5.4
	-29.0	-25.4	-16.7	-11.2	-1.1	5.8	12.1	19.8	22.6	24.5	35.1	35.3	56.0	56.2	43.6	49.5	53.4	48.9	48.5	51.0	48.8	48.2	48.0	46.7	46.2	45.9	45.9	42.3	39.8	37.6	34.9	31.5	27.1	21.6	15.1	7.6
	-28.4	-24.8	-18.5	-12.4	-1.6	5.3	13.1	18.0	25.3	29.5	33.9	35.6	36.5	46.3	40.7	40.5	43.8	43.1	45.6	45.9	46.4	48.9	49.1	50.1	49.1	46.6	43.7	42.0	39.7	37.3	35.0	31.2	26.8	21.2	14.4	6.2
	-25.3	-19.6	-14.8	-9.1	-1.0	6.5	19.6	23.4	31.6	32.6	42.1	43.8	47.0	45.9	49.7	48.0	48.7	51.6	52.7	52.7	51.8	53.0	55.1	54.5	53.5	51.1	50.0	51.6	50.0	48.2	43.7	40.9	34.6	29.2	20.9	11.6
	-28.6	-24.4	-17.6	-11.2	-4.3	4.2	14.3	20.4	23.1	29.3	32.5	31.6	34.9	37.7	38.0	40.4	40.5	40.7	42.0	44.3	44.9	46.8	47.1	46.5	46.5	45.2	43.9	42.6	40.1	37.7	35.7	31.4	26.6	21.1	14.2	7.9
	-27.0	-22.0	-16.5	-6.5	-2.6	7.6	14.3	20.3	26.3	38.4	30.8	29.8	35.1	38.0	38.0	39.3	40.7	40.7	43.3	43.2	43.2	44.8	47.6	45.0	45.1	45.2	44.6	43.7	38.8	38.2	35.1	39.3	39.0	27.9	19.2	18.0
	-28.7	-25.7	-17.7	-12.4	-5.6	2.8	8.6	15.8	21.6	24.6	26.9	31.3	30.1	32.0	34.4	36.3	36.4	39.5	44.6	42.4	43.3	45.5	45.5	46.0	45.6	43.7	41.8	40.7	38.0	36.8	35.1	32.2	25.4	19.4	12.2	4.0
	-26.4	-22.6	-17.5	-11.5	-5.2	3.7	10.2	16.3	21.2	24.8	29.9	32.2	37.0	36.7	38.8	35.9	37.5	37.1	38.7	42.4	42.9	44.4	46.0	44.5	43.7	43.2	40.8	37.9	35.7	33.5	30.6	29.8	23.3	18.8	12.4	4.2
	-28.6	-25.3	-18.9	-12.9	-4.2	3.2	10.5	17.0	20.1	24.9	32.2	34.4	38.5	44.6	43.4	43.1	41.4	44.3	44.2	43.2	41.8	43.6	44.4	43.5	43.2	41.2	38.5	35.9	34.9	34.2	30.2	26.5	19.6	17.8	23.4	3.4
	-28.2	-24.2	-19.1	-11.7	-2.6	5.7	12.7	24.2	31.9	34.6	41.6	40.8	44.9	50.8	51.1	48.6	47.2	45.8	56.8	58.6	48.9	49.4	49.1	46.8	45.5	44.5	42.5	41.4	38.7	36.5	33.0	28.9	24.1	18.8	11.8	4.4
	-25.1	-21.1	-15.0	-8.8	-1.3	3.6	13.9	20.3	22.5	27.1	30.7	32.5	36.4	34.6	36.5	41.5	39.9	40.1	40.9	42.4	43.8	45.6	46.1	45.0	45.4	44.4	42.7	40.4	37.3	35.8	32.7	28.5	23.2	18.8	11.6	4.4
	-28.8	-25.2	-17.4	-11.4	-5.1	4.1	13.4	18.0	22.1	26.5	30.0	34.4	33.4	37.4	39.4	39.7	40.2	40.0	40.6	41.8	42.9	44.4	45.5	44.9	44.3	42.7	40.8	39.1	36.7	35.2	32.4	26.1	21.8	14.7	9.2	3.4
	-29.1	-26.8	-19.9	-10.9	-4.5	3.7	10.8	21.5	23.4	28.0	31.8	33.5	32.8	35.1	35.1	37.7	42.3	42.0	42.0	43.5	44.8	46.5	47.3	47.0	47.3	45.7	43.9	41.9	39.0	36.3	33.6	42.7	24.9	19.4	13.6	5.2
	-28.7	-25.2	-17.0	-8.6	0.7	9.0	14.3	22.0	25.1	26.6	32.2	33.2	36.6	39.2	41.5	40.6	41.2	42.1	41.8	43.7	45.1	46.7	48.2	47.6	47.5	46.5	44.0	42.3	40.0	38.9	35.6	30.6	25.5	20.2	13.9	6.0
	-29.2	-26.1	-19.7	-12.3	-5.1	1.7	9.9	16.5	22.0	26.0	31.7	36.8	35.9	35.3	42.2	37.5	37.5	38.8	39.5	40.5	41.3	43.5	44.6	44.5	44.4	43.5	41.9	40.5	37.4	35.2	32.3	27.1	21.9	16.4	16.6	15.8
	-28.3	-25.2	-18.1	-12.6	-6.0	1.6	8.3	13.7	18.5	21.5	26.9	29.5	31.0	30.7	30.8	32.4	33.7	34.3	35.6	37.0	38.2	40.5	41.1	41.5	41.6	40.2	38.3	36.7	33.6	30.7	28.0	22.9	17.7	12.5	6.8	1.1
	-28.0	-23.3	-17.8	-11.9	-5.1	4.7	13.6	17.1	21.0	23.3	30.6	33.9	35.2	36.2	34.9	35.3	37.1	37.9	40.9	41.4	42.6	45.2	46.3	45.7	45.0	43.9	42.4	40.3	38.7	36.2	32.2	28.9	23.0	16.7	10.8	3.6
	-29.1	-25.8	-18.4	-12.1	-5.3	3.2	12.0	19.1	24.4	31.7	33.5	37.2	38.8	37.9	39.0	40.7	41.6	42.1	43.6	45.4	46.6	48.8	48.9	49.0	49.0	47.2	45.9	43.7	42.2	39.4	36.0	32.6	27.6	21.7	15.7	8.1
	-29.0	-26.6	-19.0	-13.6	-7.9	1.5	8.0	12.8	18.5	27.0	34.9	40.9	41.6	37.3	39.2	40.8	38.7	37.8	38.1	37.4	36.3	38.3	39.0	42.2	39.4	37.6	32.5	29.3	27.2	23.6	21.8	15.9	12.4	9.2	5.2	0.5
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

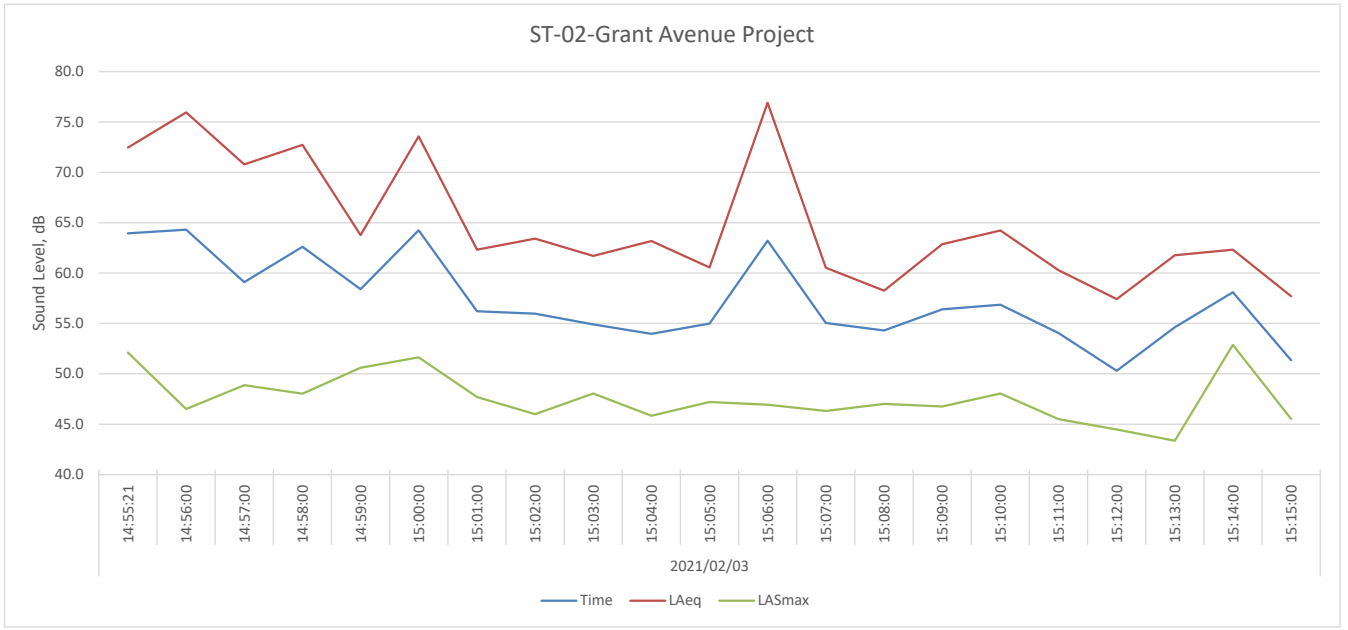
1/3 LASmax	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	-17.6	-9.2	-9.2	0.1	5.9	9.3	19.4	22.4	32.0	33.2	40.8	45.0	52.6	54.4	52.4	48.9	51.5	57.9	64.0	61.0	64.3	64.7	62.5	62.9	59.8	60.9	60.7	59.1	57.5	56.4	54.6	63.6	46.2	40.7	35.4	27.1
	-17.6	-13.2	-9.2	-3.1	6.3	10.6	15.6	22.6	38.0	45.6	52.7	58.8	63.7	71.0	64.8	62.9	65.8	63.3	69.7	69.3	62.5	60.9	61.0	58.8	58.4	57.7	63.6	61.6	55.4	55.0	53.3	50.0	45.1	39.5	34.2	25.5
	-24.2	-18.5	-13.2	-0.6	8.6	7.8	15.9	25.6	29.9	43.8	43.2	45.7	60.0	68.3	51.5	53.2	62.1	58.9	57.2	55.3	55.2	54.1	52.2	50.9	52.2	50.9	50.2	48.3	45.4	43.3	42.3	38.8	33.9	27.9	31.5	14.2
	-25.0	-19.0	-11.9	-5.9	5.5	11.7	22.4	30.2	27.4	32.8	47.2	43.6	67.8	68.2	54.5	61.7	65.4	59.7	57.9	61.8	57.1	56.0	54.9	53.1	53.3	53.1	55.9	50.9	48.0	46.0	44.2	41.2	36.5	30.9	25.1	18.2
	-22.7	-17.1	-13.1	-8.4	8.0	13.4	21.6	25.8	34.9	38.1	39.8	41.6	44.1	60.1	52.1	50.1	52.3	51.7	54.3	53.9	51.7	53.7	53.8	55.5	54.6	51.7	49.2	47.5	45.8	44.4	42.0	38.5	34.7	29.2	22.4	12.7
	-17.5	-9.9	-7.2	-2.1	4.5	12.8	30.5	29.4	42.3	40.4	51.4	54.1	57.6	57.6	61.0	59.3	57.1	61.4	61.9	62.5	60.2	63.0	64.7	63.7	62.4	59.3	59.0	63.2	61.5	60.3	53.8	51.7	44.4	39.3	31.7	22.3
	-23.5	-16.1	-12.3	-6.0	-0.7	7.5	24.1	31.8	31.3	38.0	43.8	38.2	45.9	48.0	47.1	51.5	47.6	48.8	50.9	52.0	52.3	54.1	53.0	51.5	51.6	51.8	52.0	51.5	47.9	45.4	42.5	38.5	34.2	29.2	21.8	16.4
	-21.2	-14.1	-10.7	3.0	3.5	15.7	24.4	32.4	38.9	51.1	40.6	34.6	43.2	45.7	43.9	44.9	49.3	48.4	51.1	50.2	49.1	50.8	56.6	51.2	51.3	53.0	53.9	53.9	47.9	48.7	44.7	55.2	54.9	43.4	33.5	33.2
	-24.8	-18.0	-10.1	-6.1	-1.6	6.6	11.9	24.5	31.9	31.9	33.7	40.7	35.7	39.6	45.3	46.0	42.3	46.4	54.8	51.1	50.9	52.9	52.2	52.5	53.3	51.3	50.1	48.6	46.4	45.3	43.2	38.7	33.3	28.3	20.6	10.7
	-20.6	-16.8	-11.2	-6.6	-1.5	11.2	18.8	26.1	30.5	35.6	39.5	39.6	43.6	44.6	47.9	41.9	45.7	44.1	47.7	54.4	53.5	55.2	56.1	52.5	52.1	52.1	49.9	48.1	46.1	43.2	40.9	38.5	34.5	30.9	24.2	14.6
	-23.1	-18.1	-12.8	-6.6	1.6	7.9	20.4	25.9	23.6	34.8	41.5	46.8	49.2	55.9	54.5	53.2	50.1	55.5	53.6	52.3	46.9	48.2	47.9	47.3	48.7	46.6	44.8	42.9	44.0	41.0	37.0	36.6	30.8	29.2	38.3	13.4
	-25.1	-15.8	-15.1	-5.7	3.9	12.5	22.1	35.4	42.9	45.3	56.0	51.4	55.2	65.4	65.4	62.0	60.6	58.5	70.2	74.4	62.1	62.6	59.8	53.1	51.2	51.7	52.4	52.9	50.0	43.2	41.5	37.9	34.4	29.6	35.7	12.5
	-20.3	-14.0	-9.8	-0.9	10.0	7.0	24.8	30.7	28.9	37.1	40.4	37.6	44.1	41.0	42.5	51.7	48.6	47.6	48.2	50.9	50.0	50.9	50.0	49.2	50.7	49.3	48.7	46.2	42.4	42.0	38.3	35.5	29.8	26.4	17.6	9.2
	-25.5	-20.5	-8.5	-4.4	-1.2	13.2	24.1	28.7	28.1	34.7	37.4	44.9	43.2	47.9	51.1	46.7	45.2	46.4	46.7	48.7	49.5	48.4	48.7	50.5	49.3	47.3	44.8	42.5	40.9	42.4	40.0	36.6	36.0	25.8	16.0	9.4
	-27.1	-24.1	-15.0	-3.8	1.7	8.9	20.1	32.0	32.2	37.1	43.2	41.7	41.7	44.1	42.3	44.8	53.1	49.4	48.6	50.1	49.8	51.7	52.4	51.3	52.5	51.3	49.9	48.9	45.9	44.4	42.6	58.1	34.9	30.0	23.4	14.0
	-25.7	-21.4	-10.6	0.8	11.6	18.7	24.5	33.0	37.7	37.9	42.2	42.2	46.9	51.5	53.8	53.1	48.2	54.0	51.7	50.8	51.3	52.6	55.0	55.0	55.3	53.6	50.7	48.6	47.5	45.6	43.3	40.2	35.4	30.7	24.5	16.7
	-26.3	-20.5	-15.5	-8.0	-0.8	6.8	17.0	22.0	29.4	35.4	42.5	48.0	46.0	48.5	54.3	46.6	44.4	46.6	47.2	48.2	47.9	49.9	50.4	49.3	50.2	49.2	48.3	46.8	42.9	41.4	39.4	35.0	30.3	24.2	32.2	29.5
	-21.8	-19.0	-11.9	-8.3	-2.6	6.1	11.7	24.2	26.1	28.5	32.6	35.7	38.2	35.4	37.6	39.6	40.5	41.2	44.2	45.4	46.4	49.1	48.2	48.4	48.7	46.8	44.8	43.9	40.9	39.1	37.5	34.0	29.2	23.9	17.0	16.8
	-20.4	-16.4	-11.0	-7.1	0.5	13.5	22.9	25.1	26.6	33.6	39.6	42.5	43.8	44.5	44.9	43.4	44.7	46.4	50.5	50.8	49.6	53.2	53.7	52.9	51.8	52.2	51.5	48.4	47.2	45.5	40.8	37.7	31.7	24.5	18.8	10.4
	-26.4	-20.9	-15.0	-5.8	1.3	10.4	19.7	28.5	29.9	40.6	41.9	47.3	47.1	46.5	45.3	49.1	45.0	50.4	50.1	51.2	52.1	53.0	53.2	53.0	55.1	53.9	52.4	49.3	50.1	46.3	42.3	38.1	34.8	27.7	23.3	16.2
	-27.2	-24.2	-15.5	-9.2	-4.3	4.5	11.1	18.0	27.0	34.9	43.8	50.0	52.0	45.5	47.0	49.5	46.8	45.8	45.4	44.0	43.9	42.7	44.3	48.6	45.7	44.6	41.1	39.0	35.6	33.0	30.9	27.6	23.7	18.0	11.1	3.7
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/3 LASmin 6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-30.1	-29.2	-23.7	-14.8	-6.2	1.3	6.4	11.6	17.5	22.0	23.8	28.1	30.4	32.5	36.0	36.0	36.3	38.8	38.8	38.8	40.0	40.6	40.7	39.5	37.2	34.8	31.7	29.6
-30.1	-28.8	-22.7	-17.6	-8.2	-0.4	4.6	9.4	16.1	19.2	22.1	23.7	25.7	28.3	28.3	29.6	32.0	32.2	31.8	32.7	34.2	36.3	36.6	36.7	36.2	35.1	32.2	29.3
-30.1	-29.2	-22.8	-17.5	-8.9	0.0	7.0	10.5	15.1	20.0	22.7	26.4	28.6	31.2	31.3	32.1	33.9	33.3	32.1	33.9	35.7	37.4	38.8	38.6	37.3	36.7	32.7	29.9
-30.1	-29.2	-21.6	-17.7	-8.7	0.8	5.0	12.0	18.7	20.4	23.4	28.7	31.0	33.4	30.7	30.7	31.9	33.4	33.2	33.8	35.5	37.1	38.5	37.5	36.5	35.2	32.5	29.5
-30.1	-29.2	-23.5	-16.7	-9.0	0.4	5.4	11.7	18.5	22.2	25.6	28.3	31.4	32.5	33.0	32.9	35.0	34.5	35.2	36.4	38.6	40.4	41.3	40.2	39.8	38.9	34.8	32.0
-30.1	-29.2	-24.2	-17.5	-9.5	1.4	5.8	13.1	18.7	22.3	28.5	32.5	30.5	34.3	35.1	37.0	38.8	36.9	37.2	37.1	39.9	40.7	42.0	42.2	40.9	39.2	35.1	32.7
-30.1	-29.2	-23.2	-16.3	-9.7	0.7	7.0	11.7	17.2	21.2	23.1	26.8	27.1	29.8	30.9	30.4	33.2	33.5	33.4	34.5	36.2	39.0	39.6	37.3	36.1	33.7	30.1	27.0
-30.1	-29.2	-22.4	-15.0	-7.9	-0.5	4.7	9.1	15.1	19.5	20.8	25.2	26.4	28.9	29.3	29.6	30.5	32.1	32.3	33.4	35.1	36.7	37.1	35.6	34.4	33.0	31.8	28.5
-30.1	-29.2	-25.7	-17.9	-10.7	-0.1	5.1	10.6	15.9	18.5	20.6	23.5	25.2	26.9	28.0	28.9	31.2	32.1	33.1	34.2	36.2	38.9	38.5	38.4	37.6	34.6	32.5	30.0
-30.1	-29.2	-23.0	-16.9	-9.8	-0.7	4.9	9.2	15.8	16.5	21.4	24.6	25.3	26.9	29.2	29.5	31.1	30.5	31.0	31.5	32.8	34.9	36.3	34.4	32.8	31.1	28.2	25.1
-30.1	-29.2	-24.4	-20.2	-10.7	-1.2	4.5	9.5	15.9	20.3	23.1	26.1	26.7	31.9	30.4	32.1	33.1	33.4	33.7	34.2	35.3	37.4	38.4	36.2	35.3	34.0	30.0	26.9
-30.1	-29.2	-25.5	-17.4	-10.8	0.1	6.3	12.5	16.8	20.6	23.5	29.8	27.2	31.1	31.4	30.4	31.7	33.0	33.9	33.8	34.7	36.8	37.6	35.1	34.1	31.9	29.6	26.8
-30.1	-29.2	-22.9	-17.9	-10.7	-0.4	5.3	10.3	17.7	18.6	20.7	25.8	25.5	28.4	28.6	28.5	31.3	31.6	31.0	31.6	33.4	35.9	37.2	35.4	35.5	36.0	33.1	31.7
-30.1	-29.2	-25.7	-17.0	-9.4	-1.1	4.8	10.0	15.4	19.5	22.5	24.7	26.8	28.8	29.5	30.5	33.9	33.4	32.6	33.9	35.1	37.3	38.4	37.0	36.3	34.3	32.0	28.1
-30.1	-29.2	-25.9	-16.7	-10.3	-0.8	4.9	12.6	15.8	18.7	22.4	25.4	25.2	29.3	28.8	29.9	31.8	32.5	32.5	33.3	36.0	38.0	38.8	36.5	35.7	32.9	29.3	25.5
-30.1	-29.2	-24.5	-17.7	-8.6	1.4	6.9	13.0	17.1	18.2	22.8	26.5	27.0	28.9	29.7	30.3	31.6	31.3	31.5	32.5	35.2	36.6	38.6	39.4	39.7	37.8	32.4	29.4
-30.1	-29.2	-23.8	-18.1	-10.1	-2.7	4.7	10.2	15.1	17.2	21.1	24.3	23.6	27.3	29.0	27.8	29.8	30.9	30.8	31.1	33.0	34.2	35.6	35.5	35.2	34.0	30.5	27.1
-30.1	-29.2	-23.3	-17.1	-10.5	-2.3	5.2	9.9	14.0	17.3	20.6	23.2	25.2	27.3	26.7	27.8	29.1	30.4	30.2	30.6	33.0	35.0	35.9	34.2	33.4	31.3	27.7	25.5
-30.1	-29.2	-24.6	-17.1	-9.5	-2.0	4.0	8.2	14.5	18.3	21.7	25.6	24.7	28.2	27.5	26.0	28.1	29.7	30.7	31.1	31.7	33.7	34.2	32.7	31.3	29.4	27.7	25.8
-30.1	-29.2	-22.2	-16.5	-9.9	0.0	6.3	10.8	17.8	21.9	25.5	28.6	27.6	30.1	32.1	34.1	37.0	36.4	37.5	38.8	40.6	42.7	44.0	43.4	43.6	39.9	36.8	33.7
-30.1	-29.2	-25.3	-16.7	-11.4	-1.1	4.8	6.0	15.1	19.3	22.1	26.7	26.8	27.9	29.2	28.9	29.8	30.7	31.6	32.3	33.6	36.0	36.7	35.9	34.4	32.2	28.0	24.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4000	5000	6300	8000	10000	12500	16000	20000	LAS2.00	LAS8.00	LAS25.00	LAS50.00	LAS90.00	LAS95.00	Ovrld.	OBA Ovrld.	Marker
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	No	No	
26.9	24.2	29.6	21.0	10.9	6.0	3.1	0.2	72.2	70.0	64.6	59.7	53.5	52.5	No	No	
26.7	23.8	18.0	14.3	9.6	6.0	3.2	-0.2	75.5	69.9	61.7	51.9	47.3	46.9	No	No	
26.2	22.6	16.7	11.7	7.0	4.5	2.6	-0.4	66.6	61.4	56.8	54.0	49.7	49.3	No	No	
25.7	20.6	15.3	10.4	6.6	4.3	2.6	-0.4	72.3	71.0	59.8	55.3	50.0	48.4	No	No	
28.9	24.8	20.6	15.6	10.2	6.2	3.2	-0.1	62.9	61.3	59.9	58.0	52.0	51.2	No	No	
31.2	28.1	23.4	19.3	14.1	9.1	4.5	0.2	72.9	71.0	61.4	59.1	56.1	54.4	No	No	
23.9	24.3	23.4	13.1	7.1	4.4	2.5	-0.3	62.1	60.7	56.9	54.7	49.9	48.3	No	No	
25.1	24.9	23.1	14.4	9.1	4.9	2.6	-0.3	62.9	61.0	57.7	51.7	47.1	46.6	No	No	
26.8	24.0	20.7	19.4	9.7	5.7	2.9	-0.3	61.1	58.6	55.9	53.0	49.2	48.5	No	No	
22.3	19.1	16.8	14.6	6.3	4.3	2.9	-0.5	62.7	59.0	52.9	49.0	46.8	46.4	No	No	
22.9	18.4	14.5	11.1	6.1	4.2	3.1	-0.4	60.3	58.9	55.9	53.7	49.9	48.3	No	No	
24.9	20.5	15.2	11.5	5.8	3.9	3.3	-0.4	75.1	66.0	59.7	55.4	48.7	47.3	No	No	
28.0	25.9	23.7	15.9	9.2	5.1	3.5	-0.2	60.1	58.7	56.7	54.7	48.3	46.6	No	No	
24.5	21.5	17.5	13.2	7.3	4.3	2.3	-0.3	57.9	57.0	55.6	54.1	49.2	48.5	No	No	
22.0	17.3	13.5	11.2	5.8	3.9	2.8	-0.4	61.8	60.2	57.9	55.5	47.9	47.5	No	No	
27.2	23.0	17.9	12.5	7.0	4.5	2.7	-0.4	62.6	59.6	58.0	55.9	51.1	49.6	No	No	
23.3	18.8	15.2	11.9	6.7	4.6	2.8	-0.4	60.2	58.6	55.2	52.5	46.9	46.3	No	No	
22.0	17.4	13.6	9.4	5.8	4.1	2.9	-0.4	56.8	56.1	50.4	47.0	45.3	45.2	No	No	
24.9	17.9	12.3	8.8	5.6	4.1	2.9	-0.4	61.6	60.1	54.4	49.0	45.0	44.0	No	No	
31.1	28.3	25.4	20.5	15.7	11.2	5.7	0.7	61.8	61.0	59.3	57.7	54.9	53.9	No	No	
21.4	18.2	14.3	11.1	7.7	5.7	3.0	-0.3	57.3	56.7	51.8	48.4	45.9	45.8	No	No	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	No	No	

ST-02 Chart

Record #	Date	Time	LAeq	LASmax	LASmin
1	2021/02/03	14:55:21	64.0	72.5	52.1
2		14:56:00	64.3	76	46.5
3		14:57:00	59.1	70.8	48.9
4		14:58:00	62.6	72.7	48
5		14:59:00	58.4	63.8	50.6
6		15:00:00	64.3	73.6	51.6
7		15:01:00	56.2	62.3	47.7
8		15:02:00	56.0	63.4	46
9		15:03:00	54.9	61.7	48.1
10		15:04:00	54.0	63.2	45.8
11		15:05:00	55.0	60.6	47.2
12		15:06:00	63.2	76.9	46.9
13		15:07:00	55.1	60.5	46.3
14		15:08:00	54.3	58.3	47
15		15:09:00	56.4	62.9	46.8
16		15:10:00	56.9	64.2	48
17		15:11:00	54.0	60.3	45.5
18		15:12:00	50.3	57.4	44.5
19		15:13:00	54.6	61.8	43.4
20		15:14:00	58.1	62.3	52.9
21		15:15:00	51.3	57.7	45.5



Summary					
Filename	831_Data.003				
Serial Number	3940				
Model	Model 831				
Firmware Version	2.314				
User	Issa				
Location	Grant Ave Project				
Job Description	Ambient Air Noise Survey				
Note					
Measurement Description	GRAANT-AVE				
Start	2021/02/03 15:16:18				
Stop	2021/02/03 15:36:19				
Duration	0:20:00.7				
Run Time	0:20:00.7				
Pause	0:00:00.0				
Pre Calibration	2021/02/03 14:24:11				
Post Calibration	None				
Calibration Deviation	---				
Overall Settings					
RMS Weight	A Weighting				
Peak Weight	A Weighting				
Detector	Slow				
Preamp	PRM831				
Microphone Correction	Off				
Integration Method	Linear				
OBA Range	Low				
OBA Bandwidth	1/1 and 1/3				
OBA Freq. Weighting	A Weighting				
OBA Max Spectrum	Bin Max				
Gain	0.0	dB			
Overload	143.9	dB			
	A		**C**	**Z**	
Under Range Peak	**76.5**		73.5	78.5	dB
Under Range Limit	**26.4**		26.8	32.5	dB
Noise Floor	17.3		17.6	23.0	dB
Results					
LAeq	58.8	dB			
LAE	89.6	dB			
EA	100.958	µPa²h			
LApeak (max)	2021/02/03 15:25:47		87.8	dB	
LASmax	2021/02/03 15:33:11		71.3	dB	
LASmin	2021/02/03 15:28:07		43.3	dB	
SEA	-99.9	dB			

LAS > 60.0 dB (Exceedence Counts / Duration)	36	312.6 s
LAS > 70.0 dB (Exceedence Counts / Duration)	2	4.0 s
LApeak > 90.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 100.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 120.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**
	58.8	58.8	-99.9	58.8	58.8	-99.9	-99.9

LCeq	68.6	dB
LAeq	58.8	dB
LCeq - LAeq	9.8	dB
LAIeq	60.2	dB
LAeq	58.8	dB
LAIeq - LAeq	1.4	dB
# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS2.00	66.5	dB
LAS8.00	64.1	dB
LAS25.00	59.1	dB
LAS50.00	54.1	dB
LAS90.00	48.7	dB
LAS95.00	47.4	dB

Record #	Record Type	Date	Time	LAeq	LAS
1	Run	2021/02/03	15:16:18	0.0	0.0
2		2021/02/03	15:16:18	58.2	51.7
3		2021/02/03	15:17:00	58.9	46.5
4		2021/02/03	15:18:00	57.2	57.7
5		2021/02/03	15:19:00	59.5	58.1
6		2021/02/03	15:20:00	61.5	59.4
7		2021/02/03	15:21:00	55.0	46.3
8		2021/02/03	15:22:00	49.6	57.3
9		2021/02/03	15:23:00	60.8	53.5
10		2021/02/03	15:24:00	58.8	59.4
11		2021/02/03	15:25:00	60.1	52.1
12		2021/02/03	15:26:00	59.5	51.7
13		2021/02/03	15:27:00	57.5	49.0
14		2021/02/03	15:28:00	57.3	52.6
15		2021/02/03	15:29:00	57.3	54.2
16		2021/02/03	15:30:00	57.1	55.6
17		2021/02/03	15:31:00	60.6	54.8
18		2021/02/03	15:32:00	55.7	51.0
19		2021/02/03	15:33:00	61.6	59.8
20		2021/02/03	15:34:00	58.1	55.3
21		2021/02/03	15:35:00	58.7	59.9
22		2021/02/03	15:36:00	59.6	55.0
23	Stop	2021/02/03	15:36:19	0.0	0.0

LASmax	LASmin	1/1 LAS 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000	1/1 LAeq 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65.1	51.5	-12.8	1.2	19.6	38.3	38.7	43.8	45.0	47.4	42.3	32.3	22.3	11.2	-12.9	5.0	30.9	41.1	43.4	47.7	49.7	54.7	51.9	42.9	33.4	19.7
67.1	46.4	-14.4	6.2	18.9	30.4	37.2	36.0	40.3	42.6	37.6	25.9	14.6	7.4	-14.2	5.0	23.8	37.4	45.3	46.6	51.8	55.4	52.1	42.3	30.5	15.3
66.5	46.3	-10.7	3.2	20.4	31.9	38.2	45.6	51.1	54.7	49.6	41.2	30.6	13.2	-12.8	6.3	28.9	33.2	39.5	44.1	48.3	54.7	50.2	40.6	32.3	16.6
70.3	50.5	-9.3	7.1	24.9	39.0	46.9	47.0	51.4	52.9	51.3	47.6	42.2	27.9	-9.1	9.5	23.5	37.7	47.4	47.6	49.5	54.9	51.8	42.9	37.5	52.8
67.0	49.2	-9.6	5.9	22.5	35.9	40.8	47.0	50.0	56.9	53.0	43.3	33.7	14.5	-6.0	9.0	25.6	36.5	45.7	49.0	52.6	58.3	55.7	46.3	34.7	18.4
63.1	46.3	-13.0	7.2	19.5	30.9	36.8	35.2	38.7	42.8	37.7	30.5	19.8	9.0	-3.7	11.2	23.2	32.4	38.9	42.0	45.9	52.0	49.0	39.3	28.5	13.2
57.3	45.9	-10.4	3.9	21.6	33.5	39.7	41.8	46.1	53.4	53.2	43.3	30.0	8.5	-12.3	4.0	19.0	30.5	36.6	37.4	40.7	46.3	43.0	34.1	21.6	7.7
65.5	50.3	-19.2	1.9	20.9	33.2	39.5	43.2	45.3	50.7	45.8	36.2	23.5	9.0	-15.2	5.5	28.7	36.1	44.2	47.7	52.8	57.7	54.3	44.8	34.2	19.4
66.2	48.2	5.8	18.0	30.2	34.4	44.4	49.2	50.4	55.9	53.1	45.0	33.4	19.6	-1.2	14.0	30.7	34.1	42.0	45.8	49.1	55.9	52.9	44.2	32.8	20.8
66.4	52.0	-5.0	4.2	24.0	30.6	36.8	38.8	42.8	49.3	46.1	33.4	22.5	8.9	-0.4	14.3	32.0	35.5	40.7	47.1	51.3	57.2	53.8	44.5	33.0	18.1
67.3	49.2	-9.5	1.5	18.9	31.6	37.7	40.0	43.6	48.4	45.0	34.1	20.1	8.3	-9.0	6.8	23.2	33.5	42.7	46.0	50.8	56.6	53.3	43.2	32.0	17.3
69.6	44.8	-21.8	1.8	18.1	29.1	35.6	35.3	37.5	46.8	42.3	30.0	23.0	7.6	-11.6	4.3	19.2	32.3	37.3	42.8	48.5	54.6	51.5	41.2	29.8	12.7
65.3	43.3	-15.0	4.0	22.2	32.0	43.8	39.7	43.5	48.4	45.4	33.0	21.3	8.0	-17.0	6.4	26.5	34.7	40.2	44.9	48.2	54.1	51.6	42.1	31.0	16.3
63.7	48.2	-17.0	5.0	21.1	32.0	46.3	46.6	45.4	48.3	46.0	40.4	30.0	15.2	-14.5	8.5	27.6	33.6	40.4	44.6	48.1	54.0	51.3	41.8	30.8	43.0
64.7	49.6	-19.4	3.8	26.9	33.6	47.4	45.9	46.7	50.6	49.2	40.1	26.6	7.9	-16.9	4.8	27.9	38.2	45.0	45.2	49.0	53.8	50.2	41.3	30.0	13.0
68.5	50.3	-19.4	3.6	20.7	31.1	40.6	43.7	46.8	51.8	47.9	38.1	28.9	14.9	-18.9	4.7	28.7	33.7	54.9	51.4	50.4	55.6	52.6	42.9	31.8	16.7
65.5	48.3	-15.5	4.3	22.0	39.1	43.2	41.1	42.3	46.6	43.1	33.8	22.9	11.5	-13.5	4.9	25.8	33.7	42.1	43.6	46.2	52.1	50.2	40.9	28.0	12.7
71.3	50.9	-14.7	3.5	19.8	36.2	44.1	42.0	54.0	56.2	52.6	38.8	19.0	8.1	0.0	12.5	32.8	48.5	54.1	54.4	53.8	55.1	53.0	45.6	38.0	26.5
67.0	49.7	-15.3	4.2	21.8	36.9	44.8	44.7	46.3	51.3	48.8	41.2	29.6	11.6	-11.1	8.0	29.2	37.5	45.9	46.2	48.7	54.6	51.9	44.5	37.3	24.9
64.9	49.8	-9.1	10.6	32.2	40.4	45.9	48.2	51.5	56.3	52.8	47.7	40.5	28.5	-10.8	8.3	29.0	37.0	45.3	48.3	49.6	54.7	52.8	45.6	37.1	22.9
65.7	52.6	3.7	12.4	26.7	36.5	42.6	45.7	47.6	50.4	47.6	43.0	35.4	22.9	-0.9	15.5	29.6	39.5	42.5	47.0	50.8	56.5	53.3	45.5	37.1	24.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/1 LASmax 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000	1/1 LASmin 8.0	16.0	31.5	63.0	125	250	500	1000	2000	4000	8000	16000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-6.3	8.6	43.5	49.5	50.3	53.3	55.4	62.0	59.2	50.9	42.5	29.9	-20.0	0.8	18.4	32.2	37.4	41.1	44.6	47.1	42.0	31.7	21.5	8.8
-9.0	11.7	33.4	43.0	54.8	54.7	62.3	65.1	60.6	51.3	39.8	25.8	-18.8	0.8	15.5	30.2	35.8	35.5	39.6	42.1	37.5	25.6	14.5	7.3
-3.1	17.9	39.4	39.5	45.2	51.8	57.4	64.4	59.3	49.8	44.8	29.3	-20.6	1.0	17.2	28.9	35.1	35.6	39.3	42.4	37.6	25.7	14.5	7.3
-1.0	21.2	29.0	48.8	57.4	56.7	58.4	63.2	59.2	50.4	50.5	68.2	-19.4	1.0	18.1	30.7	37.6	37.9	40.6	46.1	41.3	28.7	16.2	7.5
2.6	15.6	34.3	44.3	54.2	54.7	58.6	63.8	61.8	52.6	42.1	29.8	-18.4	3.0	17.4	30.2	37.3	37.6	40.1	45.5	42.0	33.3	21.0	8.2
5.8	18.7	27.3	38.0	45.9	49.6	53.9	59.8	58.7	47.4	39.8	25.2	-14.1	2.5	19.0	28.8	35.0	34.5	38.5	42.7	37.6	30.3	19.2	8.1
-2.4	10.4	21.7	34.3	41.6	42.5	46.3	53.6	53.2	45.3	32.0	9.0	-23.6	0.3	15.9	27.7	34.5	34.4	38.0	42.2	37.3	28.0	15.7	7.4
-8.4	11.3	39.9	43.7	52.5	52.9	60.1	62.9	58.9	49.7	39.7	27.6	-21.7	0.8	19.6	30.4	39.1	38.2	41.4	47.0	42.4	32.8	20.2	7.6
12.6	24.2	41.0	42.1	49.7	52.9	55.7	63.8	60.4	52.0	40.6	34.9	-22.4	1.3	18.5	27.7	35.6	37.0	40.5	44.9	39.9	31.6	20.0	8.0
10.0	20.9	42.3	41.2	48.7	53.1	58.2	63.0	61.2	51.3	39.8	25.1	-7.9	3.8	21.2	30.4	36.6	38.4	42.0	48.8	45.0	33.3	22.4	8.9
-0.1	14.2	26.7	39.5	51.1	51.8	58.1	64.8	62.0	51.3	40.3	27.5	-21.3	0.2	17.8	28.9	35.5	37.6	40.4	45.1	42.2	32.5	19.2	7.8
-3.0	8.1	24.7	39.0	41.8	53.9	60.9	67.0	63.9	53.9	43.2	25.0	-21.9	1.1	15.3	28.1	33.9	33.8	36.4	41.2	36.7	26.2	16.2	7.3
-9.2	11.5	37.1	41.0	46.6	54.2	56.7	62.3	60.0	51.5	40.5	27.4	-23.0	-0.6	16.0	26.9	33.2	32.7	35.7	39.0	34.8	25.4	16.5	7.4
-4.4	16.9	36.9	41.7	47.7	51.2	55.4	61.1	58.1	49.3	37.9	58.2	-22.4	1.0	17.4	29.4	35.1	35.8	39.1	44.3	41.0	31.1	16.8	7.3
-11.1	9.4	39.0	47.0	50.7	50.4	57.2	62.2	57.9	48.5	36.9	21.2	-22.7	0.9	18.1	29.4	36.4	37.4	40.8	46.5	41.6	31.7	19.0	7.3
-14.0	12.8	37.8	39.0	65.6	60.1	57.8	62.3	60.0	50.7	37.8	24.3	-24.3	0.4	17.3	28.0	38.2	38.4	40.1	45.8	41.5	29.4	17.4	7.3
-4.0	10.5	37.0	39.9	49.4	50.6	54.9	62.2	61.1	52.3	39.4	23.3	-22.6	0.7	17.9	27.5	36.6	37.1	39.8	44.5	40.1	29.4	17.1	7.2
11.6	20.0	39.9	59.8	65.7	66.4	64.1	63.1	62.4	55.7	49.7	39.0	-21.6	2.0	19.6	34.6	41.1	39.5	41.3	46.0	42.8	32.3	18.6	7.8
-4.2	17.1	39.4	45.8	57.1	54.4	57.2	64.5	61.4	55.3	50.1	39.0	-22.4	1.4	18.6	29.5	36.3	37.9	42.0	46.0	42.2	33.1	17.7	7.7
-3.8	14.2	38.6	43.7	52.9	55.9	55.7	62.0	58.8	54.2	48.8	34.0	-20.7	1.5	17.5	30.1	37.5	37.5	41.2	46.3	42.2	35.2	25.9	10.5
3.7	23.2	33.0	44.2	46.7	51.2	56.6	63.4	59.5	49.2	40.5	28.8	-14.6	6.4	24.9	34.3	39.1	40.8	44.0	47.7	46.1	42.8	35.2	22.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/3 LAS 6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-22.6	-19.3	-13.9	-8.3	-5.7	-0.7	11.9	15.6	16.3	20.7	22.3	38.2	29.1	33.3	35.6	33.1	39.4	41.0	39.4	39.4	41.7	42.5	43.8	41.4	39.9	37.0	33.4	29.8	27.2	23.3	19.8	17.2	13.3	9.1	5.3	1.0
-30.1	-24.8	-14.9	-11.7	-4.9	5.1	5.4	11.9	17.4	20.1	23.9	29.2	29.4	34.2	32.1	32.2	31.2	30.6	33.3	36.7	35.9	37.7	38.3	36.9	35.4	32.3	28.0	23.8	20.1	15.7	12.2	9.0	6.2	4.2	2.6	0.0
-28.8	-18.3	-16.5	-8.9	-3.2	2.1	10.7	12.4	19.2	21.5	26.2	29.2	30.8	33.6	35.4	37.2	40.3	43.0	45.9	46.4	46.9	49.9	51.4	48.3	47.2	44.2	40.9	39.0	35.7	32.3	28.8	24.6	18.2	11.7	5.5	0.6
-18.7	-12.1	-10.1	-5.2	-0.7	5.1	12.4	16.5	24.4	23.7	37.7	33.0	44.7	42.0	37.7	40.2	42.1	44.0	45.8	47.4	46.6	47.2	48.0	49.2	47.6	46.6	45.0	43.9	42.0	42.4	40.6	35.2	32.4	25.7	22.5	13.6
-19.4	-14.1	-11.5	-7.3	0.7	6.2	13.9	17.4	19.8	21.8	27.5	34.7	32.5	35.3	37.9	38.5	44.2	42.4	43.5	45.3	47.3	51.0	53.6	51.4	50.5	48.0	43.8	40.9	37.9	34.7	32.7	26.0	20.3	13.0	6.8	1.5
-21.0	-15.3	-14.7	-6.6	0.5	5.7	9.7	14.8	17.1	20.2	26.0	28.5	28.7	32.8	33.1	30.7	30.5	29.3	30.9	33.8	35.6	37.5	39.0	37.0	35.1	32.3	29.7	27.5	24.9	23.9	18.0	13.7	9.8	6.3	3.9	0.7
-28.2	-20.7	-9.3	-7.4	-4.0	1.4	8.8	12.4	20.6	22.5	27.6	32.1	34.9	35.5	34.3	35.6	37.9	37.9	38.4	40.0	43.1	47.5	49.1	49.1	50.4	48.2	45.0	41.1	37.8	33.7	29.2	22.1	12.8	5.9	3.1	0.1
-28.5	-23.6	-21.9	-16.6	-6.7	1.9	8.8	13.9	20.2	26.9	28.9	29.4	31.4	36.9	34.8	36.6	40.5	37.8	38.5	40.2	42.4	45.8	46.8	45.2	42.9	40.6	37.4	34.0	30.5	27.1	21.8	17.2	11.4	6.5	3.4	0.2
-5.3	0.9	3.0	14.6	14.4	16.7	21.2	22.7	29.3	25.5	30.5	32.1	37.7	42.3	38.8	41.0	47.2	42.7	42.6	45.5	47.2	49.7	52.5	51.0	49.9	48.5	45.6	43.0	39.2	35.4	31.4	27.7	22.6	17.3	14.4	6.4
-12.1	-10.8	-5.1	-2.8	-2.3	3.2	8.7	15.1	23.3	27.3	24.3	24.9	30.5	33.6	31.9	34.2	34.3	34.3	34.5	36.6	40.8	43.6	45.1	44.5	44.4	40.7	35.0	30.6	28.6	25.1	20.8	16.2	10.5	6.3	3.7	0.2
-19.1	-18.1	-9.0	-8.4	-4.9	0.3	9.6	11.8	17.5	21.0	23.9	30.3	30.1	32.4	34.4	34.7	35.9	35.4	36.3	38.3	40.8	43.3	44.2	43.6	42.1	40.5	37.0	32.2	28.0	23.6	18.2	13.8	9.3	5.4	3.4	0.1
-30.1	-28.6	-21.8	-14.5	-6.7	0.9	4.6	12.9	16.2	19.3	26.3	25.5	26.1	32.9	30.8	29.3	31.1	31.2	30.6	32.0	34.9	36.5	38.1	45.9	40.4	35.7	29.3	27.1	24.9	21.9	19.6	20.2	6.6	4.2	3.0	0.0
-30.1	-29.2	-18.1	-9.0	-2.6	2.0	11.2	15.6	21.5	23.6	25.0	30.8	34.9	37.8	41.1	35.1	34.2	34.9	35.2	38.5	41.1	42.0	44.3	44.5	42.9	40.7	35.3	31.1	27.2	22.1	18.2	17.9	8.3	4.9	3.2	0.0
-30.1	-25.5	-15.0	-9.5	-5.7	5.5	9.7	11.1	20.8	21.1	25.2	27.9	33.9	35.3	44.9	42.1	40.6	39.7	39.9	39.9	41.7	44.9	43.7	41.4	42.0	41.0	40.7	37.6	35.3	31.6	28.5	23.6	18.5	13.6	8.5	2.6
-30.1	-29.2	-20.9	-8.4	-4.1	3.6	9.8	13.2	26.8	27.2	27.8	31.0	33.6	46.2	36.8	42.4	41.4	38.5	39.1	41.0	44.0	44.8	46.5	45.5	46.1	44.0	42.0	37.8	35.0	29.9	25.2	20.1	10.5	5.1	2.7	-0.1
-30.1	-29.2	-18.4	-13.0	-3.7	2.0	9.7	13.9	19.3	25.4	25.2	28.9	32.8	38.4	35.2	37.5	39.9	39.1	40.2	42.0	43.9	46.1	48.1	47.0	45.0	43.3	39.1	35.4	32.9	29.9	26.8	23.1	18.4	13.3	8.0	2.2
-17.8	-17.9	-13.9	-11.1	-3.5	3.8	5.7	15.4	21.3	33.8	31.7	35.3	40.4	37.4	37.0	37.6	34.3	36.0	36.2	36.1	39.2	41.4	42.7	41.3	40.5	38.0	34.4	31.7	28.6	23.5	19.7	18.9	12.8	9.8	5.2	1.1
-18.4	-14.2	-15.5	-8.3	-2.5	2.3	9.0	14.1	18.5	33.2	30.5	30.5	32.9	39.4	41.1	34.6	35.7	39.7	50.1	42.5	51.5	53.4	50.5	50.5	50.9	46.2	43.8	37.6	31.7	24.3	17.1	12.6	8.4	5.2	2.9	0.2
-30.1	-25.8	-24.2	-11.0	-2.6	3.0	11.3	18.4	18.6	26.0	32.3	33.8	40.7	40.7	38.3	39.0	40.7	39.6	39.8	41.2	43.3	46.4	47.1	46.8	45.7	43.9	40.8	38.5	36.3	32.6	28.1	23.3	15.8	9.4	5.5	1.6
-17.8	-16.1	-9.0	-5.2	3.1	9.0	21.3	29.8	28.7	29.7	36.4	37.8	42.5	39.6	41.0	42.8	43.7	44.5	44.9	46.2	47.9	51.6	52.1	51.3	50.2	47.2	46.1	45.1	42.4	40.0	37.5	35.9	32.1	27.2	20.9	14.1
-14.0	-5.8	-2.9	6.1	6.1	9.7	21.8	15.6	23.0	25.4	24.5	36.4	38.3	37.6	36.2	37.7	38.9	43.6	43.3	41.9	43.5	46.0	45.9	45.3	44.8	42.7	39.5	40.6	38.2	34.6	32.1	31.2	27.2	21.7	15.4	9.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ST-03 Interval

1/3 LAeq	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	-23.4	-19.3	-14.1	-9.2	-3.6	4.1	11.4	20.1	30.4	32.8	31.3	40.0	40.2	36.6	38.3	39.6	44.8	43.0	43.6	44.4	46.3	48.7	50.5	50.3	49.0	47.0	43.7	40.4	37.2	34.5	31.3	28.1	22.9	18.0	13.3	5.8
	-25.9	-20.7	-15.6	-9.2	-3.3	4.0	9.8	15.8	22.9	23.8	26.4	36.8	39.0	40.7	41.5	40.1	42.5	42.6	44.1	47.9	48.0	49.9	51.9	50.1	49.4	47.2	43.6	40.2	36.3	32.8	28.9	24.3	18.8	13.5	8.9	2.9
	-24.9	-20.3	-14.3	-8.5	-1.0	5.2	11.1	23.4	27.4	26.0	26.4	30.8	31.4	35.8	35.8	38.4	39.0	40.2	42.3	42.8	44.8	49.1	51.5	49.0	47.4	45.5	41.7	38.3	34.9	31.6	29.3	28.1	23.0	15.1	9.0	2.7
	-21.3	-16.8	-10.3	-2.7	2.4	8.2	13.3	16.9	21.9	25.3	31.3	36.2	44.6	42.6	39.2	42.4	43.5	42.8	43.8	43.9	46.2	49.5	50.8	49.8	48.8	47.4	43.5	40.4	37.1	35.0	33.5	32.1	32.5	25.1	47.9	51.2
	-18.1	-12.5	-7.5	-1.6	2.5	7.4	13.7	21.9	22.7	26.5	31.5	34.5	38.3	39.9	43.2	42.4	44.7	45.1	46.7	47.4	49.2	52.9	54.2	53.6	52.9	50.8	47.6	44.2	40.4	36.9	33.3	28.0	22.3	16.8	11.7	5.0
	-17.4	-10.4	-5.0	0.2	5.4	9.3	14.3	16.5	21.4	24.6	27.9	29.4	30.2	34.4	36.0	35.8	37.8	37.9	39.1	40.6	43.1	46.5	48.0	47.3	46.3	44.0	40.3	37.0	33.6	30.9	26.1	23.0	19.7	11.4	6.4	1.7
	-24.9	-19.6	-13.5	-7.9	-3.2	2.6	8.5	12.7	17.3	19.8	25.5	28.3	29.4	33.1	32.2	32.6	32.5	32.8	32.9	35.2	38.1	41.0	42.1	41.5	40.4	38.1	34.2	30.6	29.1	27.8	20.8	12.6	7.3	4.5	3.0	0.0
	-26.8	-23.0	-16.1	-11.1	-4.2	4.9	13.3	23.8	26.8	25.6	29.2	34.7	38.6	41.4	37.5	40.3	43.6	44.2	44.8	47.7	50.1	52.7	53.6	52.7	51.8	49.1	45.7	42.5	39.0	35.9	32.4	28.3	22.9	17.9	12.5	5.7
	-15.7	-8.3	-3.3	4.1	7.6	12.2	16.7	26.4	28.6	25.2	28.8	31.8	37.4	38.0	36.1	39.7	41.8	41.4	41.6	44.0	46.2	49.9	52.1	51.3	50.0	47.9	44.8	42.2	38.1	34.9	30.9	26.7	22.3	18.1	16.5	3.7
	-11.6	-5.8	-1.8	3.2	8.3	12.7	17.5	20.9	31.6	27.8	29.4	32.9	34.6	36.8	36.4	40.4	43.4	42.8	44.0	46.0	48.5	52.2	53.4	51.8	51.1	48.8	45.4	42.2	38.8	35.4	31.2	26.9	21.9	16.4	11.5	4.7
	-21.8	-15.2	-10.3	-5.7	-0.3	5.4	13.4	16.3	21.6	26.4	27.0	31.0	35.1	38.2	39.5	41.1	41.3	41.2	43.6	45.1	48.2	52.0	51.9	51.7	51.3	47.4	44.0	41.0	37.5	33.9	30.2	26.0	20.6	15.7	10.9	4.2
	-23.6	-18.3	-12.9	-8.8	-3.3	3.1	7.8	13.1	17.5	21.0	24.9	31.1	32.4	32.8	32.8	35.2	38.1	39.8	44.3	42.3	44.1	48.9	51.3	49.1	48.0	47.5	43.7	39.3	35.0	30.8	27.8	24.3	17.6	10.9	5.7	1.5
	-29.4	-26.2	-17.9	-6.1	-0.1	4.8	10.7	19.7	25.3	24.7	28.7	32.8	33.9	36.4	35.5	38.0	40.8	41.3	40.7	42.9	45.5	48.0	49.7	50.1	48.8	46.7	43.4	40.1	36.2	32.2	28.4	25.4	23.1	14.6	9.5	3.4
	-29.9	-24.5	-15.0	-8.0	-2.6	8.0	15.3	18.0	26.8	24.3	28.5	31.3	32.5	36.4	37.1	38.4	41.0	39.8	40.9	42.6	45.2	49.0	50.0	48.8	49.0	45.9	42.7	39.4	36.4	32.3	28.8	25.1	20.2	16.8	42.9	31.6
	-29.9	-26.9	-17.6	-11.3	-3.5	3.9	11.8	24.2	25.2	27.7	34.5	35.1	37.4	43.0	37.6	40.0	40.4	40.7	42.2	43.4	46.1	48.9	49.7	48.4	47.8	44.7	42.1	38.9	35.9	31.8	28.3	24.0	17.0	11.4	6.0	1.0
	-29.7	-27.9	-19.6	-10.9	-4.2	3.8	12.7	22.6	27.4	28.3	27.5	30.6	45.4	53.7	46.0	47.6	45.8	46.2	44.3	45.0	47.3	50.7	51.4	50.5	50.0	47.5	44.3	40.9	37.0	33.3	29.7	26.4	20.7	15.2	9.4	3.4
	-25.2	-22.2	-14.5	-9.2	-3.6	3.9	13.4	21.4	23.7	26.5	28.1	31.0	33.9	39.8	36.1	37.7	38.3	40.3	40.7	41.0	42.4	46.0	48.6	47.0	46.9	45.9	42.6	39.1	34.6	30.6	26.1	22.4	16.3	11.0	6.1	1.3
	-13.0	-8.1	-0.9	2.1	6.7	10.5	21.1	26.6	31.2	35.8	41.8	47.1	45.1	48.9	51.6	50.6	47.7	50.6	49.7	48.1	49.0	50.3	51.2	49.5	48.9	49.4	45.8	43.2	40.3	37.1	35.4	33.3	28.9	25.8	17.6	10.2
	-23.9	-18.8	-12.2	-7.6	0.3	7.0	12.1	16.0	29.0	31.5	31.7	34.3	40.7	42.7	39.9	39.7	41.7	42.2	42.0	42.6	46.2	49.6	50.3	49.6	49.1	47.0	43.9	41.4	39.5	37.1	35.2	31.9	27.2	22.9	19.1	13.8
	-22.5	-18.2	-12.1	-3.9	3.8	5.8	14.5	22.8	27.5	27.7	31.7	34.6	37.8	40.9	41.7	42.6	44.2	43.7	43.4	44.4	46.2	48.6	50.5	50.4	49.9	47.9	45.6	43.1	40.3	37.3	34.8	32.0	27.1	21.6	15.5	8.6
	-16.2	-9.2	-3.1	3.0	7.6	14.4	23.0	25.6	26.1	28.1	33.6	37.8	38.2	37.8	37.0	40.5	42.2	43.5	43.5	44.8	48.3	52.1	52.0	51.4	51.1	47.7	44.4	43.0	40.2	36.9	34.1	32.5	28.5	23.1	16.9	10.5
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

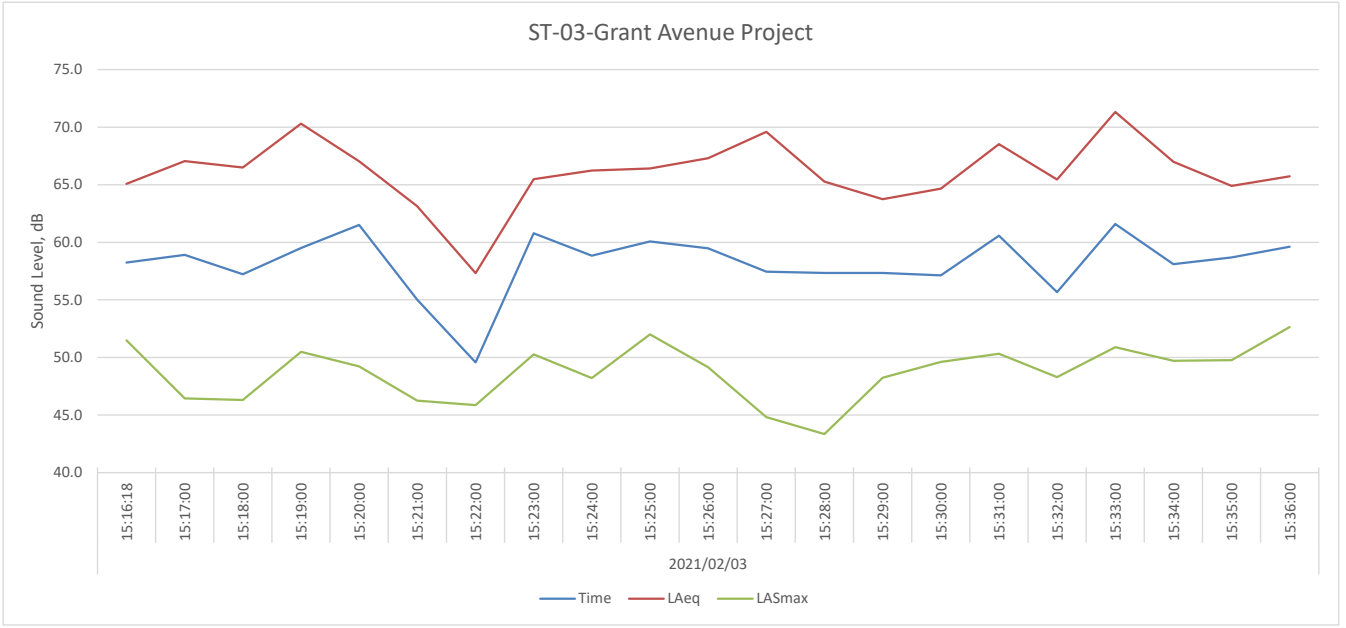
1/3 LASmax	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	-16.5	-11.9	-7.2	-4.3	2.3	8.2	17.2	30.5	43.4	45.4	38.1	46.5	48.4	43.6	45.0	46.9	50.6	47.9	48.9	51.0	52.2	55.8	58.1	58.3	56.7	54.7	51.5	48.3	45.3	43.2	39.9	37.9	32.7	28.0	24.0	15.8
	-20.0	-13.3	-10.7	-3.7	1.8	11.1	17.6	26.2	33.2	30.6	32.9	42.8	53.3	52.8	53.1	51.1	50.1	52.8	53.0	59.7	57.5	60.1	62.1	58.3	57.9	55.6	52.6	49.5	45.2	41.9	38.0	33.8	28.4	24.0	19.9	12.3
	-13.8	-11.0	-5.2	0.2	11.0	16.6	18.5	36.8	36.9	36.9	32.5	36.4	36.8	43.1	41.4	47.6	47.0	49.2	51.3	51.4	53.8	59.3	61.5	58.2	56.5	54.6	51.3	47.7	44.0	41.6	40.5	41.5	37.0	27.9	20.9	12.5
	-12.1	-9.5	-1.6	8.2	12.7	20.0	23.9	26.2	27.7	32.0	42.0	48.5	57.2	51.3	44.5	53.8	54.5	52.6	53.6	51.4	55.1	58.9	59.3	57.3	56.4	55.2	50.7	47.4	44.9	44.7	43.7	45.9	47.7	40.3	63.4	66.6
	-9.8	-2.5	0.6	7.1	11.3	13.0	22.4	31.7	32.6	34.1	39.3	43.1	48.1	47.4	53.9	50.4	51.0	52.8	54.5	53.5	55.7	59.4	59.9	60.1	58.8	57.2	54.0	50.7	46.6	42.7	40.5	35.5	32.3	27.8	24.2	16.8
	-10.0	-2.5	4.7	10.1	13.5	17.1	20.0	21.7	26.9	33.2	36.3	34.9	33.8	38.2	45.3	43.0	46.4	44.5	47.5	48.9	51.0	53.6	56.0	56.1	56.1	54.1	49.5	46.4	40.7	38.0	35.5	35.8	33.5	23.7	17.3	10.4
	-15.2	-7.3	-3.3	1.8	4.6	8.0	12.6	17.0	20.7	23.4	32.3	32.3	37.4	36.9	40.8	35.7	38.4	39.9	39.2	41.1	43.7	47.5	49.3	49.2	50.5	48.2	45.2	42.6	40.5	36.8	31.6	22.1	12.8	6.2	3.9	0.6
	-21.6	-16.5	-9.3	-6.2	1.2	11.0	20.9	33.6	39.6	30.8	36.8	43.8	47.6	51.7	42.5	46.0	49.8	50.3	51.0	54.8	57.9	58.8	59.1	57.8	56.6	54.0	50.8	47.6	44.4	40.8	37.7	34.1	29.5	26.3	20.7	13.8
	-1.2	6.0	10.6	15.8	19.9	23.1	26.8	40.1	40.6	32.8	36.0	42.3	47.8	46.9	41.3	46.1	49.5	49.7	48.3	51.6	52.9	57.1	60.3	59.6	57.2	56.0	52.7	50.6	44.9	42.0	38.6	35.0	34.3	31.8	32.8	11.6
	-2.0	4.4	8.0	14.4	15.9	19.5	24.3	26.4	42.5	35.8	35.9	39.5	45.8	44.2	41.6	48.1	50.1	49.0	51.1	53.3	54.8	59.4	59.4	58.1	58.1	56.9	52.8	49.1	45.8	41.7	37.7	33.9	29.4	23.4	18.7	11.5
	-12.2	-5.3	-1.4	2.3	7.9	12.7	22.5	20.7	25.8	35.3	31.7	36.4	42.4	46.2	50.7	48.6	47.7	47.1	50.8	53.0	56.0	61.1	60.4	60.6	60.3	55.4	52.4	49.1	45.8	42.2	38.5	35.0	29.9	26.1	21.2	13.2
	-15.7	-11.5	-3.6	-1.6	3.6	6.7	12.4	16.6	24.0	26.2	32.3	38.7	39.6	36.8	37.9	45.2	49.1	51.9	57.6	54.9	56.5	61.3	64.1	61.0	59.6	60.5	56.6	52.4	47.4	42.9	41.4	38.0	31.1	23.9	16.3	11.4
	-26.2	-20.5	-9.6	3.4	8.8	10.1	15.8	32.0	37.0	31.9	37.2	39.7	39.7	45.2	42.6	48.1	50.6	50.4	49.0	51.1	54.7	57.0	58.9	58.3	56.9	55.6	52.2	49.4	45.9	41.8	37.8	35.9	35.2	26.1	20.1	13.1
	-29.5	-17.4	-4.9	-1.4	2.7	16.7	24.4	23.7	36.8	29.6	39.6	40.5	39.0	44.7	45.9	46.2	48.2	47.3	48.5	49.6	52.8	57.6	57.0	56.0	55.5	53.2	49.7	46.9	44.3	39.5	35.6	32.6	30.7	28.9	58.1	47.2
	-28.3	-22.7	-11.4	-6.7	2.2	9.1	22.0	37.3	37.0	38.7	43.7	45.0	42.3	50.2	46.3	47.9	45.9	47.2	50.4	51.4	55.0	58.5	57.7	56.1	56.0	51.9	50.3	46.7	42.9	39.0	35.1	30.7	25.0	19.9	13.5	7.0
	-28.9	-25.6	-14.6	-5.3	0.3	12.6	23.5	32.6	37.6	36.8	33.9	35.4	60.0	64.7	58.5	57.0	54.8	54.9	52.8	52.4	54.1	57.4	58.5	57.2	56.9	55.4	52.7	49.3	44.2	39.6	36.2	32.3	28.4	22.8	17.5	10.1
	-16.7	-13.1	-5.1	0.0	2.9	9.7	26.6	35.5	34.4	34.9	36.6	37.2	40.7	48.9	43.6	44.5	46.7	47.4	48.2	50.8	51.3	56.0	59.0	56.9	57.5	57.1	54.1	50.6	45.7	42.3	37.8	32.9	28.1	22.0	15.7	8.2
	-1.1	2.8	11.5	11.2	16.9	18.4	28.9	35.0	39.3	43.5	51.8	59.7	55.7	61.4	63.5	61.8	58.9	63.7	62.0	57.7	57.1	58.4	59.5	56.9	56.0	60.6	55.5	53.4	50.3	47.5	46.7	45.4	41.1	38.5	28.7	20.2
	-14.9	-9.6	-4.3	-2.1	8.4	17.2	19.6	20.2	39.4	40.9	40.6	44.9	52.8	54.5	48.9	47.3	50.1	50.7	49.9	51.1	55.0	59.2	60.5	59.4	59.2	56.1	52.9	51.4	50.9	49.0	47.6	45.0	40.7	36.9	33.3	28.1
	-12.0	-9.2	-4.4	6.5	12.6	12.7	22.6	32.0	37.8	35.0	41.8	41.6	43.3	48.6	50.3	49.8	52.2	51.4	50.9	51.0	51.6	55.0	58.5	58.3	55.7	54.2	51.9	51.2	49.0	47.2	46.5	44.1	37.8	32.6	26.9	20.9
	-8.2	-3.8	2.9	9.6	13.5	22.9	26.2	31.5	29.8	31.5	41.4	41.9	43.5	40.5	41.4	45.3	46.6	47.0	47.6	50.5	54.6	59.3	58.4	58.3	57.8	53.2	50.2	46.9	43.7	40.6	37.6	35.8	32.3	27.6	20.9	14.3
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/3 LASmin	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	-30.1	-29.2	-21.6	-15.8	-9.3	-1.0	6.0	10.8	15.2	17.6	21.4	31.7	27.9	31.5	34.2	31.3	36.7	36.5	37.6	37.7	41.3	42.1	42.1	41.3	39.8	36.5	32.1	29.3
	-30.1	-28.4	-21.0	-14.8	-9.4	-1.1	3.6	8.3	12.9	17.8	22.0	27.7	26.1	31.3	30.5	30.8	30.0	29.1	32.8	34.6	35.4	37.2	38.0	36.3	35.2	32.0	27.2	23.3
	-30.1	-29.2	-23.5	-15.4	-8.6	-1.6	4.8	9.6	14.9	16.9	22.6	25.1	25.0	32.2	30.8	31.0	29.5	30.1	32.2	34.3	35.7	37.3	38.1	36.6	35.3	32.1	27.6	23.4
	-30.1	-28.0	-20.4	-13.6	-7.2	-0.9	5.7	11.1	15.7	17.7	24.3	26.8	29.1	33.0	32.3	33.1	33.3	32.2	34.4	34.6	37.5	40.5	41.1	41.1	38.8	35.4	30.7	26.6
	-30.1	-26.8	-20.0	-13.4	-5.1	1.6	7.1	9.5	14.8	20.2	23.1	27.3	29.9	34.3	31.6	32.7	32.5	32.4	32.9	34.5	37.3	39.2	41.1	40.9	39.0	37.2	33.2	30.0
	-28.0	-21.3	-15.7	-9.9	-3.6	0.1	7.1	11.1	16.9	18.5	21.0	25.2	25.7	31.4	29.2	29.5	29.3	28.9	30.7	33.2	35.5	37.5	38.9	36.9	35.0	32.2	29.6	26.7
	-30.1	-29.2	-25.6	-16.7	-9.8	-1.3	4.8	8.5	13.4	16.6	20.7	25.7	25.1	31.0	28.9	29.1	29.7	29.2	30.1	32.6	34.9	37.3	38.0	36.5	34.6	32.0	28.2	24.6
	-30.1	-29.2	-22.4	-17.8	-8.2	-0.6	6.2	12.5	16.8	20.9	23.6	28.1	30.4	34.5	31.2	33.0	33.7	33.3	33.8	35.8	38.7	41.1	42.9	41.7	40.1	36.9	33.5	30.1
	-30.1	-29.2	-24.1	-17.6	-9.1	0.2	6.2	10.0	16.5	19.0	20.8	25.0	27.0	31.9	31.1	32.1	32.6	31.7	32.3	34.6	37.7	39.3	40.3	39.3	37.1	34.6	31.1	28.0
	-23.2	-18.5	-9.8	-5.9	-2.5	3.1	8.3	12.4	18.3	21.1	23.2	24.9	29.0	32.4	31.4	32.6	33.7	33.8	34.2	36.3	39.4	43.5	45.0	43.7	42.3	39.9	35.0	30.5
	-30.1	-29.2	-22.6	-14.8	-9.5	-1.3	6.1	10.4	15.1	20.2	22.2	25.0	29.1	31.0	30.3	32.3	33.1	32.2	33.1	35.1	37.1	40.3	40.8	39.9	39.3	37.5	32.8	29.6
	-30.1	-29.2	-22.5	-16.1	-9.4	-0.6	3.6	7.3	13.7	17.4	18.7	25.0	25.3	30.2	28.9	28.4	29.3	28.8	29.9	30.8	33.1	35.8	37.3	36.1	34.6	31.0	27.2	23.5
	-30.1	-29.2	-25.1	-18.2	-10.5	-2.0	2.9	9.2	13.5	16.8	19.4	24.7	24.7	28.9	28.5	27.4	28.4	27.6	28.7	30.7	32.2	34.1	35.1	33.6	32.4	29.5	26.0	22.5
	-30.1	-29.2	-23.3	-15.0	-8.8	-0.9	6.1	10.1	15.3	18.9	21.7	25.6	27.4	31.6	30.1	30.2	32.3	30.6	31.5	33.8	35.8	38.5	40.0	39.4	37.7	36.3	32.7	29.0
	-30.1	-29.2	-24.0	-16.4	-11.2	-0.7	6.0	9.6	16.6	18.0	21.6	26.5	28.3	32.6	30.4	31.5	32.8	32.3	33.5	35.1	37.7	41.2	42.6	40.6	38.9	36.4	32.8	29.6
	-30.1	-29.2	-26.6	-18.2	-9.2	-1.4	4.8	11.0	14.4	19.5	22.1	23.4	27.9	33.7	33.2	33.8	33.5	32.5	33.4	34.4	37.2	41.1	41.6	40.3	39.1	36.1	31.8	27.6
	-30.1	-29.2	-23.8	-16.9	-9.4	-0.7	4.5	9.0	15.9	19.1	20.5	24.8	27.8	33.2	30.8	31.4	31.7	33.2	33.1	34.3	36.6	39.0	40.0	38.6	37.4	34.9	31.1	27.2
	-30.1	-29.1	-22.8	-16.9	-8.2	0.7	5.2	12.5	18.1	23.1	27.7	29.8	32.6	36.6	35.8	33.7	33.6	34.7	35.0	35.7	37.4	40.6	41.6	40.9	39.4	37.5	33.8	30.4
	-30.1	-29.2	-24.6	-13.8	-10.8	-0.8	4.8	11.2	16.4	19.2	23.2	25.1	29.1	33.7	30.2	31.2	33.2	33.7	34.2	36.0	39.2	40.7	41.3	41.0	39.3	36.7	34.3	31.3
	-30.1	-29.2	-23.6	-14.8	-6.1	-1.6	5.5	11.5	15.5	20.6	24.9	26.3	30.2	33.2	31.3	33.1	32.5	32.8	34.2	35.4	37.9	40.6	41.9	41.0	39.8	36.7	33.8	32.0
	-29.0	-20.7	-16.5	-7.5	-3.9	5.3	15.7	14.9	22.3	24.8	24.4	31.4	33.0	35.2	31.7	34.6	36.8	36.2	37.0	38.5	40.6	42.3	43.4	43.2	42.7	41.3	38.7	40.3
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4000	5000	6300	8000	10000	12500	16000	20000	LAS2.00	LAS8.00	LAS25.00	LAS50.00	LAS90.00	LAS95.00	Ovrld.	OBA Ovrld.	Marker
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	No	No	
26.1	23.0	19.7	15.0	10.2	6.4	3.2	0.1	64.9	64.2	57.7	56.4	52.1	51.8	No	No	
19.7	15.6	12.1	8.8	6.1	4.0	2.4	-0.1	66.5	65.6	58.4	52.7	47.0	46.7	No	No	
20.1	15.8	12.1	8.7	5.9	3.9	2.5	-0.1	65.6	62.5	56.9	52.6	47.3	47.1	No	No	
23.1	18.2	14.2	9.5	6.5	4.3	2.6	0.0	68.6	65.1	58.3	54.8	51.7	51.3	No	No	
27.8	24.8	19.7	12.7	8.0	5.0	3.2	0.1	66.7	66.1	63.9	58.5	50.8	50.0	No	No	
24.6	23.4	17.8	11.6	7.8	5.1	3.2	0.0	62.5	58.1	56.5	53.1	48.8	47.3	No	No	
22.5	20.0	14.0	8.4	5.6	4.0	2.8	-0.2	56.4	50.0	48.9	48.5	47.0	46.4	No	No	
27.2	24.2	18.6	13.4	7.7	4.4	2.8	-0.2	65.3	64.8	62.7	59.7	52.0	51.3	No	No	
26.6	24.4	18.4	13.3	8.6	5.0	2.9	-0.1	66.0	63.7	60.0	54.9	49.5	49.0	No	No	
28.5	25.0	20.7	16.1	10.4	6.3	3.6	0.2	65.7	64.2	61.4	58.2	53.7	53.0	No	No	
26.7	23.0	17.2	12.2	7.5	4.7	3.0	-0.1	67.1	65.1	59.8	53.4	50.5	49.9	No	No	
21.6	16.4	13.2	10.4	5.3	3.9	2.9	-0.2	68.9	61.8	52.4	50.2	47.0	45.4	No	No	
20.4	16.0	12.8	11.3	5.7	4.1	2.9	-0.1	65.0	63.2	58.1	51.2	43.9	43.6	No	No	
25.4	20.5	15.2	10.2	5.8	4.0	2.6	-0.2	63.5	62.9	58.8	52.4	48.8	48.6	No	No	
25.7	20.9	16.4	14.1	6.3	4.1	2.6	-0.1	63.9	62.4	56.6	54.6	51.1	50.5	No	No	
23.4	18.2	13.9	12.9	5.6	3.9	2.5	-0.1	68.0	66.1	60.8	57.6	51.3	50.8	No	No	
23.9	20.0	15.0	11.3	5.6	3.9	2.5	-0.1	64.6	59.7	54.7	52.3	49.0	48.5	No	No	
26.1	21.6	16.7	11.9	7.3	4.8	2.7	0.0	70.6	66.6	61.5	55.7	51.9	51.4	No	No	
26.5	21.5	15.9	11.2	7.0	4.7	2.8	0.0	66.7	65.2	56.1	52.9	50.9	50.5	No	No	
30.1	27.6	24.2	19.7	14.1	8.5	4.0	0.2	64.4	63.4	60.4	55.6	51.2	50.6	No	No	
37.9	34.2	31.7	31.1	27.0	21.2	15.4	8.7	65.5	64.8	61.1	55.3	53.1	52.8	No	No	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	No	No	

ST-03 Chart

Record #	Date	Time	LAeq	LASma	LASmin
1	2021/02/03	15:16:18	58.2	65.1	51.5
2		15:17:00	58.9	67.1	46.4
3		15:18:00	57.2	66.5	46.3
4		15:19:00	59.5	70.3	50.5
5		15:20:00	61.5	67	49.2
6		15:21:00	55.0	63.1	46.3
7		15:22:00	49.6	57.3	45.9
8		15:23:00	60.8	65.5	50.3
9		15:24:00	58.8	66.2	48.2
10		15:25:00	60.1	66.4	52
11		15:26:00	59.5	67.3	49.2
12		15:27:00	57.5	69.6	44.8
13		15:28:00	57.3	65.3	43.3
14		15:29:00	57.3	63.7	48.2
15		15:30:00	57.1	64.7	49.6
16		15:31:00	60.6	68.5	50.3
17		15:32:00	55.7	65.5	48.3
18		15:33:00	61.6	71.3	50.9
19		15:34:00	58.1	67	49.7
20		15:35:00	58.7	64.9	49.8
21		15:36:00	59.6	65.7	52.6



Roadway	Existing Traffic Volumes (vph)	Cumulative without Project Traffic Volumes (vph)	Cumulative Plus Project Traffic Volumes (vph)	**Increase from Cumulative without Project**	**Increase from Cumulative without Project**	Increase from Cumulative with Project	Increase from Cumulative with Project	Project's Contribution to Cumulative **Increase (%)**
Park Boulevard	793	873	908	80	10%	115	15%	30%
Page Mill Road	571	635	668	64	11%	97	17%	34%
Sherman Avenue	159	263	263	104	65%	104	65%	0%
Birch Street	686	779	806	93	14%	120	17%	23%
Sheridan Avenue	289	315	323	26	9%	34	12%	24%
Grant Avenue	161	177	179	16	10%	18	11%	11%
El Camino Real	3,905	4,373	4,418	468	12%	513	13%	9%
Oregon Expressway	3,214	3,562	3,597	348	11%	383	12%	9%
California Avenue	508	550	550	42	8%	42	8%	0%
Middlefield Road	1,698	1,786	1,791	88	5%	93	5%	5%

Roadway	Existing Traffic Volume (vehicles per hour)	Existing Plus Project Traffic Volume (vehicles per hour)	Percent Increase	Estimated Increase in Noise Level due to Traffic Volume (dBA)
Park Boulevard	793	826	4.20%	0.2
Page Mill Road	571	604	5.80%	0.2
Sherman Avenue	159	159	0.00%	0.0
Birch Street	686	713	3.90%	0.2
Sheridan Avenue	289	297	2.80%	0.1
Grant Avenue	161	163	1.20%	0.1
El Camino Real	3,905	3,907	0.10%	0.0
Oregon Expressway	3,214	3,249	1.10%	0.0
California Avenue	508	508	0.00%	0.0
Middlefield Road	1,698	1,703	0.30%	0.0

Increase in noise due to traffic volume equals:

10*log(Existing+Project traffic/existing traffic)

Roadway	Existing (vph)	Cumulative without Project (vph)	Cumulative Plus Project (vph)	Total Cumulative Increase over Existing (%)[1]	Estimated Increase in Traffic Noise Level due to Cumulative Plus Project
Park Boulevard	793	873	908	15%	0.6
Page Mill Road	571	635	668	17%	0.7
Sherman Avenue	159	263	263	65%	2.2
Birch Street	686	779	806	17%	0.7
Sheridan Avenue	289	315	323	12%	0.5
Grant Avenue	161	177	179	11%	0.5
El Camino Real	3,905	4,373	4,418	13%	0.5
Oregon Expressway	3,214	3,562	3,597	12%	0.5
California Avenue	508	550	550	8%	0.3
Middlefield Road	1,698	1,786	1,791	5%	0.2

Increase in noise due to traffic volume equals:

10*log(Cumulative+Project traffic/existing traffic)

Equipment	Ref value (dB)	Ref Distance (ft)	Distance between source & receptor (feet)	Noise Reduced By (dB)	Adjusted value	Decibel Addition Factor	Combined Noise Value
HVAC1	59	5	28	-14.96	44.04	0	44.04
HVAC2	59	5	105	-26.44	32.56		
HVAC3	59	5	28	-14.96	44.04		
HVAC3	59	5	44	-18.89	40.11		

Decibel Addition When Two Decibel Values Differ by:	Add This Amount to the Higher Value:	Example:
0 or 1 dB	3 dB	70 + 69 = 73 dB
2 or 3 dB	2 dB	74 + 71 = 76 dB
4 to 9 dB	1 dB	66 + 60 = 67 dB
10 dB+	0 dB	65 + 55 = 65 dB

Equipment	Reference Vibration Level PPV at 25 feet (in/sec)	Reference Vibration Level Lv at 25 feet (in VdB)
Impact Pile Driver[1]	0.644 (1.518)	104 (112)
Sonic Pile Driver[1]	0.170 (0.734)	93 (105)
Vibratory Roller	0.21	94
Large Bulldozer/Hoe Ram	0.089	87
Drill	0.089	87
Truck	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: FTA 2018, Caltrans 2020.

Acronyms: in/sec = inches per second; Lv = velocity level in decibels, based on the root mean square velocity amplitude; PPV = peak particle velocity; VdB = velocity decibels.

Notes:

1. Vibration levels shown for pile drivers are typical values, with upper range values in parentheses.

Reference PPV @25 ft (in/sec)	Reference Lv @25 ft (VdB)	Vibration Source	Sensitive Receptor	Minimum distance between Source and Receptor (Feet)	Estimated PPV at receptor (in/sec)	Estimated Lv at receptor (VdB)	Threshold for structural damage (in/sec PPV)	Threshold for human annoyance (VdB)
0.089	87	Drill Rig	Apartment Building	12	0.268	97	*0.5*	*80*
0.089	87	Drill Rig	Courthouse Plaza	12	0.268	97	*0.5*	*80*
0.089	87	Drill Rig	Palo Alto Courthouse	230	0.003	58	*0.5*	*80*
0.035	79	Jackhammer	Apartment Building	8	0.193	94	*0.5*	*80*
0.035	79	Jackhammer	Courthouse Plaza	8	0.193	94	*0.5*	*80*
0.035	79	Jackhammer	Palo Alto Courthouse	65	0.008	67	*0.5*	*80*
0.089	87	Large Excavator	Apartment Building	8	0.492	102	*0.5*	*80*
0.089	87	Large Excavator	Courthouse Plaza	8	0.492	102	*0.5*	*80*
0.089	87	Large Excavator	Palo Alto Courthouse	65	0.021	75	*0.5*	*80*
0.003	58	Small Excavator	Apartment Building	8	0.017	73	*0.5*	*80*
0.003	58	Small Excavator	Courthouse Plaza	8	0.017	73	*0.5*	*80*
0.003	58	Small Excavator	Palo Alto Courthouse	65	0.001	46	*0.5*	*80*
0.076	86	Trucks	Apartment Building	8	0.420	101	*0.5*	*80*
0.076	86	Trucks	Courthouse Plaza	8	0.420	101	*0.5*	*80*
0.076	86	Trucks	Palo Alto Courthouse	50	0.027	77	*0.5*	*80*
0.089	87	Large Crane	Apartment Building	100	0.011	69	*0.5*	*80*
0.089	87	Large Crane	Courthouse Plaza	100	0.011	69	*0.5*	*80*
0.089	87	Large Crane	Palo Alto Courthouse	50	0.031	78	*0.5*	*80*
0.21	94	Sheepsfoot Roller	Apartment Building	8	1.160	109	*0.5*	*80*
0.21	94	Sheepsfoot Roller	Courthouse Plaza	8	1.160	109	*0.5*	*80*
0.21	94	Sheepsfoot Roller	Palo Alto Courthouse	65	0.050	82	*0.5*	*80*

Source: calculated by AECOM 2020, based on reference values from FTA 2018, Caltrans 2020.

Notes: Vibration levels for large and small excavators are conservatively based on reference values for large and small bulldozers, respectively, as reference values were not available for all equipment types. Similarly, vibration levels for a crawler crane are conservatively based on reference values for a large bulldozer due to lack of equipment-specific reference values. Vibration levels for "sheepsfoot

Acronyms: in/sec = inches per second; Lv = velocity level in decibels, based on the root mean square velocity amplitude; PPV = peak particle velocity; VdB = velocity decibels.

Appendix E – Transportation Supporting Documentation

Contains:

- Vehicle Miles Traveled (VMT) Analysis
- Level of Service (LOS) Analysis

Traffic Impact Analysis
231 Grant Avenue Educator Workforce Housing

Project Number: 60642412

July 2021

Delivering a better world

Prepared for:

County of Santa Clara
Facilities and Fleet Department
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Table of Contents

Appendices

Figures

Tables

1 Executive Summary

This report presents the evaluation of roadway facilities for pedestrians, cyclists and transit users as part of the Traffic Impact Analysis (TIA) conducted for the 231 Grant Educator Workforce Housing project (the project) which proposes construction of an educator workforce housing complex with parking located at 231 Grant Avenue, in the City of Palo Alto, California. The project site is owned by the County of Santa Clara.

The site is approximately 61,000 square feet in area and currently contains a one-story office building with surface parking stalls. The proposed new development would have 110 residential dwelling units ranging from studios to 2-bedroom apartments, 1,120 square feet of 'flex space' that would potentially be used for retail or commercial activities and would be served by 112 parking spaces.

The purpose of this evaluation is to identify any potential impacts on the roadway facilities, excluding intersections, in the project vicinity and their corresponding potential mitigation measures. Intersection analysis is presented in a separate report for information only.

1.1 Transit, Pedestrian, and Bicycle Facilities

1.1.1 Existing Plus Project Conditions

Based on current observations, the existing transit, pedestrian and bicycle facilities in the project vicinity can support the additional users generated by this project. While a slight increase in delay for some transit routes is expected at intersections due to the added project vehicular trips, the total increase is expected to be less than one minute. In addition, the project would not include facilities or designs that impede the use of these infrastructures. The project therefore would not have adverse impacts on the surrounding transit, pedestrian and bicycle facilities under existing conditions and no mitigation measures are proposed.

1.1.2 Background Plus Project Conditions

The project would not include facilities or designs that impede the use of the surrounding transit, pedestrian and bicycle infrastructures. These facilities, under background conditions, are expected to support the additional users generated by this project. While a slight increase in delay for some transit routes is expected at intersections due to the added project vehicular trips, the total increase is expected to be less than one minute. The project therefore would not have adverse impacts on the surround transit, pedestrian and bicycle facilities under the background conditions and no mitigation measures are proposed.

1.1.3 Cumulative Plus Project Conditions

The project would not include facilities or designs that impede the use of the surrounding transit, pedestrian and bicycle infrastructures. These facilities are expected to continue to accommodate the additional users generated by this project under the cumulative conditions, especially with the planned improvements envisaged in the Palo

Alto Comprehensive Plan 2030. The total increase in delay for some transit routes expected at intersections due to the added project vehicular trips, would remain at less than one minute. The project therefore would not have adverse impacts on the surround transit, pedestrian and bicycle facilities under the cumulative conditions and no mitigation measures are proposed.

1.2 Site Access and Circulation

The project will have two access points (driveways); one each on Birch Street and Park Boulevard. The access points lead to a street-level parking garage for the development. The Birch Street access will be a 'right-in-right-out' configuration while the Park Boulevard access will cater to all movements. It is expected that these two driveways will be stop-controlled. The proposed 20-feet driveway width for both accesses meets the City's minimum design requirement and is sufficient for emergency vehicles (e.g. an ambulance) to access the garage. The proposed aisle width of at least 26 feet meets the City design requirements of 25 feet based on the proposed stall size except along the section with ADA compliant stalls which measures about 24 feet. However, this is unlikely to affect the maneuverability of vehicles as they would be 'nicely' arranged by the proposed stacked parking system. While the access on Birch Street is new, the project will close off the three accesses along Grant Avenue currently. As a result, there is a net decrease of two accesses for the project site as a result of the proposed development.

As on-street parking is allowed along Birch Street on the same side as the project site, parking prohibition for at least one car length immediately south of the proposed access is recommended to provide for additional sight-distance even though the intended landscaping is not expected to adversely affect sight-distance of the driveway. Audio and visual warning devices should be provided to warn cyclists and pedestrians when a vehicle is approaching the Birch Street garage exit. Warning signs reminding exiting motorists to watch out and yield to pedestrians should also be provided in the garage before/near the egress. These will serve a mitigation measures to the expected increase in conflicts with pedestrians and cyclists due to the new driveway (along Birch Street) and additional trips generated by the project.

There is a Class II bike lane along both sides of Park Boulevard. Therefore, audio warning should also be provided to warn cyclists and pedestrians when a vehicle is approaching the Park Boulevard garage exit. Warning signs reminding exiting motorists of crossing pedestrians/cyclists should also be provided. There is currently an access point to the project site along Park Boulevard. The proposed Park Boulevard driveway would relocate this current access point approximately 25 feet north. No new or additional access points are being created by the project along Park Boulevard and the proposed landscaping is not expected to adversely affect sight-distance of the driveway. However, the additional trips generated by the project will increase the frequency for conflict. As such, audio and visual warning devices should be provided to warn cyclists and pedestrians when a vehicle is approaching the garage exit to serve as a mitigation measure.

1.3 Parking

The project proposes a stacked parking system to manage its parking. No adverse queuing is expected on the public street due to this system based on the expected average arrival time of vehicles at the project driveways and system efficiency.

The minimum number of automobile parking required based on City of Palo Alto's requirements is 108 spaces, including five (5) ADA compliant spaces and 10 percent of electric vehicle spaces (11 spaces). The project is proposing to provide 112 parking spaces that include five (5) ADA compliant spaces. The project proposes to include 12 electric vehicle (EV) ready parking spaces. This meets the City's parking requirement for both gasoline and electrical vehicles.

Based on the City's code, the project needs to provide at least 114 long-term and 16 short-term bike parking. The project is planning to provide 134 long-term bike parking spaces within a secure, ground floor bicycle storage room, as well as 20 short-term bike parking spaces in the exterior public open spaces. The project would therefore exceed the City's minimum requirements for bicycle parking.

1.4 Vehicle Miles Traveled (VMT)

Using the Santa Clara Countywide VMT Evaluation Tool provided by the Valley Transportation Authority, the residential portion of this proposed development is screened out under the City's screening criteria for being located in a low VMT area, with 6.05 home-based VMT per capita, which is more than 15 percent less than the countywide average of 13.33 VMT per capita. The proposed 1,120 square feet of 'flex space', potentially to be used for retail services like a small eatery or coffee shop, qualifies as small local-serving retail of less than 10,000 square feet. As such, it is also screened out under the modified CEQA guidelines adopted by the City. Because both the residential and retail portions of the project meet the screening criteria, no significant VMT impact is expected.

1.5 Transportation Demand Management (TDM)

The developer for this project is committed to ensure that alternatives to drive-alone commute trips are available to the project residents. Work is therefore currently in progress to develop a comprehensive transportation demand management program that will be shared and discussed with the County and City of Palo Alto in due course.

1.6 Construction Traffic

The project developer recognizes that some inconvenience to nearby road users and residents during the construction is inevitable. However, such inconvenience will be minimized through working closely with the City of Palo Alto and coordinating with other construction in the vicinity. The developer will adhere to the guidelines laid out by the City in its 'Traffic Control Plan Requirement' and 'Public Works Standard Specifications' and will provide a feedback channel for any affected public. Construction traffic will adhere to the permitted City truck route and approval from the City will be sought for any deviations needed.

2 Introduction

This report presents the evaluation of roadway facilities for pedestrians, cyclists and transit users as part Traffic Impact Analysis (TIA) conducted for the 231 Grant Educator Workforce Housing project, which proposes construction of a mixed-use development with parking located at 231 Grant Avenue, Palo Alto, California. The project site is owned by the County of Santa Clara but is within the incorporated area of the City of Palo Alto.

The purpose of this evaluation is to identify any potential impacts on the roadway facilities, excluding intersections, in the project vicinity and their corresponding potential mitigation measures. Analysis of level of service (LOS) for intersections is presented in a separate report for information only.

2.1 Project Description

2.1.1 Existing Site

The site is located at 231 Grant Avenue, near Oregon Expressway. An existing one-story building (approximately 6,800 square feet) used by approximately 10 employees currently occupies the site bounded by, Grant Avenue to the north, Park Boulevard to the east and Birch Street to the west. Access to the existing building is via four driveways, three on Grant Avenue and one on Park Boulevard. The Park Boulevard driveway is accessible by all movements as Park Boulevard is undivided. The Grant Avenue driveways, on the other hand, have a 'right-in-right-out' configuration because the section of Grant Avenue fronting the project site is one-way eastbound.

2.1.2 Proposed Site

The proposed development includes a new four-story mixed-use building of 110 residential units and associated amenities such as a residents' lounge, activity room, and laundry. The project would also include a 'flex space' of 1,120 square feet, which could be used for retail or commercial purposes, and approximately 6,400 square feet of outdoor public open space. A total of 112 (car) parking spaces and 146 bicycle parking spaces would be provided. One full movement driveway will be provided along Park Boulevard and the second access along Birch Street will be of a 'right-in-right-out' configuration as Birch Street is divided. **Figure 2-1** shows the Project site plan.

2.2 Study Area

The study area is bounded by California Avenue to the north, Page Mill Road to the south, Alma Street to the east and El Camino Real (ECR) to the west. While Oregon Expressway and California Avenue provide local access to the project site, freeway US 101 provides regional access to the project site. U.S. 101 can be accessed via the interchange at Oregon Expressway. Further to the west, I-280 and Foothill Expressways bring motorists from the region to the study area.

2.3 Study Scope and Approach

The following six scenarios were evaluated to identify the potential transportation impacts of the project on the roadway facilities:

1) Existing Conditions – Current conditions
2) Existing plus Project Conditions – current conditions from *Scenario 1* plus the proposed project.
3) Background Conditions – Current conditions with approved but not completed projects. This is defined as the 'Background without project' conditions.
4) Background plus Project Conditions – Background conditions from *Scenario 3* plus the proposed project.
5) Cumulative – Conditions in 2030 as proposed in the 2030 Palo Alto Comprehensive Plan
6) Cumulative plus Project Conditions – Cumulative conditions from *Scenario 5* plus the proposed project

Figure 2-1 Conceptual Site Plan

Source: Mercy Housing and Abode Communities, 2020

3 Existing, Background, and Cumulative Conditions

This section describes the existing, background and cumulative conditions in the vicinity of the project in terms of the general roadway, transit, pedestrian, and bicycle facilities.

3.1 Major Roadways in Study Area

Regional access to the Project site is provided by US 101 and I-280.

- US 101 – This eight-lane freeway extends from San Francisco to San Jose with a posted speed limit of 65 mph. In the vicinity of the Project site, this freeway runs in the north-south direction. It has three mixed-flow lanes in both directions, and one carpool lane in each direction with hours of operation during 5am-9am and 3pm-7pm. US 101 is under the jurisdiction of Caltrans. Access to the freeway from the project site is provided via ramps at Oregon Expressway Interchange.
- I-280 – This north-south freeway also connects San Francisco and San Jose. It has four mixed-flow lanes in each direction in the vicinity of the project although a short section of the southbound drops to three lanes between the Page Mill Road On/Off Ramps. Access to the freeway from the project site is provided via ramps at Page Mill Road Interchange.

Local access to the Project site is provided by Oregon Expressway, Page Mill Road, ECR and California Avenue. Direct access to the project site is from Grant Avenue and Park Boulevard. These roadways are described below.

- Oregon Expressway – This east-west 4-lane divided expressway connects ECR to US-101, with accesses to local residential areas in between. Oregon Expressway has a posted speed limit of 35mph and connects to Page Mill Road west of ECR. Project site access to/from eastbound Oregon Expressway is via Park Boulevard and the short section of Page Mill Road. Project access to westbound Oregon Expressway is via Birch Street.
- El Camino Real (ECR) – Also known as SR 82, ECR is a major north-south arterial extending from the San Francisco area all the way to San Jose with a posted speed limit of 35mph. It provides direct access to developments along both approaches. Under existing conditions, Grant Avenue provides direct ingress to the project site from ECR.
- Page Mill Road – This east-west roadway extends from Skyline Boulevard west of the project site to ECR, connecting to Oregon Expressway. It is a 4-lane divided arterial road between ECR and I-280. The posted speed limit is 50mph between I-280 and Foothill Expressway but drops to 35mph between Foothill Expressway and ECR. Page Mill Road transitions to Oregon Expressway east of ECR with a short section of the roadway that continues to the California Avenue Transit Station. A Class 2 bike-lane is provided from ECR to Foothill Expressway on both approaches.

- California Avenue – This east-west collector roadway connects Amherst Street to Park Boulevard. It is primarily 2-lane undivided with Class 2 bike lanes along both approaches between Amherst Street and ECR. On-street parking is provided along California Avenue with a posted speed limit of 25mph.
- Grant Avenue – This east-west local roadway connects ECR to Park Boulevard. It is primarily 2-lane undivided except between Birch Street and Park Boulevard (i.e., immediately adjacent to the project site) where it is one-way eastbound. It has a posted speed limit of 25mph with on-street parking allowed on both approaches. It provides direct access to the project site under existing conditions but will not have access to the project site under the proposed project layout.
- Park Boulevard – This roadway starts at the intersection of ECR and Serra Street, first going east-west for a short section before becoming north-south, extending past West Charleston Road where it connects to Whitclem Drive. In the project vicinity, it is 2-lane undivided, with a Class 2 bike lane on both approaches up to Chestnut Avenue. On-street parking with a 2-hr limit is provided between California Avenue and Sheridan Avenue. In the project vicinity, Park Boulevard is designated as a collector road with posted speed limit of 25mph. It provides direct access to the project site under existing conditions as well as under the proposed project layout.
- Birch Street – This north-south local street starts at the east-west section of Park Boulevard and continues to Oregon Expressway. It is 2-lane undivided with on-street parking up to California Avenue. It becomes divided from California Avenue to Oregon Expressway. This latter section in the project vicinity is designated as a collector road with a posted speed limit of 25mph. Northbound Birch Street will provide direct access under the proposed project layout.

3.2 Existing Traffic Conditions

Due to the global COVID pandemic that was occurring during preparation of this study, existing traffic volumes in the project vicinity would not be an accurate representation of normal conditions. Therefore, past data provided by the County and from two recently approved developments in the project vicinity were used as base volumes from which the 2020 (‘Existing’) volumes were extrapolated. This is a conservative approach as it assumes ‘pre-COVID’ level of traffic, rather than the dampened traffic volumes present during the pandemic. The County provided the PM peak hour data for the intersection of ECR/Page Mill Road (int #5) and Middlefield Road/Oregon Expressway (int #8), for the year 2019 and 2018 respectively. Remaining volume data were obtained from the studies for housing development at 2755 ECR (Hexagon Transportation Consultants, Inc., January 2018) and the Palo Alto Public Safety Building and Public Parking Structure (Fehr & Peers, May 2018). Counts for these two projects were collected between 2016 and 2017.

Volumes from the different sources mentioned above were compared and a growth factor was determined. The average growth was determined to be about 1.7% per year. This growth factor was used to grow the latest counts available to the existing year of 2020. The calculated traffic volumes for selected intersections in the project vicinity, as agreed after consultation with City staff, are presented in **Figure 3-1.**

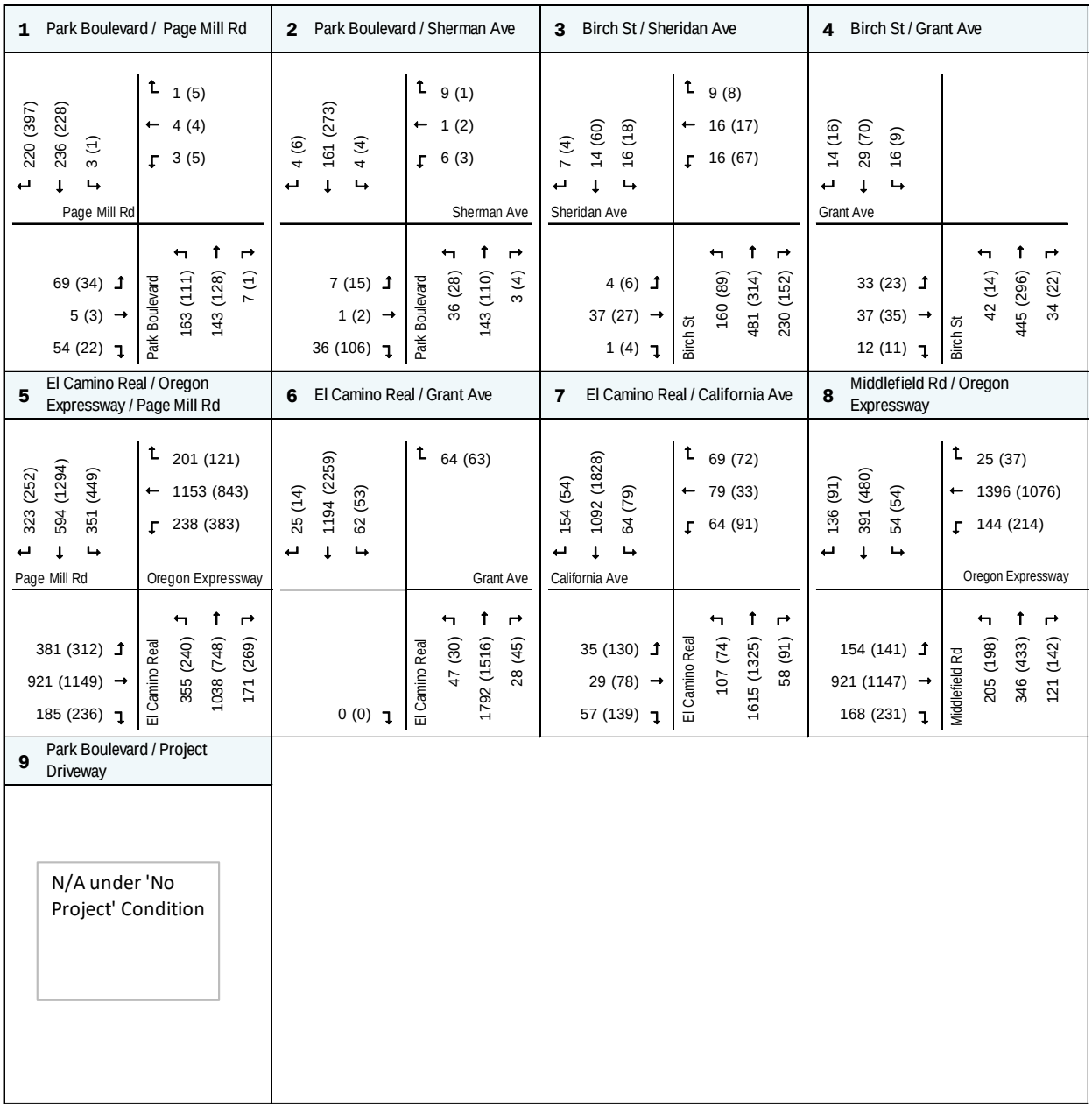


Figure 3-1 Existing Traffic Volumes

Source: AECOM 2021

3.3 Existing Transit Facilities

While there are no transit stops along the streets bordering the project site, the project site is still well served by public transportation. It is approximately one-third of a mile from the California Avenue Transit Station for Caltrain. Caltrain runs between 4:30AM to midnight on weekdays serving commuters between San Francisco and Gilroy. On the weekends, services are only between San Francisco and Diridon Station in San Jose, with shuttle bus service to Tamien Station. The California Transit Station is also a stop for the Valley Transportation Authority (VTA) Line 89 as well as the California Avenue

Foothill Express (CAFX) Shuttle by Stanford Research Park. Due to the COVID-19 global pandemic, the CAFX Shuttle is on hold until further notice; however, the latest schedule that operated prior to COVID-19 restrictions is presented for completeness.

The project site is approximately one-third of a mile from the bus stops along ECR. The bus stops along ECR serve VTA Lines 22, 89, 522 and the Stanford Marguerite Research Park Shuttle (Line RP). Another bus stop about half a mile from the project site along Page Mill Road (west of ECR) serves several VTA express services and the Dumbarton Express DB1. Details of the different public transit service schedules are presented in **Table 3-1**, while **Figure 3-2** presents the transit routes in the vicinity of the project site.

Table 3-1 Existing Transit Service Schedule

Provider & Route	From	To	Weekday Operating Hours and Frequency	Weekend Operating Hours and Frequency
VTA 22	Palo Alto Transit Center	Eastridge Transit Center	4:30 AM to 12:30AM with 15-minute headway	4:45 AM to 12:30AM with 15-minute headway
VTA 89	California Ave Caltrain Station	Palo Alto VA Hospital	6:35AM to 6:06PM with 20-minute headway	NA
VTA 101 (Express)	Camden & Highway 85	Stanford Research Park	Northbound @ 6:20AM and 7:09AM only. Southbound @ 4:10PM and 5:10PM only.	NA
VTA 102 (Express)	South San Jose	Stanford Research Park	Westbound 5:52AM to 7:10AM with 50- to 75-minute headway. Eastbound 2:41PM to 5:05PM with 60- to 85-minute headway	NA
VTA 103 (Express)	Eastridge	Stanford Research Park	Westbound 5:05AM to 10:13AM with 20- to 40-minute headway. Eastbound 3:43PM to 6:48PM with 20- to 40- minute headway.	NA
VTA 104 (Express)	Milpitas BART Station	Stanford Research Park	Westbound @ 6:09AM and 6:43AM only. Eastbound @ 4:01PM and 4:30PM only.	NA
VTA 522	Palo Alto Transit Center	Eastridge Transit Center	5:20AM to 9:45PM with 15-minute headway	5:50AM to 8:50PM with 20-minute headway
Caltrain California Ave Station	San Francisco	Gilroy	4:57AM to 1:10AM with 11- to 23- minute headway	7:37AM to 1:15AM with 90-minute headway
Dumbarton Express DB1	Union City BART Station	3475 Deer Creek Rd	5:10AM to 7:28PM with 30-minute headway	NA
Stanford Marguerite Shuttle RP	Palo Alto Transit Center	3475 Deer Creek Rd	Westbound 6:32AM to 10:13AM with 20- to 40-minute headway. Eastbound 3:43PM to 6:48PM with 20- to 40-minute headway.	NA
Stanford Research Park Transportation CAFX	*California Ave Caltrain Station*	*3475 Deer Creek Rd*	*Westbound 7:41AM to 10:46AM with approx. 60-minute headway. Eastbound 3:39PM to 6:41PM with approx. 60-minute headway.*	*NA*

Sources: Valley Transit Authority (VTA) Services effective 10/12/2020, expected to run through 2/7/2021 (https://www.vta.org/go/routes); Caltrain Service effective 6/15/2020 (https://www.caltrain.com/schedules.html); Dumbarton Express effective 6/14/2020 (https://dumbartonexpress.com/line-db1-schedule/); Stanford Marguerite Shuttle effective 6/15/2020 (https://transportation.stanford.edu/marguerite); Stanford Research Park Transportation March 2020 - on hold until further notice (https://d29vmu15ua1e0a.cloudfront.net/uploads/SRP-CAFX-Sched-Updated-MAR2020.pdf).

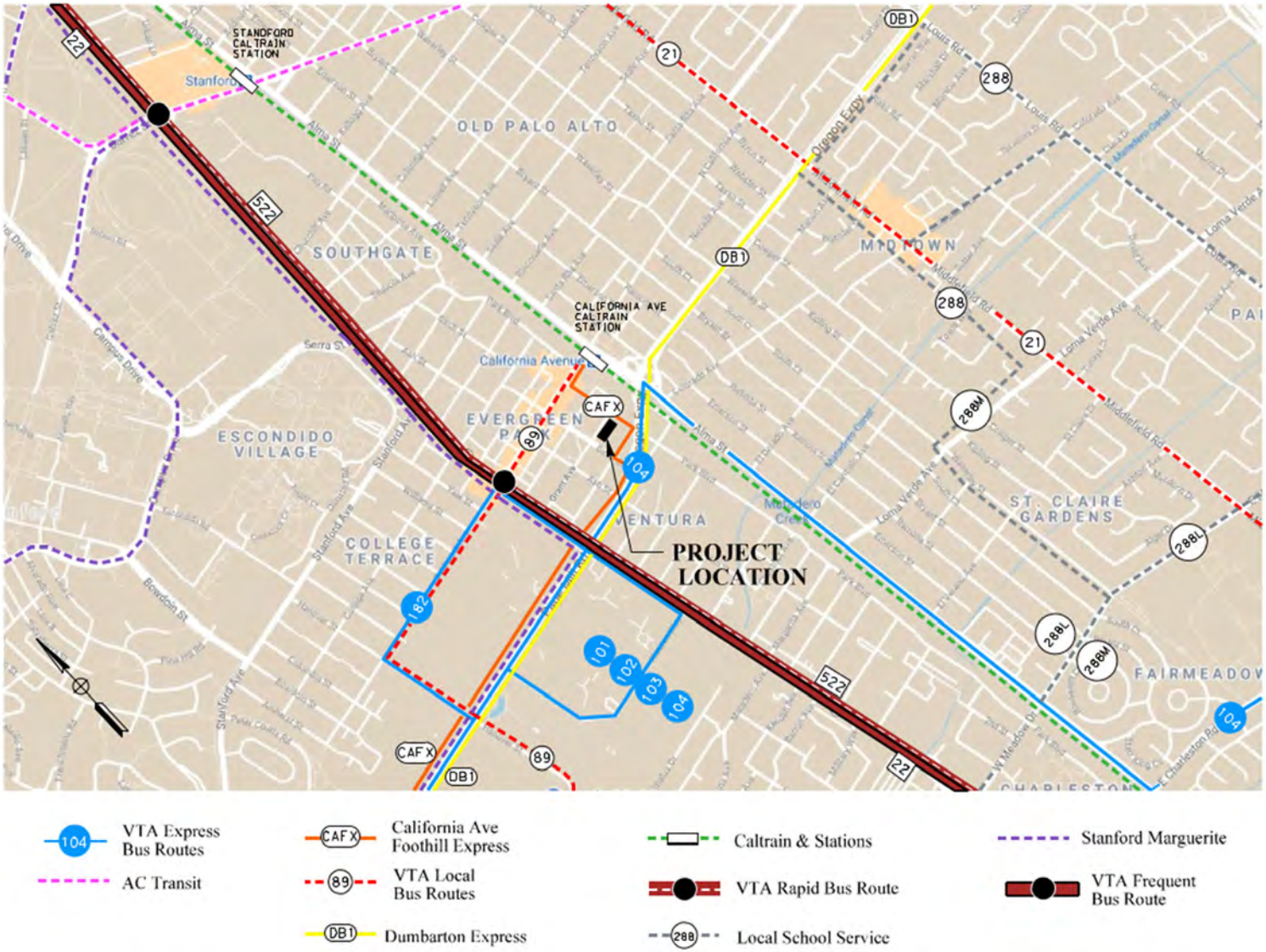


Figure 3-2 Existing Transit Facilities

Source: AECOM 2021 based on VTA Transit Map December 2019

3.4 Existing Pedestrian and Bicycle Facilities

Sidewalks are provided along both sides of Grant Avenue, Birch Street, and Park Boulevard surrounding the project site. Marked crosswalks are provided at the Two-Way Stop-Controlled intersection of Grant Avenue and Park Boulevard, as well as the All-Way Stop-Controlled intersection of Grant Avenue and Birch Street. The nearest signalized pedestrian crossing is at Page Mill Road and Park Boulevard. Signalized pedestrian crossing is also provided at the intersection of ECR and California Avenue.

In the immediate vicinity of the project site, Class II bike lanes are provided along both sides of Park Boulevard up to Lambert Avenue. South of Lambert Avenue, Park Boulevard is designated as a bike boulevard. Class III bike route is provided along the section of California Avenue between ECR and Park Boulevard. In addition, bicycles are allowed on ECR and Oregon Expressway. The existing bicycle facilities in the vicinity of the project are illustrated in **Figure 3-3.**

Definitions of the different bike facilities are as follow:

- Class I (bike path): a paved trail that is separate from roadways (there are no Class I facilities in the immediate project area).
- Class II (bike lane) provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted.
- Class III (bike route) provides a right-of-way designated by signs or permanent markings indicating the roadway is shared by pedestrians and motorists.
- Bike Boulevards are streets prioritized for bicycle use through advisory warning to motorists, traffic calming measures and guidance to encourage bicycle use over less attractive routes.

Figure 3-3 Existing Bicycle Facilities

Source: AECOM 2021 based on VTA Bikeways Map June 2020

3.5 Background Conditions

The list of approved projects (as obtained from the City of Palo Alto) in the vicinity of this project is shown in Table 3-2 below.

Table 3-2 List of Approved Projects

Project Name	Project Location	Land Use
2755 El Camino Real Redevelopment	2755 El Camino Real	Residential
Palo Alto Public Safety Building and Public Parking Structure	250 Sherman Avenue	Public Services/Office

Source: City of Palo Alto, 2020.

The pedestrian and bicycle facilities under the background conditions will largely be similar to the existing conditions. While no new pedestrian and bicycle infrastructures are proposed by the approved projects, the re-development of sidewalks, (e.g., with landscaping) fronting these projects will enhance the pedestrian experience in the project vicinity.

For transit facilities, the 2755 ECR Development plans to relocate the bus stop that is currently about 80 feet north of the ECR/Page Mill Road intersection, along northbound ECR. The new bus stop will be about 50 feet from the intersection. In addition, both of the approved projects are expected to generate some new pedestrians, cyclists, and transit users in the project vicinity.

3.6 Cumulative Conditions

The horizon year for the cumulative conditions was determined to be 2030 after consulting with City of Palo Alto so as to coincide with its current Comprehensive Plan adopted in 2017 (Comprehensive Plan 2030, City of Palo Alto). As part of the comprehensive plan study process, the City of Palo Alto evaluated a total of six scenarios with varying degrees of growth for the year 2030. Its City Council eventually adopted a scenario with growth approximately mid-way of the evaluated scenarios. **Appendix A** presents a summary of the Comprehensive Plan study scenario parameters.

In particular, the North Ventura Planning Area, which is adjacent to the project area, south of Oregon Expressway, will be defined as a Transit Oriented Development (TOD) area. This area will create and enhance non-motorized connections to take advantage of its proximity to the California Caltrain Station, the California Business District, and ECR. As a result, the number of pedestrians, cyclists, and transit users are expected to increase in the project vicinity under the Cumulative Conditions.

It was outlined in the 2030 Comprehensive Plan that the City of Palo Alto will continue to capitalize on its complete streets resolution adopted in 2015 to ensure that the city is conducive to non-motorized road users. Older sidewalks in the city will be upgraded or redeveloped with adjacent projects. Bicycle and other facilities will also be improved according to the City's Bicycle and Pedestrian Transportation Plan (May 2012). In the project vicinity, the bikeway map from the 2030 Comprehensive Plan, presented in **Appendix B,** indicates that the Class I bike path along Hanover Street that currently ends at Page Mill Road will be extended eastward to the ECR / Oregon Expressway /

Page Mill Rd intersection in the future. The City will continue to work with other agencies to expand facilities for pedestrians and cyclists. Envisioned improvements include, but are not limited to, full grade-separations for vehicles, pedestrians, and cyclists at Caltrain crossings and new pedestrian and bicycle grade-separated crossings of Caltrain in North and South Palo Alto.

The City will also work closely with VTA to enhance transit services for the community such as improving circulation at the Palo Alto Transit Center to allow direct access to ECR (for transit) and the introduction of Bus Rapid Transit along ECR.

4 Plus Project Conditions

This chapter looks at the future transportation conditions in the study area as a result of the proposed project. Additional usage of the roadway facilities by the proposed development are added to the 'no project' scenarios discussed in the earlier chapter to determine the effects of this project. Any mitigation measures necessary to alleviate potential impacts will also be discussed.

4.1 Trip Generation, Trip Distribution and Project-Only Trip Assignment

This section presents the number of vehicle trips generated by the proposed development. Trip generation rates from the Institute of Transportation Engineers' (ITE) Trip Generation Manual (10th Edition, 2017) were used for determining the number of trips of the future land use at the project site. Trip generation rates and estimates are summarized in **Table 4-1** and **Table 4-2**. As this project replaces an existing office area, the net additional trips will be considered 'project trips'.

Table 4-1 Trip Generation for Proposed Project – AM Peak Hour

Land Use	Size	Rate	In%	In	Out%	Out	Total
Residential (Land Use 221)	110 DU	0.36 per DU	26%	10	74%	29	39
Trip Adjustment for TOD		9 %		(1)		(3)	(4)
Café (Land Use 936)	1,120 SF	101.14 per SF		58		56	113
Total Proposed Trips			**51**	**67**	**49**	**82**	**149**
Office (Land Use 710)	10 employees	0.37 per employee	83%	3	17%	1	4
Total Existing Trips				**3**		**1**	**4**
Net New Trips				**64**		**81**	**145**

Source: Calculated by AECOM 2021 based on generation rates from ITE 2017.

Acronyms: DU = dwelling unit; SF = square feet; TOD = transit oriented development

Table 4-2 Trip Generation for Proposed Project – PM Peak Hour

Land Use	Size	Rate	In%	In	Out%	Out	Total
Residential (Land Use 221)	110 DU	0.44 per DU	61%	30	39%	18	48
Trip Adjustment for TOD		9 %		(3)		(2)	(4)
Café (Land Use 936)	1,120 SF	36.31 per SF		20		20	41
Total Proposed Trips			**50**	**47**	**50**	**38**	**85**
Office (Land Use 710)	10 employees	0.4 per employee	20%	1	80%	3	4
Total Existing Trips				**1**		**3**	**4**
Net New Trips				**46**		**35**	**81**

Source: Calculated by AECOM 2021 based on generation rates from ITE 2017.

Acronyms: DU = dwelling unit; SF = square feet; TOD = transit oriented development

According to VTA's guidelines, because this proposed development is located within 2,000 feet of walking distance from a major transit facility (no more than 0.3 mile, or 1,600 feet from California Avenue Caltrain Station), it is considered a transit-oriented development and a reduction of 9% can be applied to the number of trips generated by the housing portion. This should be coupled with implementing a Transportation Demand Management (TDM) Program. The developer of the project is currently developing a comprehensive TDM program and will be discussed with the County, followed by the City of Palo Alto when more details are available.

Although tenant for the proposed 'flex space' has not been decided at the point of this report, a café type land use (ITE Land Use 936 - Coffee/Donut Shop without Drive-Through Window) was chosen to represent the potential use of this area, as a café is likely to be one of the higher trip generating uses that might use the flex space, and is therefore a conservative assumption. Furthermore, Land Use 936 has a higher trip generation rates compared to another similar café type (ITE Land Use 939 – Bread/Donut/Bagel Shop Without Drive-Through Window) which will result in a more conservative analysis. The project trip generation did not further reduce for pass-by and diverted trips even though a café type use could see some of such trips. Trip generation for the existing office use were determined based on the number of employees rather than by the area of the building. This is because the number of trips calculated using the latter method would generate a higher number of trips which will lower the net new project trips to be generated. Therefore, to maintain a conservative approach, a lower number of existing trips based on actual employee numbers at the existing office were used.

As a result, the proposed project is estimated to generate 145 net new AM peak hour vehicle trips (64 inbound trips and 81 outbound trips) and 81 net new PM peak hour vehicle trips (46 inbound trips and 35 outbound trips).

Trip distribution is defined as the direction of approach and departure that vehicles would use to arrive at and depart from the site. The trip distribution pattern of the traffic generated by the project onto the roadway system was based on recent TIA's completed in the area, prevailing traffic patterns and the site access locations. The project trips were distributed and assigned to the selected intersections based on the trip distribution percentages shown in **Figure 4-1.** The resulting project only volumes at each of these intersections are presented in **Figure 4-2**, and existing plus project traffic volumes at each intersection are shown in **Figure 4-3.**

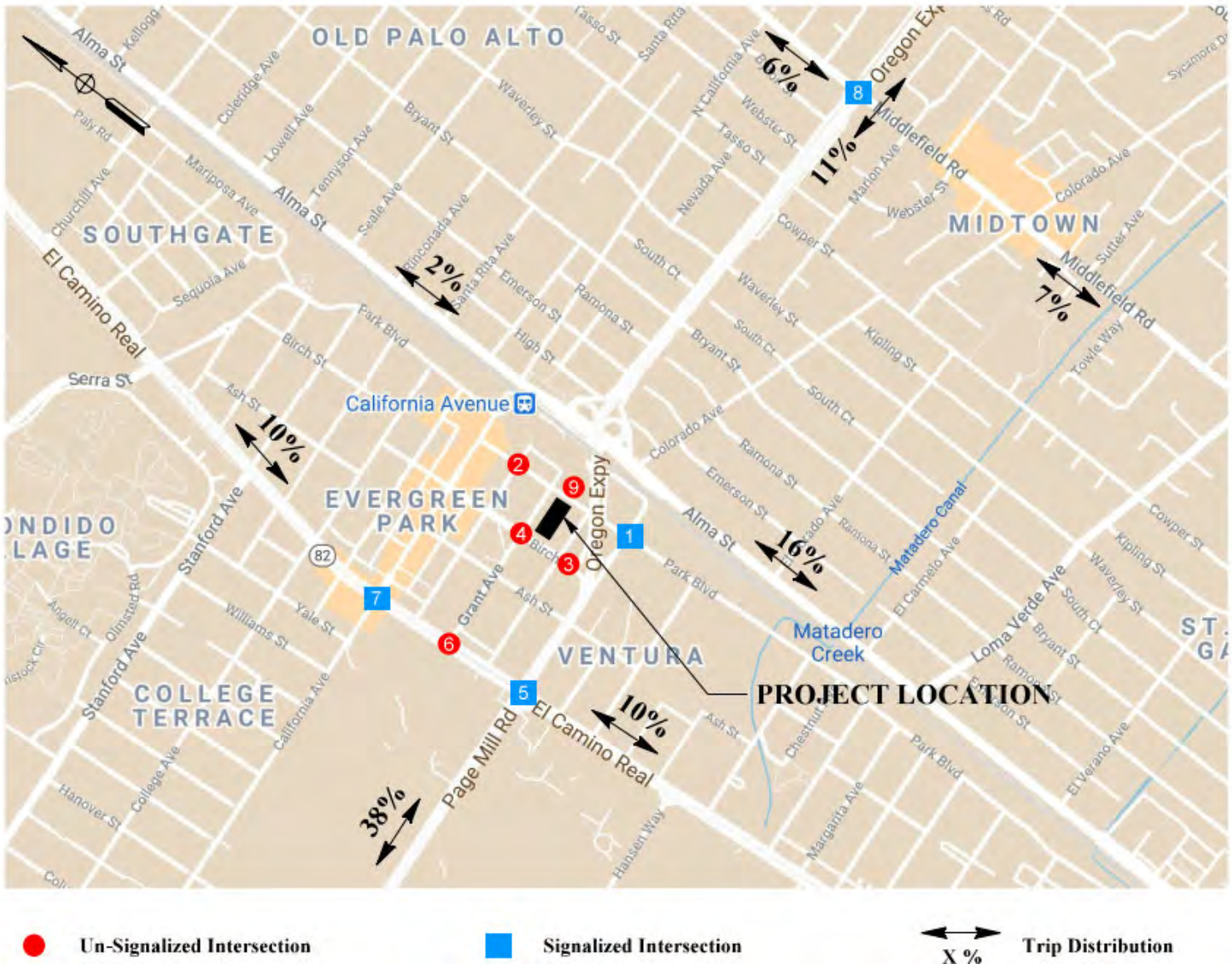


Figure 4-1 Project Trip Distribution

Source: AECOM 2021

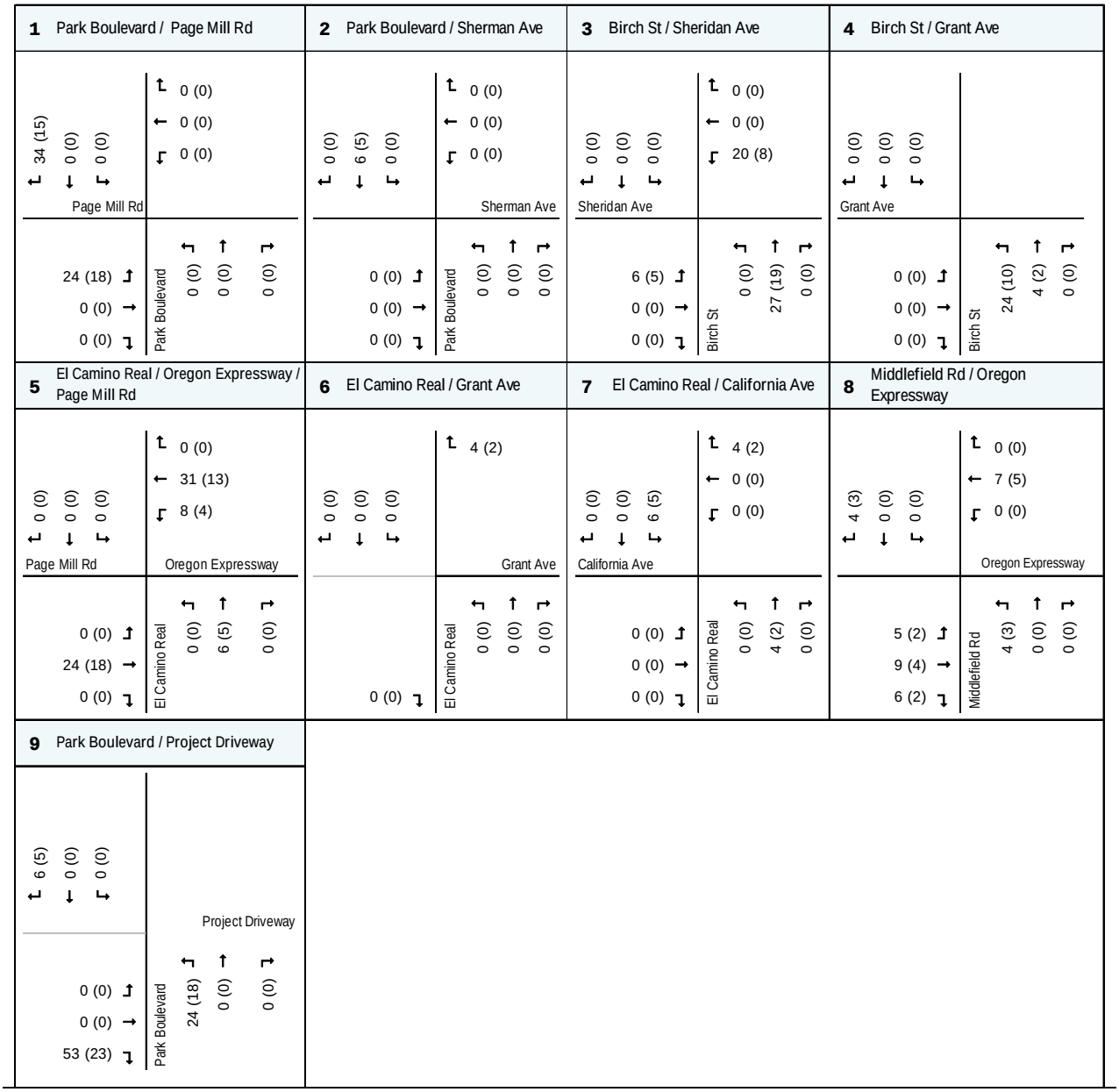


Figure 4-2 Project Only Traffic Volumes

Source: AECOM 2021

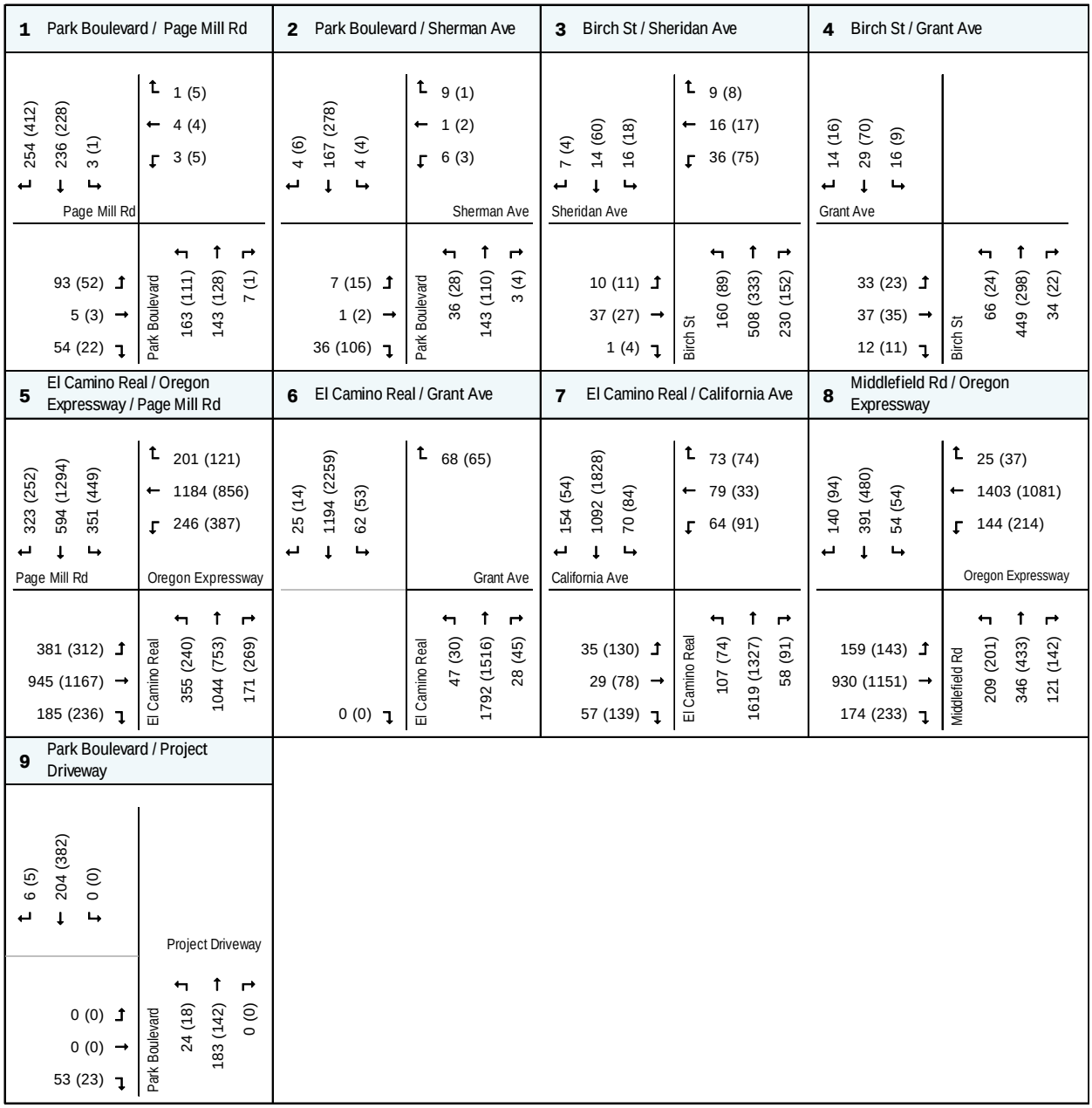


Figure 4-3 Existing plus Project Traffic Volumes

Source: AECOM 2021

4.2 Existing plus Project Conditions

4.2.1 Transit Facilities Impacts

The existing transit facilities in the project vicinity are expected to support the project usage under the 'plus project' conditions. Based on current observations, the bus services and Caltrain would continue to serve the project vicinity and the new transit users from the project are not expected to adversely affect public transit services. In addition, the project would not implement or install any transit impeding facilities that could negatively impact the transit infrastructure. However, due to the additional vehicular project trips, there could be some delay to the bus services in the project area during the AM and PM peak hours. **Table 4-1** summarizes the movement delays through the selected intersections along the routes of the bus service within the study area.

Table 4-3 Transit Impact Analysis - Existing plus Project Conditions

Transit Line	Intersection	Direction/ Movement	Existing Delay (sec)		Existing plus Project Delay (sec)		Change in Delay (sec)	
			AM	PM	AM	PM	AM	PM
22/522	ECR / Oregon Expressway / Page Mill	NB/THRU	56.1	52.9	57.3	53.4	1.2	0.5
		SB/THRU	43.7	44.1	43.9	44.4	0.2	0.3
	ECR / California Ave	NB/THRU	12.8	22	13.2	22.2	0.4	0.2
		SB/THRU	17.4	22.1	17.2	22.1	-0.2	0
89	ECR / California Ave	EB/THRU	64.9	57.2	65.1	57.2	0.2	0
		WB/THRU	63.3	57.2	63.5	57.2	0.2	0
101/102/103 Express	ECR / Oregon Expressway / Page Mill	NB/LEFT	65.6	68.3	66.4	68.9	0.8	0.6
		EB/RIGHT	25.2	30.5	25	30.3	-0.2	-0.2
104 Express	ECR / Oregon Expressway / Page Mill	EB/THRU	30.1	41.5	30.2	41.7	0.1	0.2
		WB/THRU	43.4	36.2	44.1	36	0.7	-0.2
	Middlefield Rd / Oregon Expressway	EB/THRU	31.7	40.2	31.8	40.1	0.1	-0.1
DB1	ECR / Oregon Expressway / Page Mill	EB/THRU	30.1	41.5	30.2	41.7	0.1	0.2
		WB/THRU	43.4	36.2	44.1	36	0.7	-0.2
	Middlefield Rd / Oregon Expressway	EB/THRU	31.7	40.2	31.8	40.1	0.1	-0.1
		WB/THRU	35.2	33.4	35.8	33.5	0.6	0.1
Marguerite RP	ECR / Oregon Expressway / Page Mill	SB/RIGHT	59.9	38.5	60.9	38.7	1	0.2
		EB/LEFT	76.5	58	78.6	58.3	2.1	0.3
	ECR / California Ave	NB/THRU	12.8	22	13.2	22.2	0.4	0.2
		SB/THRU	17.4	22.1	17.2	22.1	-0.2	0
CAFX	ECR / Oregon Expressway / Page Mill	EB/THRU	30.1	41.5	30.2	41.7	0.1	0.2
		WB/THRU	43.4	36.2	44.1	36	0.7	-0.2
	Birch St / Sheridan Ave*	NB/RIGHT	N/A	N/A	N/A	N/A	N/A	N/A
		WB/LEFT	24.2	19.3	30.9	20.5	6.7	1.2
	Park Boulevard / Sherman Ave*	NB/THRU	N/A	N/A	N/A	N/A	N/A	N/A
		SB/THRU						

Source: AECOM, 2021

Notes: Asterisk (*) indicates two-way stop-controlled intersections; N/A = not applicable as movement is uncontrolled; ECR = El Camino Real.

As shown in the table, the expected delay caused by the proposed project for most movements is less than one second, except for the following traffic movements:

- Northbound through movement at the ECR / Oregon Expressway / Page Mill Road intersection (int #5) affecting VTA Line 22 and 522 in the AM peak with a possible added delay of 1.2 seconds.
- Eastbound left movement at the ECR / Oregon Expressway / Page Mill Road intersection (int #5) affecting Marguerite Line RP in the AM peak with a possible added delay of 2.1 seconds.
- Westbound left movement at the Birch Street / Sheridan Avenue intersection (int #3) affecting CAFX Line in the AM peak with a possible added delay of 6.7 seconds.

The total delay increase expected to be experienced by each of these bus services as a result of the project would be less than one minute and, therefore, would not be considered as an adverse impact. Some movements would have a decreased delay, which is likely due to the redistribution of the ‘green’ time to accommodate the prevailing traffic volumes, which would in turn benefit the bus movements. As such, the project is not expected to significantly impact the transit facilities and services under existing conditions.

4.2.2 Pedestrian and Bicycle Facilities Impacts

The project will not provide additional sections of sidewalks along the project boundary but will re-develop the sidewalks with landscaping features to improve the pedestrian experience. In addition, based on observations of the current usage, the existing sidewalks and crosswalks in the project vicinity are expected to accommodate the usage under the ‘plus project’ conditions.

Similarly, based on the observations of current usage, the existing bicycle facilities in the project vicinity presented earlier would be sufficient to meet the expected demand of the proposed project. The proposed project would not provide any hazardous design features impeding the use of bicycles; the proposed landscaping near the project driveways is not expected compromise the sight-distance of vehicles (turning in/out), cyclists or pedestrians. Therefore, the project is not expected to adversely impact the pedestrian and bicycle facilities under existing conditions.

Additional discussion of the project site access and circulation is presented later in the report.

4.3 Background plus Project Conditions

4.3.1 Transit Facilities Impacts

The transit facilities in the project vicinity are expected to support the project usage under the background ‘plus project’ conditions as no changes are expected from the existing conditions. The bus services and Caltrain would continue to serve the project vicinity and the new transit users from the proposed project are not expected to adversely affect public transit services. In addition, the project would not implement or

install any transit impeding facilities that could negatively impact the transit infrastructure.

However, due to the additional vehicular project trips in the vicinity, there could be some delay to the bus services in the project area during the AM and PM peak hours. **Table 4-2** summarizes the movement delays through the selected intersections along the routes of the bus service within the study area.

Table 4-4 Transit Impact Analysis - Background plus Project Conditions

Transit Line	Intersection	Direction/ Movement	Background Delay (sec)		Background plus Project Delay (sec)		Change in Delay (sec)	
			AM	PM	AM	PM	AM	PM
22/522	ECR / Oregon Expressway / Page Mill Rd	NB/THRU	49.9	53.6	50.6	54.2	0.7	0.6
		SB/THRU	41.4	43.8	41.7	44.1	0.3	0.3
	ECR / California Ave	NB/THRU	13.6	22.8	14	23.3	0.4	0.5
		SB/THRU	17.7	22.5	17.5	22.5	-0.2	0
89	ECR / California Ave	EB/THRU	65.2	57.5	65.4	57.5	0.2	0
		WB/THRU	62.9	56.8	63.1	56.8	0.2	0
101 / 102 / 103 (Express)	ECR / Oregon Expressway / Page Mill Rd	NB/LEFT	59.6	67.8	60.1	68.4	0.5	0.6
		EB/RIGHT	27.5	30.9	27.3	30.7	-0.2	-0.2
104 (Express	ECR / Oregon Expressway / Page Mill Rd	EB/THRU	33.1	42.6	33.3	42.8	0.2	0.2
		WB/THRU	42.3	36.2	42.4	36	0.1	-0.2
	Middlefield Rd / Oregon Expressway	EB/THRU	31.8	40.8	31.8	41.1	0	0.3
DB1	ECR / Oregon Expressway / Page Mill Rd	EB/THRU	33.1	42.6	33.3	42.8	0.2	0.2
		WB/THRU	42.3	36.2	42.4	36	0.1	-0.2
	Middlefield Rd / Oregon Expressway	EB/THRU	31.8	40.8	31.8	41.1	0	0.3
		WB/THRU	35.6	34.2	36.2	34.6	0.6	0.4
Marguerite RP	ECR / Oregon Expressway / Page Mill Rd	SB/RIGHT	52.6	38.3	53.3	38.6	0.7	0.3
		EB/LEFT	66.6	53.7	68	53.9	1.4	0.2
	ECR / California Ave	NB/THRU	13.6	22.8	14	23.3	0.4	0.5
		SB/THRU	17.7	22.5	17.5	22.5	-0.2	0
CAFX	ECR / Oregon Expressway / Page Mill Rd	EB/THRU	33.1	42.6	33.3	42.8	0.2	0.2
		WB/THRU	42.3	36.2	42.4	36	0.1	-0.2
	Birch St / Sheridan Ave*	NB/RIGHT	N/A	N/A	N/A	N/A	N/A	N/A
		WB/LEFT	25.9	20.8	34.1	22.3	8.2	1.5
	Park Boulevard / Sherman Ave*	NB/THRU	N/A	N/A	N/A	N/A	N/A	N/A
		SB/THRU						

Source: AECOM, 2021

Notes: Asterisk (*) indicates two-way stop-controlled intersections; N/A = not applicable as movement is uncontrolled; ECR = El Camino Real.

As shown in the table, the expected delay caused by the proposed project for most movements is less than one second except for the following traffic movements:

- Eastbound left movement at the ECR / Oregon Expressway / Page Mill Road intersection (int #5) affecting Marguerite Line RP in the AM peak with a possible added delay of 1.4 seconds.
- Westbound left movement at the Birch Street / Sheridan Avenue intersection (int #3) affecting CAFX Line in the AM and PM peak with a possible added delay of 8.2 seconds and 1.5 seconds respectively.

The total delay increase expected to be experienced by each of these bus services as a result of the project would be less than one minute and, therefore, would not be considered as an adverse impact. Some movements would have decreased delay, which could be due to the redistribution of the 'green' time to accommodate the prevailing traffic volumes, which would in turn benefit the bus movements. As such, the project is not expected to significantly impact the transit facilities and services under the background conditions.

4.3.2 Pedestrian and Bicycle Facilities Impacts

No change to the existing pedestrian and bicycle facilities in the project vicinity is expected under the background conditions. Therefore, similar to the 'existing plus project conditions', the bicycle facilities in the project vicinity presented earlier would be sufficient to meet the expected demand of the proposed project. The proposed project would not provide any hazardous design features impeding the use of bicycles; the proposed landscaping near the project driveways is not expected to compromise the sight-distance of vehicles (turning in/out), cyclists or pedestrians. Therefore, the project is not expected to adversely impact the pedestrian and bicycle facilities under the background conditions.

4.4 Cumulative plus Project Conditions

4.4.1 Transit Facilities Impacts

The transit facilities in the project vicinity are expected to support the project usage under the cumulative 'plus project' conditions as transit services evolve to meet the demand of the Bay Area. Bus services and Caltrain are expected to continue serving the project vicinity and new transit users from the proposed project are not expected to adversely affect public transit services. In addition, the project would not implement or install any transit impeding facilities that could negatively impact the transit infrastructure.

However, due to the additional vehicular project trips in the vicinity, there could be some delay to the bus services in the project area during the AM and PM peak hours. **Table 4-3** summarizes the movement delays through the selected intersections along the routes of the bus service within the study area.

Table 4-5 Transit Impact Analysis - Cumulative plus Project Conditions

Transit Line	Intersection	Direction/ Movement	Cumulative Delay (sec)		Cumulative plus Project Delay (sec)		Δ Delay (sec)	
			AM	PM	AM	PM	AM	PM
22/522		NB/THRU	52.1	60.3	53.2	61.3	1.1	1

Transit Line	Intersection	Direction/ Movement	Cumulative Delay (sec)		Cumulative plus Project Delay (sec)		Δ Delay (sec)	
			AM	PM	AM	PM	AM	PM
	ECR / Oregon Expressway / Page Mill Rd	SB/THRU	40.1	46.4	40.3	46.8	0.2	0.4
	ECR / California Ave	NB/THRU	14	23	14.4	23.4	0.4	0.4
		SB/THRU	17.6	23.1	17.5	23.1	-0.1	0
89	ECR / California Ave	EB/THRU	66.9	61.6	67.2	61.6	0.3	0
		WB/THRU	64.1	58.4	64.2	56.4	0.1	-2
101 / 102 / 103 (Express)	ECR / Oregon Expressway / Page Mill Rd	NB/LEFT	62.3	76.9	63.1	77.7	0.8	0.8
		EB/RIGHT	29.4	32.3	29.2	32	-0.2	-0.3
104 (Express	ECR / Oregon Expressway / Page Mill Rd	EB/THRU	35.8	50.3	36	51.1	0.2	0.8
		WB/THRU	48.1	38.4	48.7	38.2	0.6	-0.2
	Middlefield Rd / Oregon Expressway	EB/THRU	35.4	42.8	35.4	43.1	0	0.3
DB1	ECR / Oregon Expressway / Page Mill Rd	EB/THRU	35.8	50.3	36	51.1	0.2	0.8
		WB/THRU	48.1	38.4	48.7	38.2	0.6	-0.2
	Middlefield Rd / Oregon Expressway	EB/THRU	35.4	42.8	35.4	43.1	0	0.3
		WB/THRU	41.6	35.2	42.3	35.6	0.7	0.4
Marguerite RP	ECR / Oregon Expressway / Page Mill Rd	SB/RIGHT	54.7	38.6	55.6	38.8	0.9	0.2
		EB/LEFT	74.7	56.8	76.6	57	1.9	0.2
	ECR / California Ave	NB/THRU	14	23	14.4	23.4	0.4	0.4
		SB/THRU	17.6	23.1	17.5	23.1	-0.1	0
CAFX	ECR / Oregon Expressway / Page Mill Rd	EB/THRU	35.8	50.3	36	51.1	0.2	0.8
		WB/THRU	48.1	38.4	48.7	38.2	0.6	-0.2
	Birch St / Sheridan Ave*	NB/RIGHT	N/A	N/A	N/A	N/A	N/A	N/A
		WB/LEFT	30	23.7	41.9	25.7	11.9	2
	Park Boulevard / Sherman Ave*	NB/THRU	N/A	N/A	N/A	N/A	N/A	N/A
		SB/THRU	N/A	N/A	N/A	N/A	N/A	N/A

Source: AECOM, 2021

Notes: Asterisk (*) indicates two-way stop-controlled intersections; N/A = not applicable as movement is uncontrolled; ECR = El Camino Real.

As shown in the table, the expected delay caused by the proposed project for most movements is less than one second except for the following traffic movements:

- Northbound through movement at the ECR / Oregon Expressway / Page Mill Road intersection (int #5) affecting VTA Line 22 and 522 in the AM and PM peak with a possible added delay of 1.1 seconds and 1.0 second respectively.
- Eastbound left movement at the ECR / Oregon Expressway / Page Mill Road intersection (int #5) affecting Marguerite Line RP in the AM peak with a possible added delay of 1.9 seconds.
- Westbound left movement at the Birch Street / Sheridan Avenue intersection (int #3) affecting CAFX Line in the AM and PM peak with a possible added delay of 11.9 seconds and 2 seconds respectively.

The total delay increase expected to be experienced by each of these bus services as a result of the project would be less than one minute and, therefore, would not be considered as an adverse impact. Some movements would have a decreased delay, which could be due to the redistribution of the 'green' time to accommodate the prevailing traffic volumes, which in turn would benefit the bus movements. As such, the project is not expected to significantly impact the transit facilities and services under the cumulative conditions.

4.4.2 Pedestrian and Bicycle Facilities Impacts

The pedestrian and bicycle facilities in the project vicinity are expected to gradually be upgraded or improved as outlined in the Palo Alto 2030 Comprehensive Plan. It is therefore envisaged that the facilities can satisfy the added demand brought about by users from this project under the cumulative conditions. In addition, the proposed project would not provide any hazardous design features impeding the use of bicycles; the proposed landscaping near the project driveways is not expected to compromise the sight-distance of vehicles (turning in/out), cyclists or pedestrians. Therefore, the project is not expected to adversely impact the pedestrian and bicycle facilities under the cumulative conditions.

4.5 Site Access and Circulation

4.5.1 Project Site Access

As shown in **Figure 2-1**, the project will have two access points (driveways); one each on Birch Street and Park Boulevard. The access points lead to the street-level parking garage for the development.

The access on Park Boulevard would be located approximately 25 feet north of the existing project site access, which would be removed as part of the Project along with the three existing access points on Grant Avenue. The proposed access on Birch Street would be new. Therefore, there would be a net decrease of two access points for the project site as a result of the proposed development. It is expected that the two project driveways will be stop-controlled.

The access on Birch Street will be a 'right-in-right-out' configuration due to the existing center divider. On-street parking is allowed along Birch Street on the same side as the project site. As such, parking prohibition for at least one car length immediately south of the proposed access is recommended to provide additional sight distance for straight-through vehicles as well as those exiting the project site. The project plans to remove all the tress currently lining Birch Avenue at the project perimeter except the one Valley Oak tree at each end. No new trees will be planted between the existing south-end Valley Oak tree and the driveway. As a result, the sight-distance for vehicles looking south of the driveway will not be obstructed. The right-turn sight-triangle measured by AECOM appeared to be more than 200 feet. The project should verify and provide this information. As there is currently no driveway along the project perimeter section of Birch Street, the proposed access presents a new conflicting point for pedestrians and cyclists, especially given that this area is highly walkable and footpaths are provided on both sides of the driveway. Provision of audio and visual warning devices is therefore recommended as a mitigation measure to warn cyclists and pedestrians when a vehicle is approaching the garage exit. Warning signs reminding exiting motorists to watch out

and yield to pedestrians should also be provided in the garage before/near the egress. Designs of any sign or devices deviating from the California Manual of Uniform Traffic Control Devices (CA MUTCD) will need approval from both the County and City.

All movements will be possible at the Park Boulevard access. While parking is not allowed adjacent to the proposed driveway, there is a Class II bike lane along both sides of Park Boulevard. On-street parking on the same side as the project is provided north of Grant Avenue which would unlikely affect the sight distance of motorists exiting the project site. There are footpaths on both sides of the proposed access. The project is proposing to retain the existing trees along Park Avenue abutting the site, except the two affected by the new driveway. The current size and spacing of the remaining four trees along Park Avenue are not expected to hinder the sight-distance of the project driveway as the situation will essentially be similar to existing condition. The sight-triangle for both left and right-turn measured by AECOM appeared to be more than 200 feet. . The project should verify and provide this information. The City of Palo Alto was concerned with additional/new access points along the bike boulevard (Park Boulevard). There is currently an access to the project site along Park Boulevard, adjacent to development at 200/230 Sheridan Avenue. The proposed Park Boulevard driveway merely relocates this current access point approximately 25 feet north. No additional access point will be created by the project along Park Boulevard and the exposure to conflict for a pedestrian or cyclist along Park Boulevard remain similar to current condition. However, given the net increase in vehicular trips expected at the driveway, more pedestrians and cyclists are expected to encounter vehicular movement at this driveway. As such, similar to the Birch Street access, provision of audio and visual warning devices is recommended to warn cyclists and pedestrians when a vehicle is approaching the Park Boulevard garage exit. Warning signs reminding exiting motorists to watch out and yield to pedestrians/cyclists should also be provided near the egress. Designs of any sign or devices deviating from the California Manual of Uniform Traffic Control Devices (CA MUTCD) will need approval from both the County and City.

The proposed driveway width for both accesses is 20 feet. This meets the City's minimum design requirement for multi-family parking facility[1]. In addition, this width is sufficient for emergency vehicles, such as ambulances, to access the garage.

4.5.2 Project Site Circulation

The project proposes 90 degree at-grade parking along both sides of a single aisle of the garage, using a stacked system described in more details below. Based on the proposed 8.5 feet wide 90-degree parking stalls provided, a minimum aisle width of 25 feet is needed to meet the City's design requirement. The proposed aisle width is at least 26 feet for the entire span except for the section with ADA compliant stalls which measured to be about 24 feet. This section of under-provision is unlikely to cause any operational issues since the (regular) cars will be mechanically parked and would fit 'nicely' in each stall, giving ample space for vehicles to maneuver. As the parking aisle spans across the entire building (more than 330 feet) and a stacked parking system is proposed, it is recommended that variable message signs displaying parking availability be installed at both entrances to provide advanced information to drivers, avoiding the need to drive down the aisle and turn around unnecessarily.

[1] City of Palo Alto Municipal Code, Section 18.54.070, Table 5

4.5.3 Stacked Parking

The project proposes to implement a stacked parking system for its street-level garage. While the five (5) ADA compliant spaces will be accessed directly at-grade, the remaining 107 spaces will be stacked over two levels. Mechanical lifts with pit will be installed. The project would determine the most efficient way to assign each individual space to the user. A vehicle would drive up to an open space provided in the lift to park. When requested to retrieve a vehicle, the lift will move it to the ground level where the driver would be able get it and drive out like a standard at-grade parking space. During the worse-case scenario, the project could see up to 64 inbound vehicles to the site during the morning peak hour. These 64 vehicles would be distributed about equally between the 2 driveways (34 vehicles via Birch Street and 30 vehicles via Park Boulevard, see **Figure 4-1** for project trips assignment), which means an average of one vehicle entering each driveway almost every 2 minutes. While more details on the stacked parking system, its operation and efficiency will be provided in due course, some systems can park a car in about half a minute[2]. Given the average arrival time of one vehicle per two minutes, it is unlikely that the stacking process would result in significant queuing along the streets.

4.6 Parking Adequacy

This section presents the evaluation of the proposed parking spaces, for both automobile and bicycle, to determine if adequate number of parking spaces will be provided. An evaluation of the proposed number of spaces against requirements from the City of Palo Alto Zoning Code is made for informational purposes only, because County projects are exempt from City zoning and building regulations due to intergovernmental immunity. The County Zoning Ordinance is also not applicable to the project site as it applies to only the unincorporated areas of the County.

4.6.1 Automobile Parking

This project will provide a total of 112 automobile parking spaces, which include five (5) ADA compliant spaces.

The City of Palo Alto Zoning Code for Workforce Housing[3] requires the provision of the greater of one space per unit or bedroom, which equates to 135 spaces based on the number of bedrooms, before any concession or allowable reduction. This should include at least five (5) ADA compliant spaces, based on the 2019 CA Building Code[4]. The required number of automobile parking spaces for the flex space based on the City's code[5] (1 space / 60sf) is 19, including one ADA compliant space.

Table 4-4 below shows how the number of parking spaces is calculated based on the City's requirements.

[2] 2755 El Camino Real Development TIA, Hexagon Transportation Consultants, Inc, January 2018
[3] https://codelibrary.amlegal.com/codes/paloalto/latest/paloalto_ca/0-0-0-55146
[4] https://up.codes/viewer/california/ibc-2018/chapter/new_11B/accessibility-to-public-buildings-public-accommodations-commercial-buildings-and#new_11B-208 (Table 11B-208.2)
[5] https://codelibrary.amlegal.com/codes/paloalto/latest/paloalto_ca/0-0-0-36359#JD_18.52.040 (Table 1)

Table 4-6 Automobile Parking Spaces Calculation

Unit/Area	Requirement Description or Calculation	# of Spaces Required
110 Dwelling Units	Greater of one space per unit or bedroom (Chapter 18.30(K) Table 1)	135
Adjustment 1	*20% reduction due to housing near transit facilities with TDM program (Chapter 18.52.050 Table 4)*	*(27)*
Adjustment 2	*20% reduction due to joint use (shared) parking facilities (Chapter 18.52.050 Table 4)*	*(27)*
Housing Subtotal		**81**
1,120 SF Commercial	1 space / 60 SF	19
Adjustment 1	*20% reduction due to joint use (shared) parking facilities (Chapter 18.52.050 Table 4)*	*(3)*
Commercial Subtotal		**16**
Total Project	Without adjustments = 135 + 19	154
Total Project	With adjustments = 81 + 16	97
Max allowable reduction	*30% of non-adjusted total*	*(46)*
Total required spaces	**= 154 – 46**	**108**

Source: AECOM 2021.

Acronyms: SF = square feet

Given the project is located within the Pedestrian/Transit Oriented area and will have a transportation demand management (TDM) plan, a reduction of 20% of the housing parking space provision is allowed. A further 20% reduction can also be taken due to the shared parking with the flex space. Similarly, a 20% reduction of the required flex space parking is allowed. The total number of automobile parking spaces needed for this development would be 97. However, Chapter 18.52.050 of the code states that "parking reductions may be granted for any combination of circumstances, prescribed by this chapter, so long as in total no more than a 30% reduction of the total parking demand otherwise required occurs…". As such, based on the non-adjusted total of 154 (135 + 19) spaces, the maximum allowable reduction is 46 spaces. The required automobile parking spaces for this development is therefore 108. This should include at least five (5) ADA compliant spaces. The proposed parking provision of 112 spaces including five that are (5) ADA compliant therefore meets the minimum requirements of the City.

According to the 2019 CA Green Building Standards Code, Title 24, Part 11, Section 4.106.4.2 for new multifamily dwelling units, presented in **Appendix C**, 10 percent of the total proposed parking spaces needs to be EV charging spaces. The project proposes to include 12 EV-ready parking spaces (one of which would be van accessible) and therefore meets the requirements of the Green Building Standards Code.

4.6.2 Bicycle Parking

The project will provide a total of at least 154 bicycle parking spaces (134 long-term and 20 short-term). The City of Palo Alto's code (footnote 4) requires one long-term bicycle parking space be provided for each residential unit which equates to 110 spaces and 1 short-term space per 10 DU which equates to 11 spaces. In addition, nine (9) more bicycle parking spaces will be needed for the flex space portion, of which four (4) should be long-term parking. The total number of long and short-term bike spaces required by the City is 114 and 16 respectively. The project's proposal of 134 long term parking

spaces and 20 short term bicycle parking spaces will therefore meet and exceed the City's requirement.

4.7 Vehicle Miles Travelled (VMT)

In September 2013, California Governor Jerry Brown Signed 4.106.4.2 into law. This resulted in the elimination of the traditional measurements in determining significant transportation impact under the California CEQA Guidelines, which took effect statewide as of July 1, 2020. Factors like vehicular delay and intersection levels of service (LOS) that have long been used to quantify roadway capacity and congestion levels will no longer be used. In replacement, the new CEQA Guidelines require the use of VMT as a metric for analysis.

4.7.1 City of Palo Alto Thresholds

While the County of Santa Clara has yet to adopt a VMT Policy, the City of Palo Alto adopted a new set of VMT thresholds of significance for CEQA analysis in June 2020. The new CEQA thresholds of significance for transportation impacts are consistent with the Transportation Element of the City's Comprehensive Plan. The relevant goals and policies are:

> GOAL T-1: Create a sustainable transportation system, complemented by a mix of land uses, that emphasizes walking, bicycling, use of public transportation and other methods to reduce GHG emissions and the use of single-occupancy motor vehicles.
>
> Policy T-1.3: Reduce GHG and pollutant emissions associated with transportation by reducing VMT and per-mile emissions through increasing transit options, supporting biking and walking, and the use of zero-emission vehicle technologies to meet City and State goals for GHG reductions by 2030.
>
> GOAL T-2: Decrease delay, congestion and VMT with a priority on our worst intersections and our peak commute times, including school traffic.
>
> Policy T-2.3: Use motor vehicle LOS at signalized intersections to evaluate the potential impact of proposed projects, including contributions to cumulative congestion. Use signal warrants and other metrics to evaluate impacts at unsignalized intersections.
>
> Program T2.3.1: When adopting new CEQA significance thresholds for VMT for compliance with SB 743 (2013), adopt standards for vehicular LOS analysis for use in evaluating the consistency of a proposed project with the Comprehensive Plan, and also explore desired standards for MMLOS, which includes motor vehicle LOS, at signalized intersections.
>
> GOAL T-3: Maintain an efficient roadway network for all users.
>
> Policy T-3.3: Avoid major increases in single-occupant vehicle capacity when constructing or modifying roadways unless needed to remedy severe congestion or critical neighborhood traffic problems. Where capacity is increased, balance the needs of motor vehicles with pedestrians and bicyclists.

The adopted VMT thresholds of significance for the City of Palo Alto by project type are presented in **Table 4-5**.

Table 4-7 City of Palo Alto VMT Thresholds of Significance by Project Type

Land Use / Project Type	Threshold of Significance
1. Residential Projects	A proposed project exceeding a level of 15% below existing (baseline) County home-based VMT per resident may indicate a significant transportation impact.
2. Office Projects	A proposed project exceeding a level of 15% below existing (baseline) regional home-based work VMT per employee may indicate a significant transportation impact.
3. Retail Projects	A proposed project that results in a net increase in total (boundary) VMT may indicate a significant transportation impact.
4. Mixed-Use Projects	Each component of a proposed mixed-use project should be evaluated independently and apply thresholds of significance for each project type separately (i.e., residential, office, and retail).
5. Other Project Types	The City will either develop an ad hoc (i.e., project specific) VMT threshold for a unique land use type or apply the most applicable of the above thresholds depending on project characteristics.
6. Redevelopment Projects	Where a proposed project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project may cause a less than significant transportation impact. If the redevelopment project leads to a net overall increase in VMT, it may cause a significant transportation impact if proposed new residential, office, or retail land uses would individually exceed their respective thresholds.

Source: City of Palo Alto 2020

In addition, certain projects may qualify for VMT screening based on six criteria presented in **Table 4-6**. Projects screened from requiring a VMT analysis would be considered to have no VMT impact under the State CEQA Guidelines Section 15064.3.

Table 4-8 City of Palo Alto VMT Screening Criteria

Land Use / Project Type	Screening Criteria
1. Small Development	Projects that generate fewer than 110 trips per day. This may equate to non-residential projects of 10,000 sq. ft., or less and residential projects of 20 units or less.
2. Projects in Low-VMT Areas[1]	Residential and office projects located in low-VMT areas that have similar features (i.e., density, mix of uses, transit accessibility) as existing developments in these areas.
3. Projects in Proximity to Major Transit Stops	Projects that are located within a half mile of an existing or planned high-quality transit corridor or major transit stations, and meet the following additional criteria: (1) is high density (minimum floor area ratio of 0.75), (2) does not exceed parking requirements, (3) is consistent with *Plan Bay Area 2040* (http://2040.planbayarea.org/), and (4) does not replace affordable units with smaller numbers of moderate- or above moderate-income units.
4. Affordable Housing	100% affordable housing projects in infill locations.
5. Local-Serving Retail[2]	Retail projects of 10,000 sq. ft. or less.
6. Transportation Projects	Roadway, transit, bicycle and pedestrian projects that do not lead to a measurable increase in vehicle travel.

Source: City of Palo Alto 2020.

Notes:

1. Residential projects located in areas where baseline VMT is 15 percent below the existing county average per resident and office projects located in areas where baseline VMT is 15 percent below the existing regional average per employee could be considered to be in low-VMT areas and presumed to have a less than significant VMT impact.
2. OPR indicates that local-serving retail up to 50,000 square feet may be presumed to create less-than-significant VMT impact. However, local-serving retails and lots in Palo Alto are typically smaller. Thus, Palo Alto adopts 10,000 square feet as the City's local-serving retail screening criteria, which also constitutes a small project that would be screened out under CEQA.

4.7.2 Evaluation Results

In accordance with the City's VMT threshold of significance #4, each component of a proposed mixed-use project should be evaluated independently and apply thresholds of significance for each project type separately (i.e., residential, office, and retail).

The proposed 1,120 square feet of proposed flex space, potentially to be used for retail services like a small eatery or coffee shop, would qualify as small local-serving retail of less than 10,000 square feet. As such, the retail component of the Project meets the City's screening criteria #5 and, therefore, a significant VMT impact would not be anticipated for the retail component of the project.

The Santa Clara Countywide VMT Evaluation Tool provided by the Valley Transportation Authority (VTA), shows that the county average for Home-Based VMT per Capita is 13.33 for 2020. Using this VMT Evaluation Tool, it is determined that the existing (baseline) Home-Based VMT per Capita for the project area is 6.05, estimated based on similar developments in the planning zone (refer **Appendix D**). This is significantly lower than the applicable threshold of 11.33 (i.e., 15 percent less than the countywide average of 13.33), meaning that the project site is within a "low-VMT area." Because the project site is within a low-VMT area, and because the project would have a similar density, mix of uses, and transit accessibility as other existing developments in the area, the project meets the City's Screening Criteria 2 and, therefore, a significant VMT impact would not be anticipated for the residential component of the Project.

Because both the retail and residential components of the Project would meet the City's screening criteria for VMT analysis, the project would be screened out from further analysis and the VMT impact can be assumed to be less than significant.

Although the retail and residential portions of the project meet the City's screening criteria, VMT for the Project was still calculated using the Santa Clara Countywide VMT Evaluation Tool, for information only (refer Appendix D). Based on the key project characteristics (110 residential units, 1,125 SF retail use[6], 112 parking spaces, and 134 bicycle parking spaces), the expected Home-Based VMT per Capita for the project would be 5.45. This is also significantly lower than the applicable threshold of 11.33 (i.e., 15 percent less than the countywide average of 13.33). Therefore, the project would not be expected to create a significant VMT impact.

In conclusion, this project, both the residential development and the small commercial/retail area, is not expected to have any VMT impacts based on the screening process adopted by the City of Palo Alto.

[6] The VMT Evaluation Tool requires rounding to the nearest 1,000 square feet, therefore 1,125 was rounded down to 1,000 square feet.

4.8 Transportation Demand Management (TDM)

The developer for this project is committed to ensure that alternatives to drive-alone commute trips are available to the project residents. Work is currently in progress to develop a comprehensive TDM program that will be shared and discussed with the County and City of Palo Alto.

It is recommended that a monitoring program of the proposed TDM measures should also be in placed to ensure the effectiveness of the proposal.

4.9 Construction Traffic

Construction for this project is expected to begin in mid-2022 and could coincide with the construction of the Palo Alto Public Safety Building and Public Parking Structure (PSB) located one block north of the project site. The project developer is committed to work with the City of Palo Alto and contractors of the PSB to ensure the construction activities are coordinated as much as practically feasible to minimize inconvenience to residents and road users in the affected areas. The construction of this project will adhere to the permitting guidelines set out by the City of Palo Alto. In particular, the Traffic Control Plan will follow the City's latest 'Traffic Control Plan Requirement' and 'Public Works Standard Specifications', such that the required notices are posted timely, making sure that work is performed within the allowable time periods and construction trucks use the designated truck routes, for example. The contractors will also adhere to stipulated requirements for working in the City's right-of-way, including dust, noise, and pollution controls. In addition, on-site staff will park at public parking areas within a quarter mile of the project site.

Construction staging will be along the street frontages immediately abutting the site. Before construction begins, the construction contractor will prepare and implement a traffic control plan as part of the project, in consultation with the City of Palo Alto. The traffic control plan (TCP) would include the following:

- Development and implementation of a process for communicating with affected residents and landowners about the Project. The public notice will include the posting of notices and the installation of appropriate signage regarding construction activities. The written notifications will consist of information related to the construction schedule, the exact location and duration of activities on each roadway, detours and alternative routes that may be available to avoid delays and contact information for questions and complaints.
- Identification of work hours and haul routes, road and lane closures, detour routes, work areas, staging areas, worker parking areas, and determination of traffic control methods to reduce conflicts, and will include identification and coordination with potential road or lane closures or detours associated with construction of the nearby Public Safety Building project at 350 Sherman Street.
- Posting of appropriate warning signs in advance of construction activities, alerting bicyclists and pedestrians to any closures of nonmotorized facilities.
- Notification of administrators of any affected police and fire stations, ambulance service providers, transit providers, and recreational facility managers regarding the timing, location, and duration of construction activities and the locations of detours

and road or lane closures. Access for emergency vehicles in and/or adjacent to roadways affected by construction activities will be maintained at all times.

- The repair and restoration of any damaged or deteriorated roadway rights-of-way / facilities according to the agency's guidelines after construction is completed.
- Scheduling equipment/deliveries during off-peak vehicular commuter hours and use of flaggers for large equipment.

While some road, lane, and sidewalk closures or narrowing are expected during certain phases of project construction, adequate notices and warning signs will be put up to inform and direct the affected road users to keep the inconvenience to a minimum. In particular, one-way traffic controls and temporary closure of on-street parking would be required on Grant Avenue between Park Boulevard and Birch Avenue throughout the majority of the construction period. Periodical closure of Grant Avenue is also expected to allow for crane mobilization and/or concrete pours, including a full closure for 4 to 8 weeks during crane setting of modular units. Lane closures on Birch Avenue (northbound side of median only) and Park Boulevard may also be required occasionally, including two days each for crane setting of the far southwest and far southeast modular units, respectively.

The transportation of construction material and modular components to the project site will be via the City's permitted truck entry/exit point of US 101-Oregon Expressway and adhere to the City's allowable truck route. Any deviation, if needed will be approved by the City. Full police escort will be deployed when transporting wider modular units.

5 Conclusions

This proposed educator workforce housing project is located at 231 Grant Avenue in the City of Palo Alto, California. The proposal is to develop a new four-story mixed-use complex on an existing office area. Having evaluated the current and future conditions of the pedestrian, bicycle, and transit infrastructures in the vicinity of the project, the study concluded that this project would not lead to any significant impacts these facilities in general except at the project access points. The expected VMT for the development falls below the City's threshold and no significant impact is expected. In addition, the evaluation also concluded that the number of proposed automobile parking meets the City of Palo Alto's requirement for the overall total number of spaces (for both gasoline and electric vehicles) and ADA compliance. The geometric design of its driveways also meets the City standard. The City's requirements for bicycle parking are also met by the project.

The project would not provide installations that could interfere with the transit facilities in the project vicinity under the 'existing', 'background' and 'cumulative' conditions and the infrastructure is expected to accommodate the additional users from the project. A slight increase in delay is expected to be experienced by several bus services at the selected intersections in the project vicinity. However, the total increase for each of the affected line is expected to be less than one minute. Considering all aspects, the project will not have significant impacts on the transit facilities in the project vicinity.

The re-developed sidewalks with landscaping surrounding the project site would enhance the walking experience and is not expected to compromise the sight-distance of the project driveways. While the public pedestrian and bicycle infrastructure is expected to accommodate the additional users due to the project, the new access along Birch Street and the expected increase in trips using the Park Boulevard driveway could increase the frequency for conflicts between motorized and non-motorized road users. However, the project would result in a net decrease in the number of driveways (by two accesses) thereby reducing the overall conflict among the different road users. Installation of audio and visual warning devices (of exiting vehicles from the project garage) and warning signs for exiting drivers is recommended for both the Birch Street and Park Boulevard project site accesses.

The geometric design of the driveways and the proposed parking aisle meet the City's design standards which also allows emergency vehicles, such as ambulances, to access the garage. However, a short section of the parking aisle width measures less than the City's design requirement of 25 feet. No operational issues are expected as the (regular) vehicles will be neatly arranged by the stacked parking system giving ample space for vehicles to maneuver. The proposed stacked parking system is also unlikely to cause significant queuing along the public given the longer average vehicle arrival time compared to the expected efficiency of the system.

The number total number of proposed automobile parking spaces, including ADA compliant spaces, on-site meets the City's requirement. The EV parking provision also satisfies the City's code. Similarly, the long and short-term bicycle parking spaces to be provided meet and exceed the City's requirement.

The project is expected to produce VMT below the City's threshold and no significant impact is expected. The residential portion is screened out based it being located within a low VMT area and the project specific VMT is also below the City's threshold. The commercial/retail portion is screened out based on its small size and local serving feature.

For temporary traffic conditions during project construction, the contractor will work closely with the City of Palo Alto, adhering to the permitting requirements in preparing and implementing the traffic control plan. Coordination with other concurrent constructions in the vicinity will be made to minimize the convenience to affected road users.

6 References

City of Palo Alto, 2017. City of Palo Alto Comprehensive Plan.

City of Palo Alto, December 2020. Personal Communication. Emails between Shrupath Patel, City of Palo Alto Transportation Planner, and Nichole Seow, AECOM Transportation Planner.

Fehr & Peers, May 2018. Traffic Impact Analysis, Palo Alto Public Safety Building and Public Parking Structure.

Hexagon Transportation Consultants, Inc., January 2018. Traffic Impact Analysis, 2755 El Camino Real Redevelopment Project.

Institute of Transportation Engineers' (ITE) 2017. Trip Generation Manual (10th Edition).

Mercy Housing and Abode Communities, 2020. Conceptual Project Plans for 231 Grant Educator Workforce Housing project.

VTA Bikeways Map June 2020

APPENDICES

APPENDIX A

City of Palo Alto Comprehensive Plan 2030

Study Scenarios Summary

Comp Plan Key Characteristics

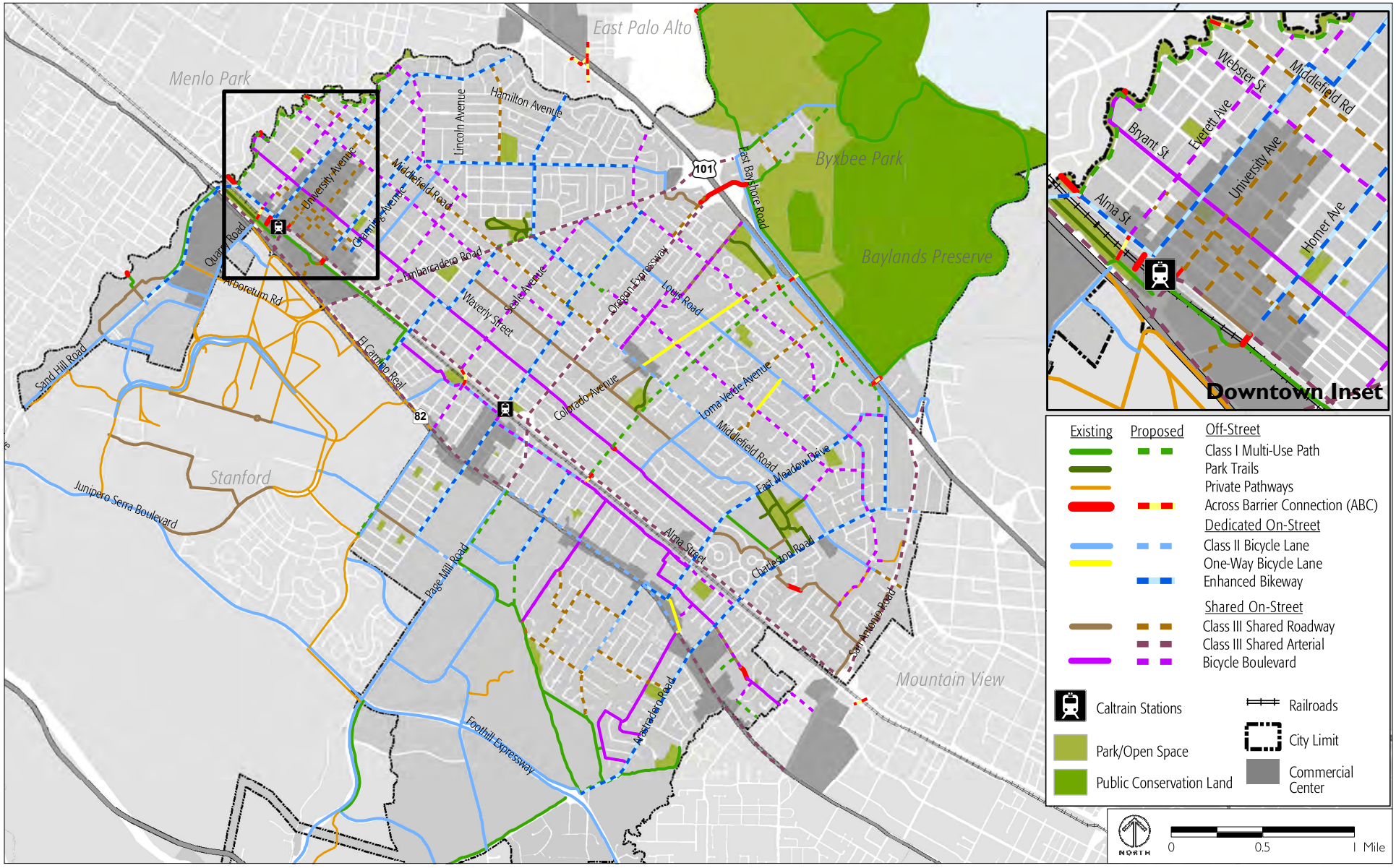
	Existing (2014)	Scenario 1 (2030)	Scenario 2 (2030)	Scenario 3 (2030)	Scenario 4 (2030)	Scenario 5 (2030)	Scenario 6 (2030)	Preferred Scenario - Low (2030)	Preferred Scenario - High (2030)	Preferred Scenario - Mid-Point (2030)	Preferred Scenario - Council Reduced (2030)	No Growth (2030)	
POPULATION													
Additional residents in City	--	6,599	6,599	8,436	10,455	8,436	14,078	8,432	10,455	9,444	9,444	1,233	
Additional residents in City + SOI	--	9,405	9,405	11,242	13,261	11,242	16,884	11,238	13,261	12,250	12,250	1,233	
Total in City	65,686	72,284	72,284	74,121	76,141	74,121	79,764	74,118	76,141	75,130	75,130	66,919	
Total in City + SOI	80,806	90,210	90,210	92,047	94,067	92,047	97,690	92,044	94,067	93,056	93,056	82,039	
Average household size in City	2.40	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.40	
Average household size in SOI	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
HOUSING													
Additional housing units in City	--	2,720	2,720	3,546	4,418	3,546	6,000	3,547	4,418	3,983	3,983	540	
Additional housing units in City + SOI	--	3,881	3,881	4,707	5,579	4,707	7,161	4,707	5,579	5,143	5,143	540	
Total in City	28,546	31,266	31,266	32,092	32,964	32,092	34,547	32,093	32,964	32,529	32,529	29,086	
Total in City and SOI	33,071	36,952	36,952	37,778	38,650	37,778	40,233	37,778	38,650	38,214	38,214	33,611	
JOBS													
Gain in City	--	15,482	9,853	12,758	15,482	8,869	8,869	9,853	11,500	10,677	7,321	3,882	
Total in City	95,458	110,940	105,311	108,216	110,940	104,327	104,327	105,311	106,958	106,135	102,779	99,340	*Note: assumes same SOI*
Total in City + SOI	100,829	116,700	111,071	113,977	116,700	110,087	110,087	111,072	112,719	111,895	108,539	104,711	*buildout as Scenarios 1-4*
EMPLOYED RESIDENTS													
City	31,165	34,696	34,696	35,578	36,548	35,578	38,287	35,577	36,548	36,062	36,062	32,121	
City + SOI	36,004	40,595	40,595	41,421	42,330	41,421	43,960	41,420	42,330	41,875	41,875	36,918	
JOBS/EMPLOYED RESIDENTS RATIO													
City	3.06	3.20	3.04	3.04	3.04	2.93	2.72	2.96	2.93	2.94	2.85	3.09	
City + SOI	2.80	2.87	2.74	2.75	2.76	2.66	2.50	2.68	2.66	2.67	2.59	2.84	

Date Modified: 5/26/2017

APPENDIX B

City of Palo Alto Comprehensive Plan 2030

Bikeway Map



Source: City of Palo Alto, 2016; PlaceWorks, 2016.

MAP T-3

BIKEWAYS IN PALO ALTO

APPENDIX C

2019 CA Green Building Standards

Code for EV Provision

3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

4.106.3 Grading and paving. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Section 4.106.4.1, 4.106.4.2, or 4.106.4.3, to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code,* Article 625.

Exceptions:

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1. Where there is no commercial power supply.
   1.2. Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per dwelling unit.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings. If residential parking is available, ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EV space shall be located in the common use parking area and shall be available for use by all residents.

4.106.4.2.1.1 Electric vehicle charging stations (EVCS). When EV chargers are installed, EV spaces required by Section 4.106.4.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the *California Building Code*, Chapter 11A, to allow use of the EV charger from the accessible parking space.
2. The EV space shall be located on an accessible route, as defined in the *California Building Code,* Chapter 2, to the building.

   Exception: Electric vehicle charging stations designed and constructed in compliance with the *California Building Code*, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.

Note: Electric vehicle charging stations serving public housing are required to comply with the *California Building Code*, Chapter 11 B.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).

APPENDIX D

VMT Evaluation Summary

Santa Clara Countywide VMT Evaluation Tool Report

Appendix D-1

Project Details

Timestamp of Analysis: February 08, 2021, 11:51:47 PM

Project Name: 231 Grant Avenue Educator Housing Development Project

Project Description: To provide 110 Units of housing development that includes a small flex space for potential commercial use.

Project Location

Jurisdiction:
Palo Alto

APN	TAZ
13231005	441
13231074	440

Inside Transit Priority Area (TPA)?
Yes (Pass)

Analysis Details

Santa Clara Countywide VMT Evaluation Tool Version: 1

Data Version: VTA Countywide Model December 2019

Analysis Methodology: TAZ

Baseline Year: 2020

Project Land Use

Residential:

Single Family DU:

Multifamily DU:

Total DUs: 0

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

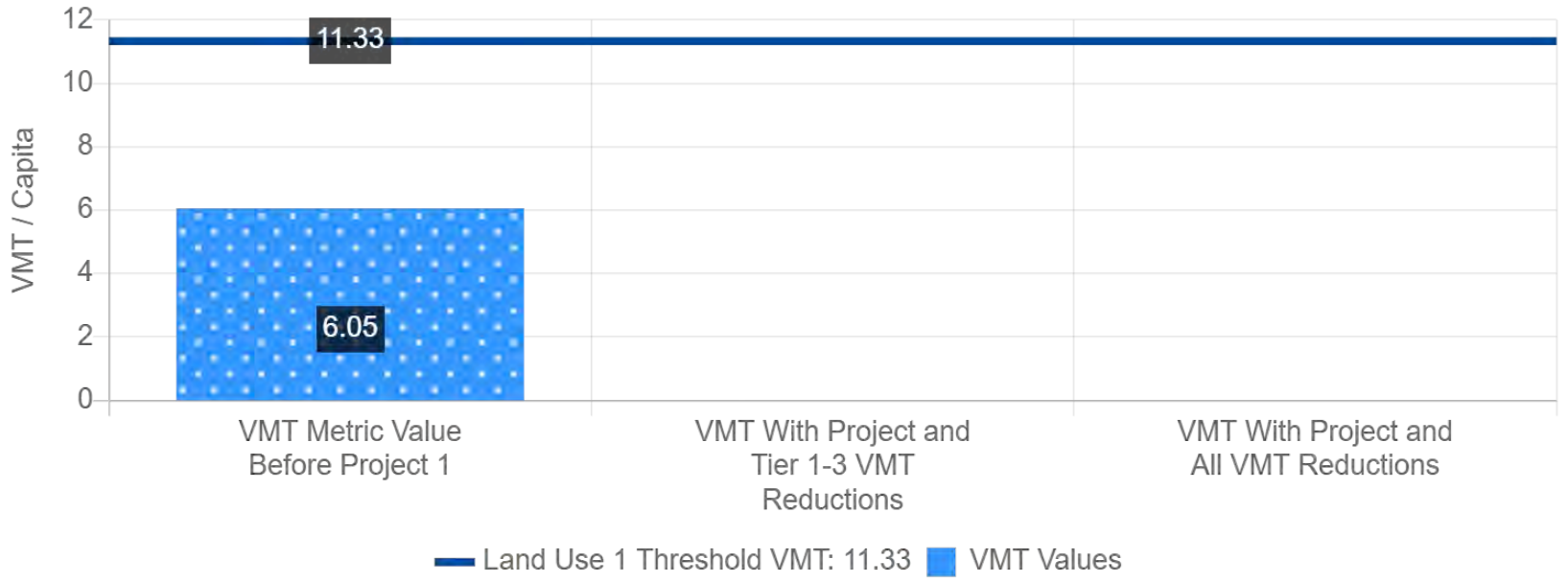
Motor Vehicle Parking:

Bicycle Parking:

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project:	Home-based VMT per Capita
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	13.33
TAZ:	440
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

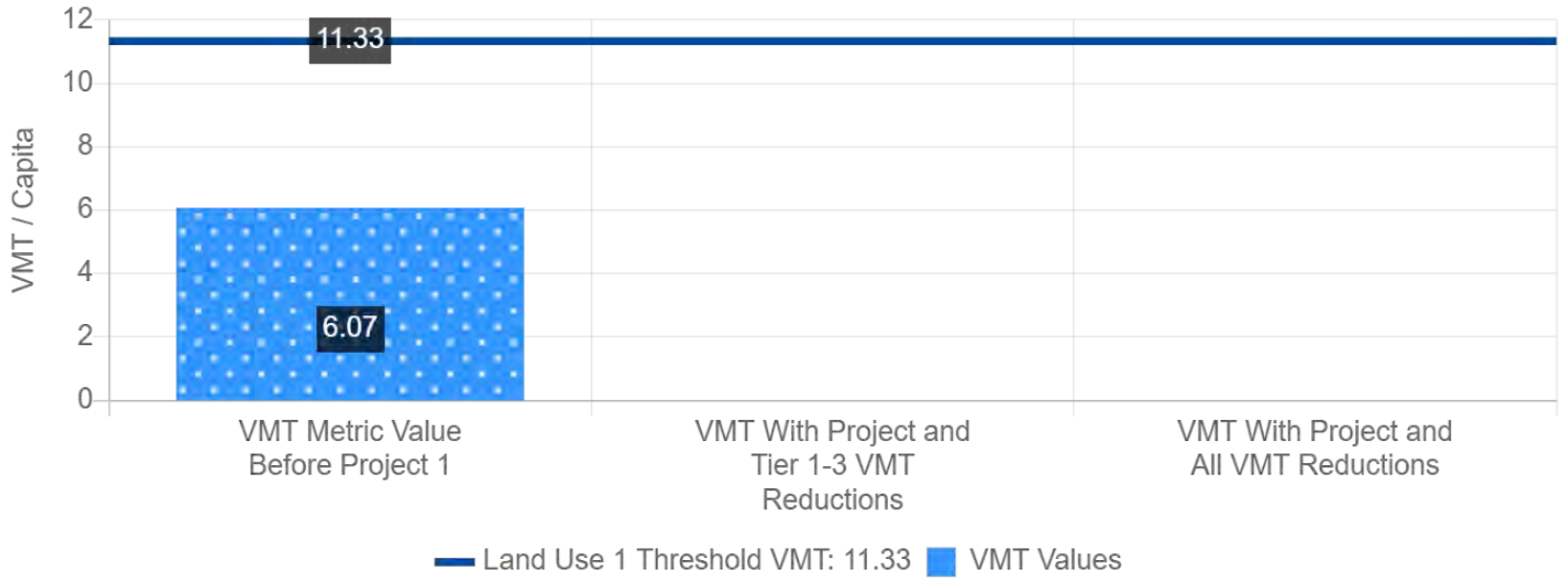
	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	6.05	null	null
Low VMT Screening Analysis	Yes (Pass)	null	null



Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project:	Home-based VMT per Capita
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	13.33
TAZ:	441
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	6.07	null	null
Low VMT Screening Analysis	Yes (Pass)	null	null



Santa Clara Countywide VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: July 20, 2021, 03:48:35 PM

Project Name: 231 Grant Educator Workforce Housing Project

Project Description: 110 residential units with 1,100 SF of "flex space" for commercial (cafe or other retail) use.

Project Location

Jurisdiction:
Palo Alto

APN	TAZ
13231074	440

Inside Transit Priority Area (TPA)?
Yes (Pass)

Analysis Details

Santa Clara Countywide VMT Evaluation Tool Version: 1

Data Version: VTA Countywide Model December 2019

Analysis Methodology: TAZ

Baseline Year: 2020

Project Land Use

Residential:

Single Family DU:

Multifamily DU: 110

Total DUs: 110

Non-Residential:

Office KSF:

Local Serving Retail KSF: 1

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

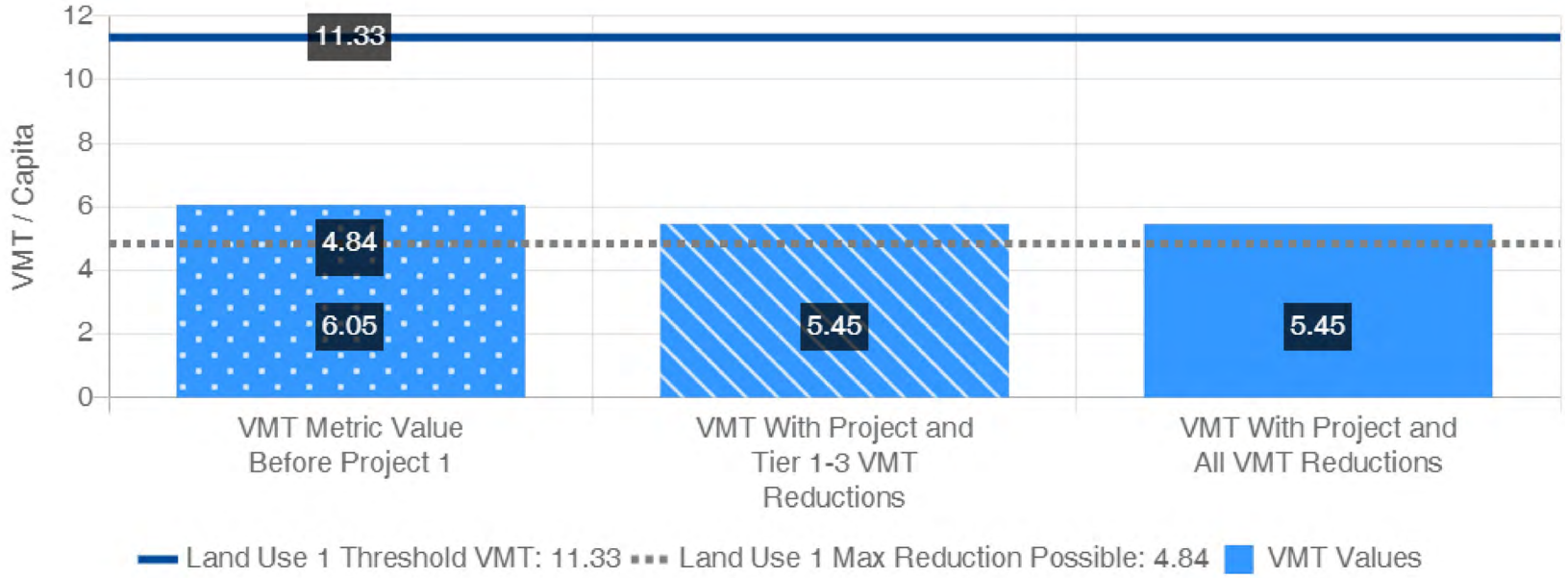
Motor Vehicle Parking: 112

Bicycle Parking: 134

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project:	Home-based VMT per Capita
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	13.33
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	6.05	5.45	5.45
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



Tier 1 Project Characteristics

PC01 Increase Residential Density

Existing Residential Density:	15.95
With Project Residential Density:	83.44

PC02 Increase Residential Diversity

Existing Residential Diversity Index:	0.86
With Project Residential Diversity Index:	0.77

PC03 Affordable Housing

PC04 Increase Employment Density

Existing Employment Density:	166.38
With Project Employment Density:	167.04

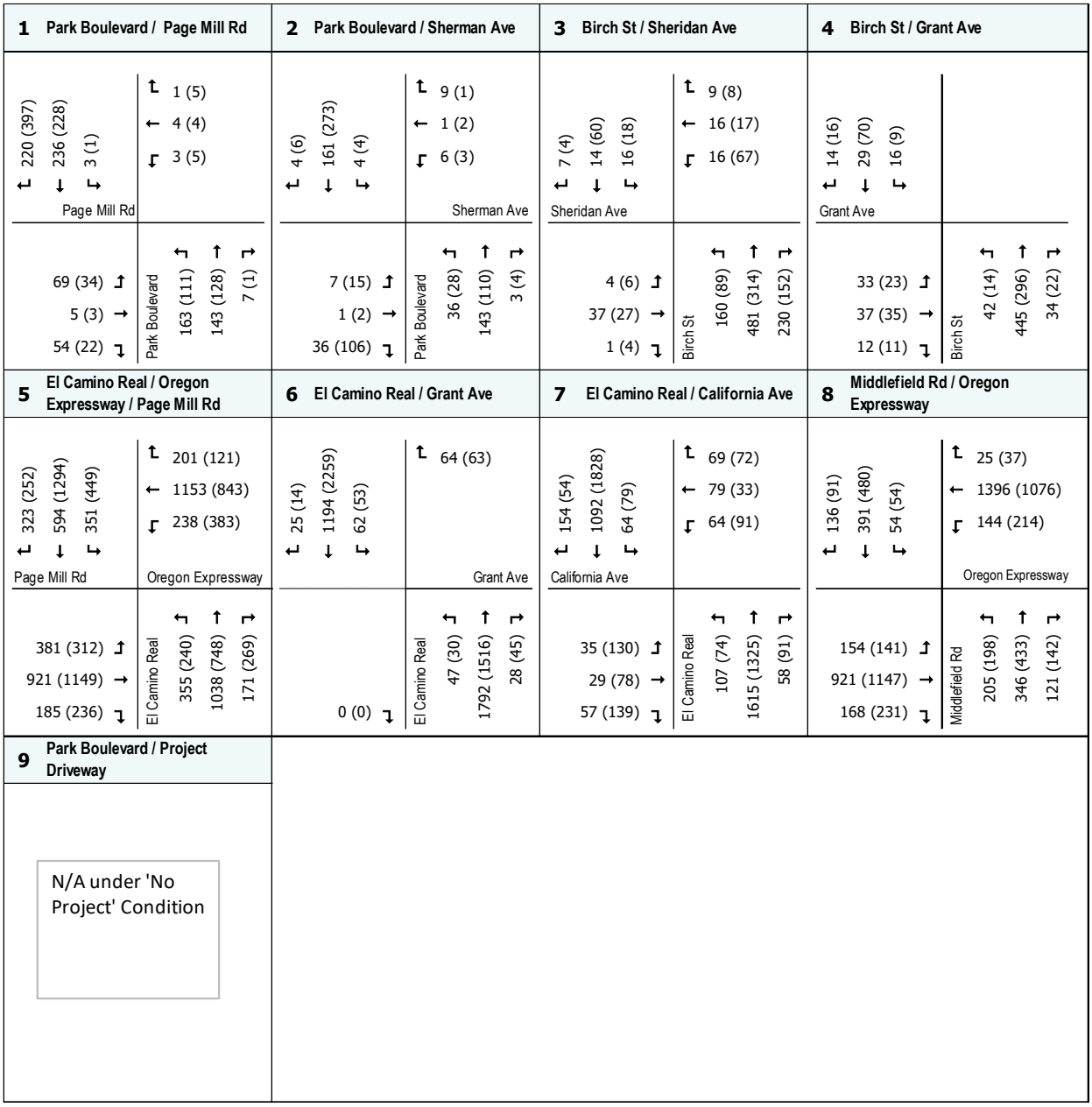
Tier 2 Multimodal Infrastructure

Tier 3 Parking

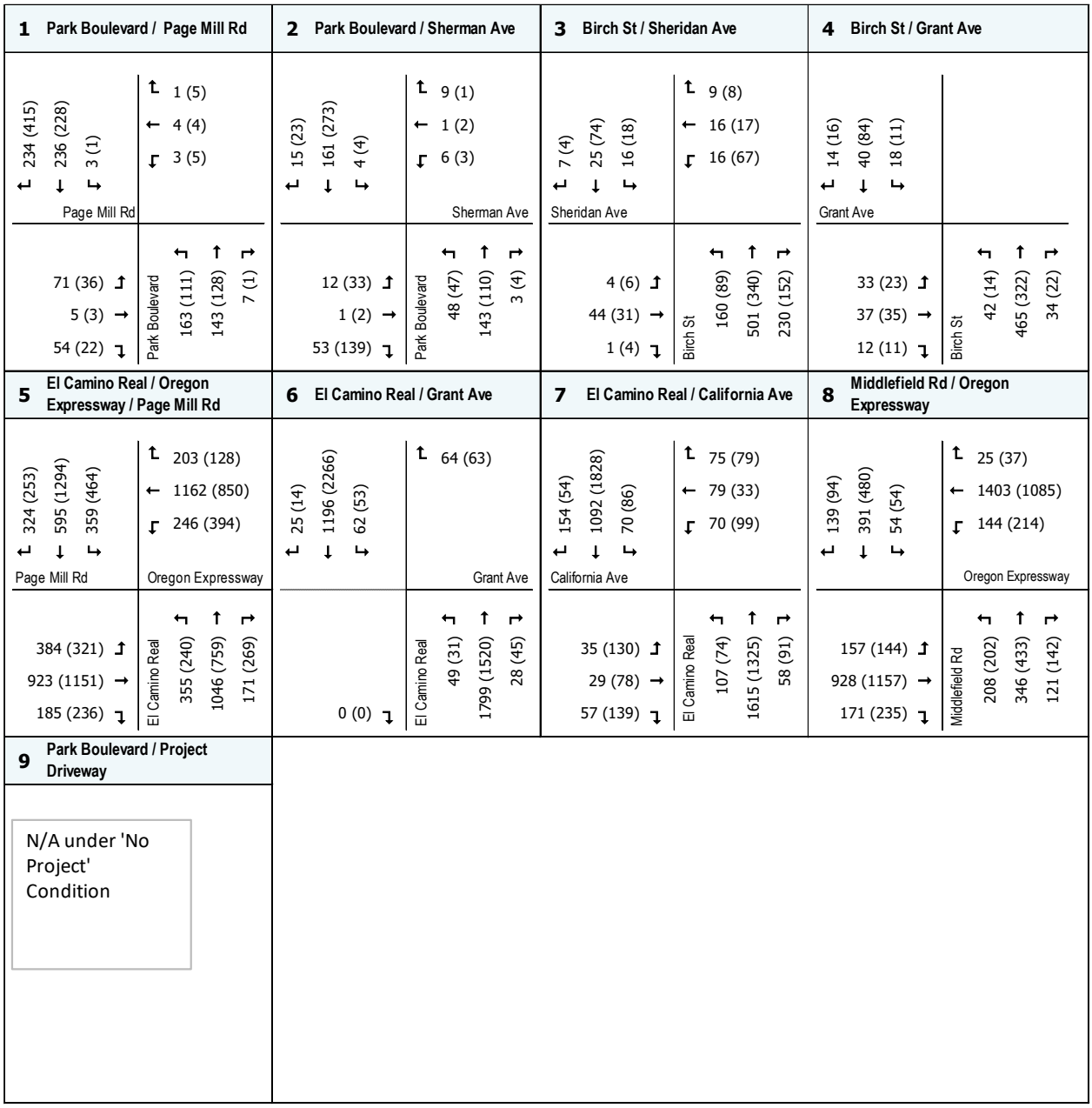
Tier 4 TDM Programs

APPENDIX E

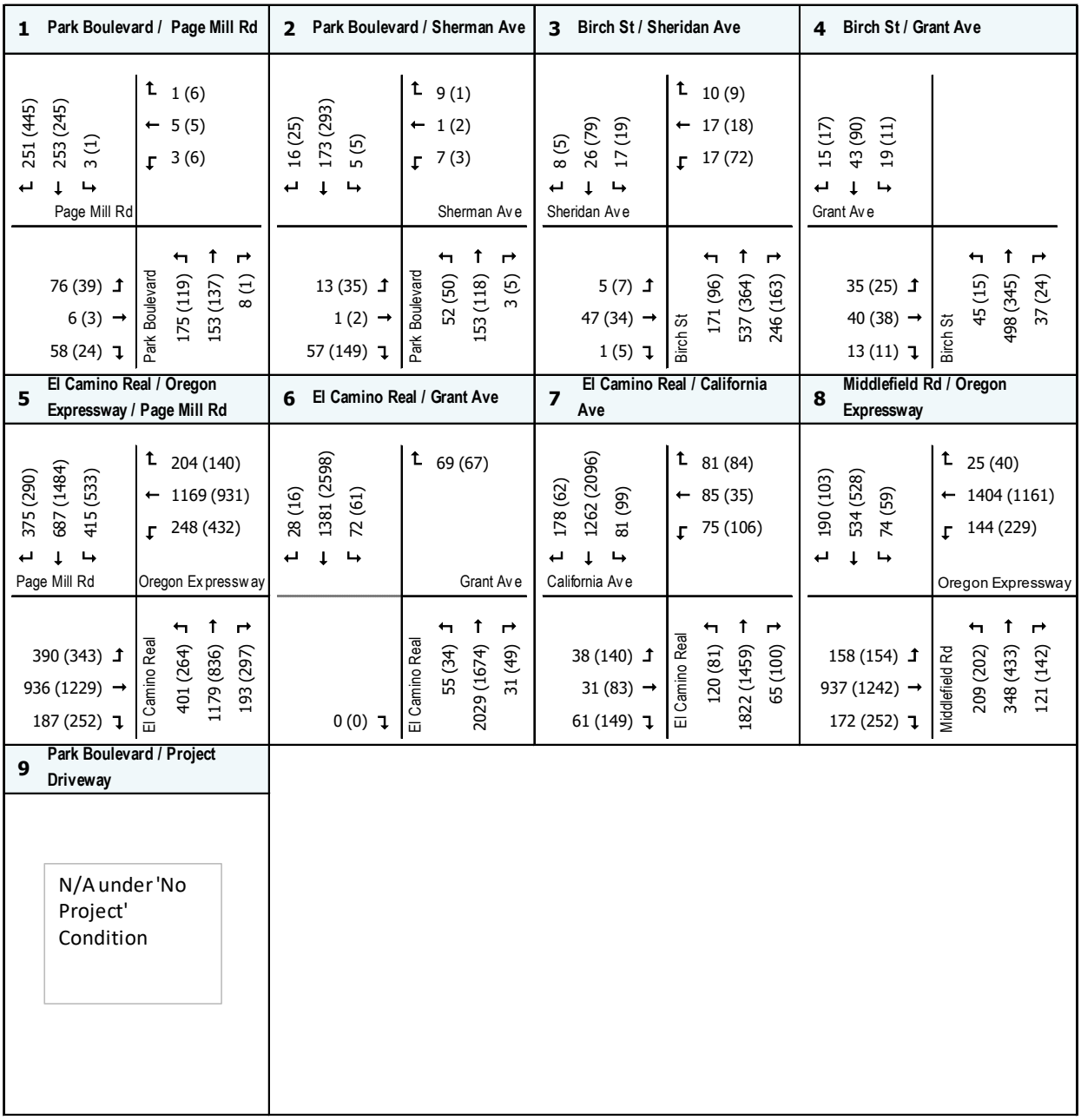
Intersection Volumes



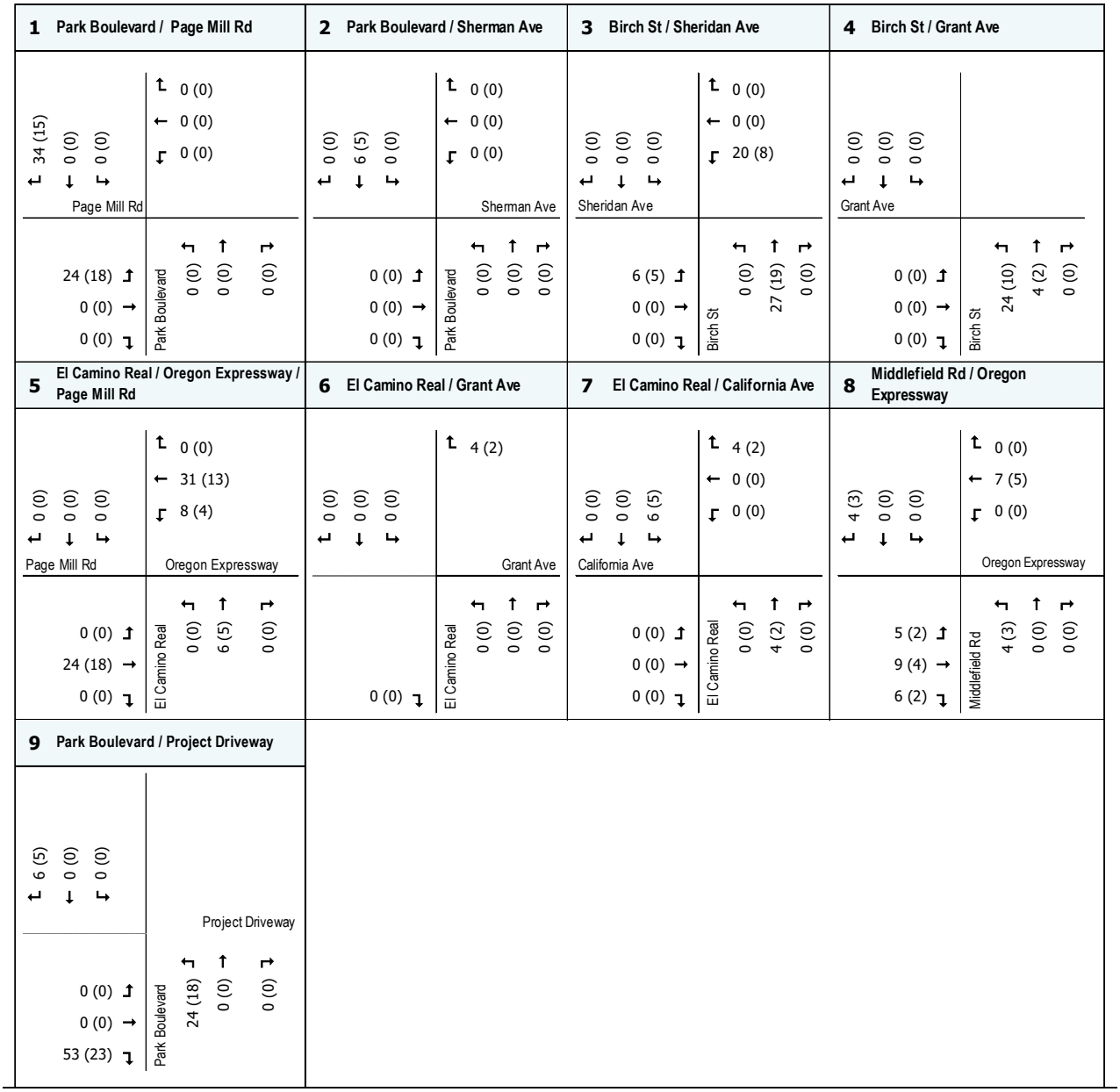
Appendix E-1 Existing Traffic Volumes



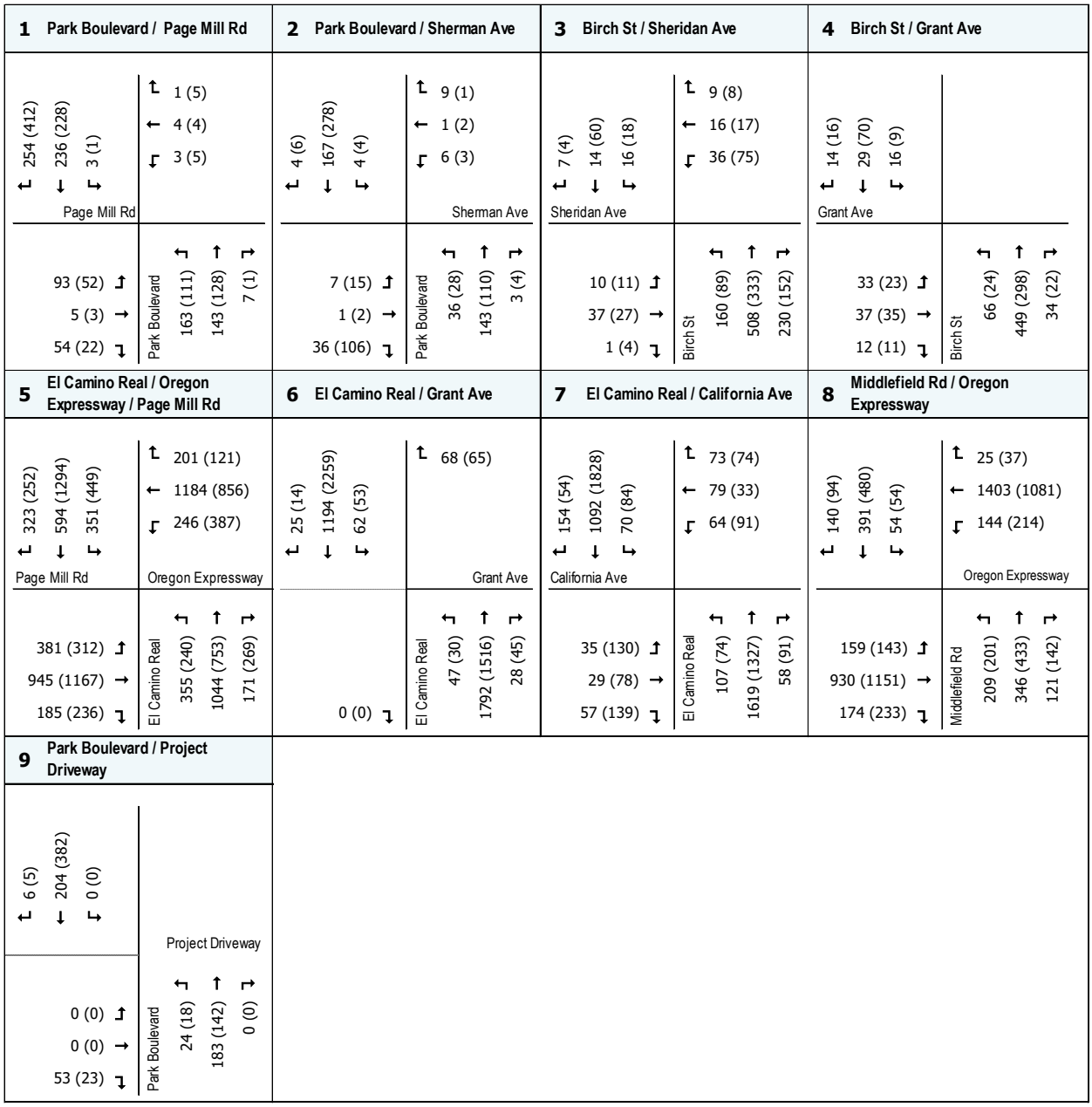
Appendix E-2 Background Intersection Traffic Volumes



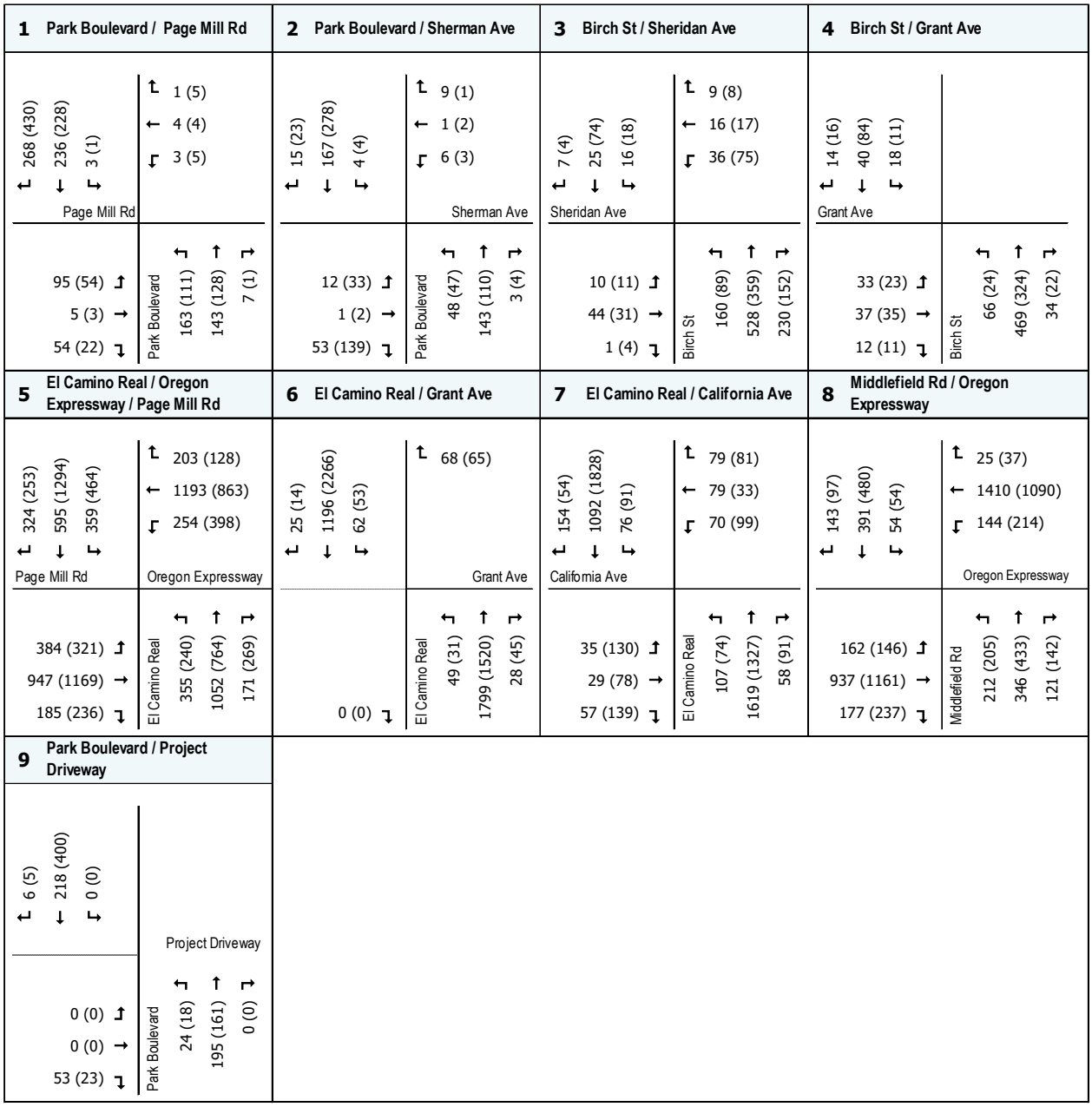
Appendix E-3 Cumulative Intersection Traffic Volumes



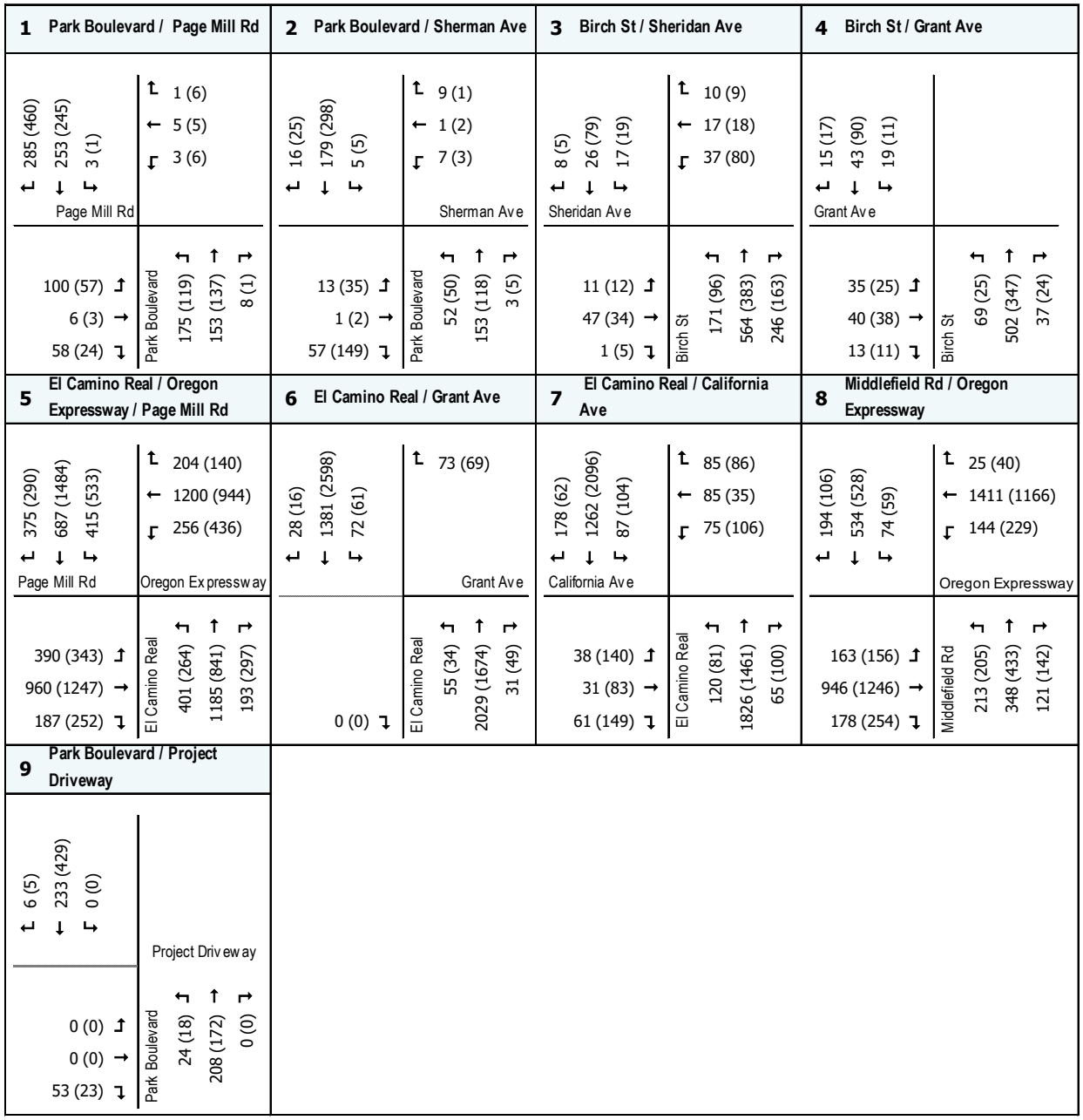
Appendix E-4 Project Only Traffic Volumes



Appendix E-5 Existing+ Project Traffic Volumes



Appendix E-6 Background plus Project Traffic Volumes



Appendix E-7 Cumulative plus Project Traffic Volumes

AECOM

Intersection Level of Service (LOS) Evaluation

231 Grant Avenue Educator Workforce Housing

Project Number: 60642412

July 2021

Delivering a better world

Prepared for:

County of Santa Clara
Facilities and Fleet Department
2310 North First Street, Suite 200
San Jose, CA 95131

Prepared by:

AECOM
4 North Second Street, Suite 675
San Jose, CA 95113
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Table of Contents

Appendices

Figures

Tables

1 Executive Summary

This report presents the results of a Traffic Impact Analysis (TIA) conducted for the 231 Grant Educator Workforce Housing project (the project), which proposes construction of a mixed-use development at 231 Grant Avenue in the City of Palo Alto, California.

The project would involve the construction of a four-story residential/commercial/retail complex with a parking garage. The site is approximately 61,000 square feet in area and currently contains a one-story office building with surface parking stalls. The proposed new development would have 110 residential dwelling units ranging from studios to 2-bedroom apartments, 1,120 square feet of 'flex space' that would potentially be used for retail or commercial use and would be served by 112 parking spaces.

The impacts of the proposed project were evaluated following the guidelines of the City of Palo Alto and the Santa Clara Valley Transportation Authority (VTA), which is the Congestion Management Agency for Santa Clara County. Intersection operations were evaluated for level of service (LOS) and queuing impacts under the following study scenarios:

- Existing Conditions
- Existing plus Project Conditions
- Background Conditions
- Background plus Project Conditions
- Cumulative Conditions

1.1 Project Trip Generation

Project generated trips were estimated using vehicle trip rates published by the Institute of Transportation Engineers (ITE) and the allowable reduction due to proximity to transit according to VTA's guidelines. The proposed project is estimated to generate 145 net new AM peak hour trips (64 inbound trips and 81 outbound trips) and 81 net new PM peak hour trips (46 inbound trips and 35 outbound trips).

1.2 Project Impacts

This analysis aims to identify potentially significant LOS and queuing intersection impacts of the proposed project, if any, on the identified intersections and recommends measures to mitigate these impacts.

A potentially significant LOS impact would be identified if the project would result in deterioration of an intersection's LOS to worse than the applicable City or CMP LOS standard; or, for intersections already operating at below the applicable LOS standard, if the project would result in an increase in average control delay for the critical movements by four seconds or more and would increase the critical V/C ratio value by 0.01 or more.

A potentially significant queuing impact would be identified if the project would increase queue length by more than one vehicle length (25 feet) and if the queue exceeds the available turn pocket length.

1.2.1 Existing Plus Project Conditions

Intersection Analysis

Under this scenario, all the study intersections are expected to operate at acceptable LOS during both peak hours, with and without the project. Therefore, the proposed development is not expected to create a significant impact and no mitigation measures are recommended at the study intersections.

Queuing Analysis

A total of four movements are expected to have queues exceeding the provided storage capacity. Southbound right-turn (both peak hours) and westbound left-turn (PM peak) for the El Camino Real / Oregon Expressway / Page Mill Road intersection are expected to have queues longer than the provided storage lane with and without the project. Queues at northbound left-turn (both peak hours) and the eastbound right-turn (both peaks) for the Middlefield Road / Oregon Expressway intersection are expected to exceed the storage with and without the project.

However, for both intersections, the increase in queue length under the 'with project' conditions is less than one car-length and, therefore, is not considered as an impact. Queues at all other analyzed intersections and movements are expected to be accommodated within their provided storage lanes. Hence, no mitigation measures are recommended.

1.2.2 Background Plus Project Conditions

Intersection Analysis

Under this scenario, all the study intersections are expected to operate at acceptable LOS during both peak hours, with and without the project. Therefore, the proposed development is not expected to create a significant impact and no mitigation measures are recommended at the study intersections.

Queuing Analysis

A total of four movements are expected to have queues exceeding the provided storage capacity. Southbound right-turn (both peak hours) and westbound right-turn (AM peak) for the El Camino Real / Oregon Expressway / Page Mill Road intersection are expected to have queues longer than the provided storage lane with and without the project. The westbound left-turn queue at this intersection is expected to be accommodated by the lengthened storage lane that will be implemented by end of 2022 as part of the County's Expressway 2040 Program. Queues at northbound left-turn (both peak hours) and the eastbound right-turn (both peaks) for the Middlefield Road / Oregon Expressway intersection are expected to exceed the storage with and without the project.

However, for both intersections, the increase in queue length under the 'with project' conditions is less than one car-length and it therefore not considered as an impact. Queues at all other analyzed intersections and movements are expected to be accommodated within their provided storage lanes. Hence, no mitigation measures are recommended.

1.2.3 Cumulative Plus Project Conditions

Intersection Analysis

Under this scenario, all the study intersections are expected to operate at acceptable LOS during both peak hours, with and without the project, with the exception of the Birch Street / Sheridan Avenue. This intersection is expected to operate at LOS E during the AM peak with and without project, which is considered at an unacceptable level. However, the project is not expected to cause a significant impact as the Volume to Capacity ratio (V/C) did not meet the significance threshold. Therefore, the proposed development is not expected to create a significant impact and no mitigation measures are recommended at all study intersections.

Queuing Analysis

A total of six movements are expected to have queues exceeding the provided storage capacity. Southbound left-turn (PM peak), southbound right-turn (both peak hours) and westbound right-turn (AM peak) for the ECR / Oregon Expressway / Page Mill Road intersection are expected to have queues longer than the provided storage lane with and without the project. The westbound left-turn queue at this intersection is still expected to be accommodated by the lengthened storage lane that will be implemented by end of 2022 as part of the County's Expressway 2040 Program. Westbound left-turn (PM peak) at the El Camino Real / California Ave is expected to exceed the provided storage capacity with and without the project. Queues at northbound left-turn (both peak hours) and the eastbound right-turn (both peak hours) for the Middlefield Road / Oregon Expressway intersection are expected to exceed the storage with and without the project.

However, for all three intersections, the increase in queue length under the 'with project' conditions is less than one car-length and, therefore, is not considered as an impact. Queues at all other analyzed intersections and movements are expected to be accommodated within their provided storage lanes. Hence, no mitigation measures are recommended.

2 Introduction

This report presents the results of intersection level of service (LOS) analysis for the proposed construction of an educator workforce housing complex with parking located at 231 Grant Avenue on county land in the City of Palo Alto, California.

The purpose of this intersection evaluation is to identify the potential traffic impacts on the study intersections and to recommend corresponding mitigation measures, if required, in accordance with the guidelines of the City of Palo Alto and the Santa Clara Valley Transportation Authority (VTA), which is the Congestion Management Agency for Santa Clara County. Impacts considered in this study include level of service (LOS) delays and queuing impacts at the identified study intersections. The scope of work was prepared in consultation with staff from the County of Santa Clara and City of Palo Alto.

2.1 Project Description

2.1.1 Existing Site

The site is located at 231 Grant Avenue, near Oregon Expressway. An existing one-story building (approximately 6,800 square feet) used by approximately 10 employees currently occupies the site bounded by, Grant Avenue to the north, Park Boulevard to the east and Birch Street to the west. Access to the existing building is via four driveways, three on Grant Avenue and one on Park Boulevard. The Park Boulevard driveway is accessible by all movements as Park Boulevard is undivided. The Grant Avenue driveways, on the other hand, have a 'right-in-right-out' configuration because the section of Grant Avenue fronting the project site is one-way eastbound.

2.1.2 Proposed Site

The proposed development includes a new four-story mixed-use building of 110 residential units and associated amenities such as a residents' lounge, activity room, and laundry. The project would also include a 'flex space' of 1,120 square feet, which could be used for retail or commercial purposes, and approximately 6,400 square feet of outdoor public open space. A total of 112 (car) parking spaces and 146 bicycle parking spaces would be provided. One full movement driveway will be provided along Park Boulevard and the second access along Birch Street will be of a 'right-in-right-out' configuration as Birch Street is divided. **Figure 2-1** shows the Project site plan.

2.2 Study Area

The study area is bounded by California Avenue to the north, Page Mill Road to the south, Alma Street to the east and El Camino Real (ECR) to the west (**Figure 2-2**). While Oregon Expressway and California Avenue provide local access to the project site, freeway US 101 provides regional access to the project site. U.S. 101 can be accessed via the interchange at Oregon Expressway. Further to the west, I-280 and Foothill Expressways bring motorists from the region to the study area.

Figure 2-1 Conceptual Site Plan

Source: Mercy Housing and Abode Communities, 2020

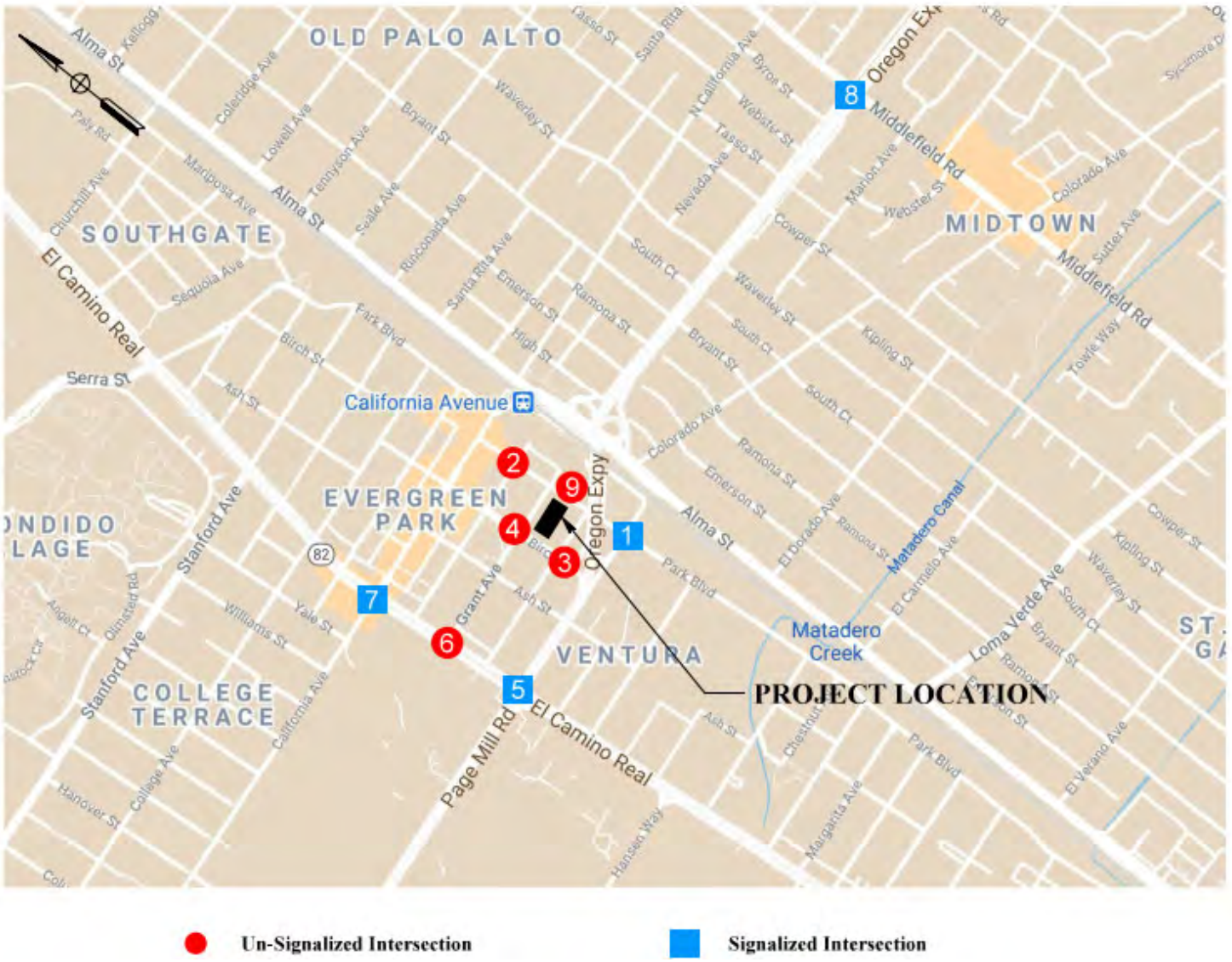

Figure 2-2 Project Vicinity and Intersections

Source: AECOM 2021

The roadway impacts of the proposed Project were evaluated by measuring the effect that project traffic would have on intersection operations, in accordance with City and VTA guidance. The nine study intersections shown in **Figure 2-2** and listed in **Table 2-1**, as agreed with staff from City of Palo Alto, include two intersections being monitored under the VTA Congestion Management Program (CMP) and one full movement project driveway along Park Boulevard.

Table 2-1 List of Study Intersections

Intersection #	Location	Control Type
1	Park Boulevard / Page Mill Rd	Signalized
2	Park Boulevard / Sherman Ave	TWSC
3	Birch St / Sheridan Ave	TWSC
4	Birch St / Grant Ave	AWSC
5	ECR / Oregon Expressway / Page Mill Rd (CMP)	Signalized
6	ECR / Grant Ave	TWSC
7	ECR / California Ave	Signalized
8	Middlefield Rd / Oregon Expressway (CMP)	Signalized
9	Park Boulevard / Project Driveway	TWSC

Source: Compiled by AECOM 2021.

Acronyms: CMP = monitored by Congestion Management Program; AWSC = All-way-stop controlled; TWSC= Two-way-stop controlled; ECR = El Camino Real

2.3 Study Scope and Approach

The following six scenarios were evaluated to identify the potential transportation impacts of the project on the study intersections:

1. Existing Conditions – Calculated intersection volumes for 2020 based on historical traffic counts collected. [1]
2. Existing plus Project Conditions – Existing volumes from Scenario 1 plus the trips from the proposed project.
3. Background Conditions – Existing volumes plus trips from approved but not completed projects. This is defined as the 'Background without Project' conditions.
4. Background plus Project Conditions – Background volumes from Scenario 3 plus the trips from the proposed project.
5. Cumulative Conditions – Volumes from Scenario 3 grown to year 2030. This is defined as the 'Cumulative without Project' conditions.
6. Cumulative plus Project Conditions – Cumulative volumes from Scenario 5 plus the trips from the proposed project.

Intersection LOS was analyzed for the weekday AM peak hour and PM peak hour.

[1] Due to Shelter-In-Place order in response to COVID-19, on-site traffic counts cannot be conducted. Historical traffic counts obtained from earlier projects were grown to 2020, as described in Section 3.3.

2.4 Analysis Methodology

The LOS method approved by VTA and adopted by the City of Palo Alto for signalized intersections is the method described in Chapter 16 of the 2000 Highway Capacity Manual (HCM) (Special Report 209, Transportation Research Board 2010) with adjusted saturation flow rates to reflect conditions in Santa Clara County. This method bases signalized intersection operations on the average control vehicular delay.

Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay. The average control delay for signalized intersections is calculated using TRAFFIX analysis software and is correlated to a LOS designation as shown in **Table 2-2.**

Levels of service at an intersection can range from A, which represents free flow or excellent conditions with insignificant delays, to F, which represents congested or over-saturated conditions with unacceptable delays. **Table 2-2** shows the LOS thresholds for signalized intersections.

Table 2-2 Level of Service Thresholds for Signalized Intersections

Level of Service	Description	Average Control Delay (seconds/vehicle)
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	delay ≤ 10.0
B+	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	10.0 < delay ≤ 12.0
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	12.0 < delay ≤ 18.0
B-	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	18.0 < delay ≤ 20.0
C+	Flow with speeds at or near free-flow speeds. Freedom to maneuver with the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	20.0 < delay ≤ 23.0
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver with the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	23.0 < delay ≤ 32.0
C-	Flow with speeds at or near free-flow speeds. Freedom to maneuver with the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	32.0 < delay ≤ 35.0
D+	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	35.0 < delay ≤ 39.0
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	39.0 < delay ≤ 51.0
D-	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	51.0 < delay ≤ 55.0

E+	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing	55.0 < delay ≤ 60.0
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing	60.0 < delay ≤ 75.0
E-	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	75.0 < delay ≤ 80.0
F	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	delay > 80.0

Source: Traffic Level of Service Analysis Guidelines (VTA 2003) and Highway Capacity Manual (Transportation Research Board 2010).

LOS rating for unsignalized intersections is based on the weighted average control delay expressed in seconds per vehicle for all approaches. Control delay includes initial deceleration delay, queue move-up time, stopped delay and final acceleration. For single lane approaches, the control delay is computed as the average of all movements in that lane. At two-way or side-street controlled intersections, the average control delay is calculated for each stopped movement and not for the intersection as a whole.

There is no specific methodology for analyzing unsignalized intersections in the CMP. For this report, the 2000 Highway Capacity Manual (HCM) methodology for unsignalized intersection (supported by TRAFFIX software) was used for the unsignalized intersection LOS calculations. **Table 2-3** shows the thresholds for the different LOS conditions at unsignalized intersections. In addition, the City of Palo Alto uses the California Manual on Uniform Traffic Control Devices (CA MUTCD) peak hour volume signal warrant to evaluate operations at unsignalized intersections (Caltrans 2020).

Table 2-3 Unsignalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay (seconds/vehicle)
A	Little or no delay	delay ≤ 10.0
B	Short traffic delays	10.0 < delay ≤ 15.0
C	Average traffic delays	15.0 < delay ≤ 25.0
D	Long traffic delays	25.0 < delay ≤ 35.0
E	Very long traffic delays	35.0 < delay ≤ 50.0
F	Extreme traffic delays with intersection capacity exceeded	delay > 50.0

Source: Highway Capacity Manual (Transportation Research Board 2010).

The LOS standard for City of Palo Alto intersections is LOS D or better. The LOS standard for CMP intersections is LOS E. CMP intersections are indicated as such in **Table 2-1** above.

As such, for this report, a traffic impact would be considered significant if the project would:

- cause a local (City of Palo Alto) intersection to deteriorate below LOS D; or
- cause a CMP intersection to deteriorate from LOS E or better to LOS F; or
- cause a local intersection already operating at LOS E or F to deteriorate in the average control delay for the critical movements by four seconds or more and the critical volume to capacity (V/C) ratio value to increase by 0.01 or more; or
- cause a CMP or regionally significant intersection already operating at LOS F to deteriorate in the average control delay for the critical movements by four seconds or more and the critical V/C ratio value to increase by 0.01 or more.

For unsignalized intersections, the City's LOS standard is also level D. Significant impacts are defined to occur when the addition of project traffic causes the LOS of an unsignalized intersection to degrade to LOS E or worse. Project impacts are also considered significant if the intersection satisfies the peak hour traffic signal warrant from the CA MUTCD. For an all-way stop intersection already operating at LOS E or F without the project, significant impacts are deemed to have occurred if the average intersection delay increases by four seconds or more and the V/C ratio value increases by 0.01 or more. For a side-street stop-controlled intersection already operating at LOS E or F without the project, project impacts will be considered significant if the worst movement delay increases by four seconds or more and the critical V/C value increases by 0.01 or more.

For queuing analysis, an operational deficiency is assumed to occur if the queue increases by the length of one or more vehicles (25 feet) and if the queue exceeds the available turn pocket length.

3 Existing, Background, and Cumulative Conditions

This section describes the existing, background and cumulative conditions in the vicinity of the project in terms of the existing roadways and traffic operations. These conditions do not take account of traffic generated by the proposed project and are therefore considered “no project” conditions.

3.1 Major Roadways in Study Area

Regional access to the Project site is provided by US 101 and I-280.

- US 101 – This eight-lane freeway extends from San Francisco to San Jose with a posted speed limit of 65 mph. In the vicinity of the Project site, this freeway runs in the north-south direction. It has three mixed-flow lanes in both directions, and one carpool lane in each direction with hours of operation during 5am-9am and 3pm-7pm. US 101 is under the jurisdiction of Caltrans. Access to the freeway from the project site is provided via ramps at Oregon Expressway Interchange.
- I-280 – This north-south freeway also connects San Francisco and San Jose. It has four mixed-flow lanes in each direction in the vicinity of the project although a short section of the southbound drops to three lanes between the Page Mill Road On/Off Ramps. Access to the freeway from the project site is provided via ramps at Page Mill Road Interchange.

Local access to the Project site is provided by Oregon Expressway, Page Mill Road, ECR and California Avenue. Direct access to the project site is from Grant Avenue and Park Boulevard. These roadways are described below.

- Oregon Expressway – This east-west 4-lane divided expressway connects ECR to US-101, with accesses to local residential areas in between. Oregon Expressway has a posted speed limit of 35mph and connects to Page Mill Road west of ECR. Project site access to/from eastbound Oregon Expressway is via Park Boulevard and the short section of Page Mill Road. Project access to westbound Oregon Expressway is via Birch Street.
- El Camino Real (ECR) – Also known as SR 82, ECR is a major north-south arterial extending from the San Francisco area all the way to San Jose with a posted speed limit of 35mph. It provides direct access to developments along both approaches. Under existing conditions, Grant Avenue provides direct ingress to the project site from ECR.
- Page Mill Road – This east-west roadway extends from Skyline Boulevard west of the project site to ECR, connecting to Oregon Expressway. It is a 4-lane divided arterial road between ECR and I-280. The posted speed limit is 50mph between I-280 and Foothill Expressway but drops to 35mph between Foothill Expressway and ECR. Page Mill Road transitions to Oregon Expressway east of ECR with a short

section of the roadway that continues to the California Avenue Transit Station. A Class 2 bike-lane is provided from ECR to Foothill Expressway on both approaches.

- California Avenue – This east-west collector roadway connects Amherst Street to Park Boulevard. It is primarily 2-lane undivided with Class 2 bike lanes along both approaches between Amherst Street and ECR. On-street parking is provided along California Avenue with a posted speed limit of 25mph.
- Grant Avenue – This east-west local roadway connects ECR to Park Boulevard. It is primarily 2-lane undivided except between Birch Street and Park Boulevard (i.e., immediately adjacent to the project site) where it is one-way eastbound. It has a posted speed limit of 25mph with on-street parking allowed on both approaches. It provides direct access to the project site under existing conditions but will not have access to the project site under the proposed project layout.
- Park Boulevard – This roadway starts at the intersection of ECR and Serra Street, first going east-west for a short section before becoming north-south, extending past West Charleston Road where it connects to Whitclem Drive. In the project vicinity, it is 2-lane undivided, with a Class 2 bike lane on both approaches up to Chestnut Avenue. On-street parking with a 2-hr limit is provided between California Avenue and Sheridan Avenue. In the project vicinity, Park Boulevard is designated as a collector road with posted speed limit of 25mph. It provides direct access to the project site under existing conditions as well as under the proposed project layout.
- Birch Street – This north-south local street starts at the east-west section of Park Boulevard and continues to Oregon Expressway. It is 2-lane undivided with on-street parking up to California Avenue. It becomes divided from California Avenue to Oregon Expressway. This latter section in the project vicinity is designated as a collector road with a posted speed limit of 25mph. Northbound Birch Street will provide direct access under the proposed project layout.

3.2 Field Observations

This traffic analysis and report were prepared in the midst of the COVID-19 pandemic which started in the first quarter of 2020. During this period, varying degrees of stay-at-home orders were issued by the counties in the Bay Area, resulting in significantly less than usual traffic on the roads of the Bay Area. Data collected by the Metropolitan Transportation Commission (MTC) in July 2020 indicated that traffic on the San Mateo-Hayward Bridge was at 64 percent of the previous year and traffic on the Dumbarton Bridge was just 56 percent of the previous year[2]. In addition, traffic in the project vicinity has also decreased significantly as big trip generators like the Stanford University moved most of its teaching online and encouraged staff to work from home as much as possible during this period. Similarly, many major employers in the peninsula/south bay area have also seen many of their staff working from home during this period. When AECOM visited the project site in February 2021, the section of California Avenue,

[2] https://abc7news.com/san-francisco-bay-area-traffic-sf-report-current/6417391/

between ECR and Birch Avenue was closed to vehicular traffic. This was to allow for outdoor dining to be set up along California Avenue for eateries fronting this roadway.

Due to the unusual situation brought about by the pandemic, no traffic count was collected on site for this project. Similarly, it would not be meaningful to make field observations in the project vicinity given that the traffic conditions changed depending on the degree of stay-at-home orders. It is noted that while the pandemic may only be temporary, its effect on commuter behavior could be long-term. More companies are seen expanding their flexible work schemes to allow increased opportunities of working remotely, for example. Separate studies at a later date would need to be conducted to determine the long-term effects this pandemic has on the traffic patterns in the Bay Area. It is still too early to tell at this point as employers carve out new policies regarding working remotely. Another area of consideration is the use of public transportation and carpooling; the level of willingness to travel via transit and carpool post-COVID would also affect the traffic conditions as life returns to normal.

However, based on past studies of other projects in the vicinity and AECOM's knowledge of the surrounding, the intersection of ECR and Page Mill Road/Oregon Expressway has been experiencing heavy traffic during both AM and PM peaks in all directions. The cycle length was long to allow for more through put during each green phase, but also resulted in long queue lengths for the waiting approach. It has been observed that motorists could clear the intersection within two cycles, with most vehicles clearing it in one cycle unless joining the queue late. The left-turn queues on the east-west approach along Page Mill Road/Oregon Expressway were observed to frequently exceed their storage capacity. The lead left-turn phase, however, was able to clear the left-turn vehicles, thus making room for the through traffic to join the queue. The LOS of this intersection for the PM peak was reported at level D in the latest 2018 CMP Monitoring and Conformance Report by VTA.

At the intersection of Grant Avenue and ECR, only right-turns to northbound ECR are allowed. Left-turns from Grant Avenue to southbound ECR are prohibited. Recent improvements were made along ECR to curb the left-turn movements by installing a raised median. Approximately 4-car storage lanes are provided for U-turning or left-turning vehicles from both approaches of ECR and the new raised median now prevents the illegal left-turns movements from both Grant Avenue and the driveways along southbound ECR. The traffic volumes on ECR have been observed to be relatively high during both peak hours in the pre-pandemic conditions. However, due to the proximity of the signalized upstream intersection (ECR/Page Mill Road/Oregon Expressway), right-turning vehicles from Grant Avenue (on to northbound ECR) have been observed to find adequate gaps for this maneuver. Similarly, left-turning or U-turning vehicles along both directions of ECR were observed to be able to find adequate gaps to maneuver without exceeding the storage lane provided; thus, not impeding the through traffic.

Along Birch Street, due to the high volume coming off Oregon Expressway during both peak hours, the northbound through volume has been observed to be relatively high, which is reflected in the volumes used for this project's analysis. The sight-distance for the westbound movement (on Birch Street) at the stop line is obstructed by the garage

at the southeast corner. Motorists on Birch have to inch out from the stop line in order to get a good view of the oncoming traffic from Oregon Expressway.

The intersection of Middlefield Road and Oregon Expressway is another busy intersection in proximity to the project site. The 2018 CPM Monitoring and Conformance Report states that the LOS for this intersection is E+ during the PM peak, but still within acceptable standards defined by VTA and the City of Palo Alto.

3.3 Intersection Volumes

Due to the inability to collect traffic counts on site for the project, past data provided by the County and from two recently approved developments in the project vicinity were used as base volumes from which the 2020 ('Existing') volumes were extrapolated. This is a conservative approach as it assumed the 'pre-COVID' level of traffic growth, rather than the dampened traffic volumes present during the pandemic. The County provided the PM peak hour data for the intersection of ECR/Page Mill Road (int #5) and Middlefield Road/Oregon Expressway (int #8), for the year 2019 and 2018 respectively. Remaining volume data were obtained from the studies for housing development at 2755 ECR (Hexagon Transportation Consultants, Inc., January 2018) and the Palo Alto Public Safety Building and Public Parking Structure (Fehr & Peers, May 2018). Counts for these two projects were collected between 2016 and 2017. **Appendix A** provides the data used for this project.

Volumes from the different sources mentioned above were compared and a growth factor was determined. The average growth was determined to be about 1.7% per year. This growth factor was used to grow the latest counts available to the existing year of 2020. This set of volumes constitutes the input for Scenario 1 (existing conditions) of the LOS analysis.

3.4 Existing Intersection Operations

The intersection geometry and (calculated) existing traffic volumes are shown in **Figure 3-1** and **Figure 3-2** respectively. The performance of each intersection under existing conditions is presented in **Table 3-1**. The results of the LOS calculations indicate that all the study intersections operate at acceptable levels of service according to their LOS standard and the peak hour signal warrant for all unsignalized intersections is not met during both peak hours. Details for the intersection analysis are presented in **Appendix B.**

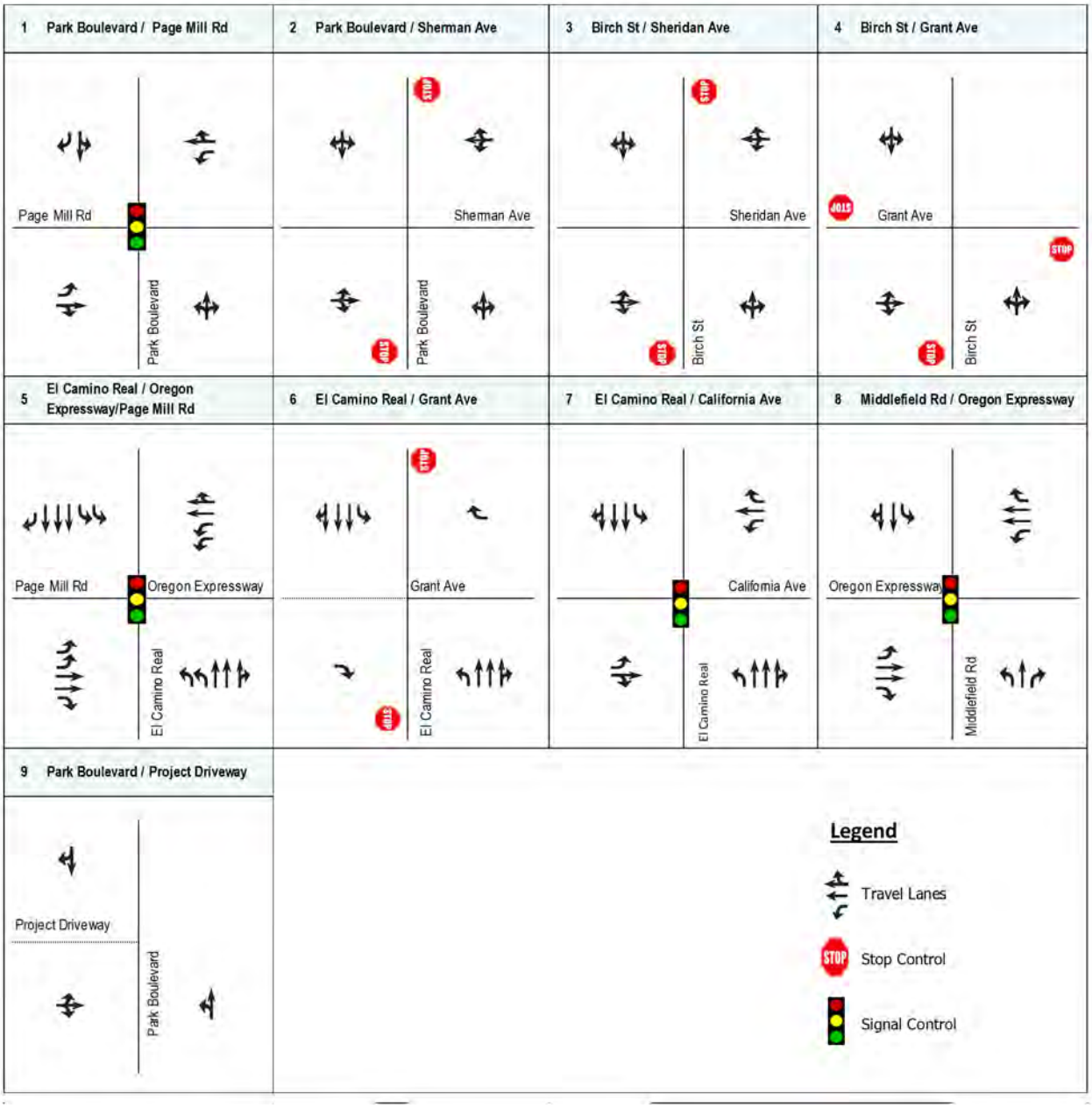

Figure 3-1 Intersection Geometry

Source: AECOM 2021

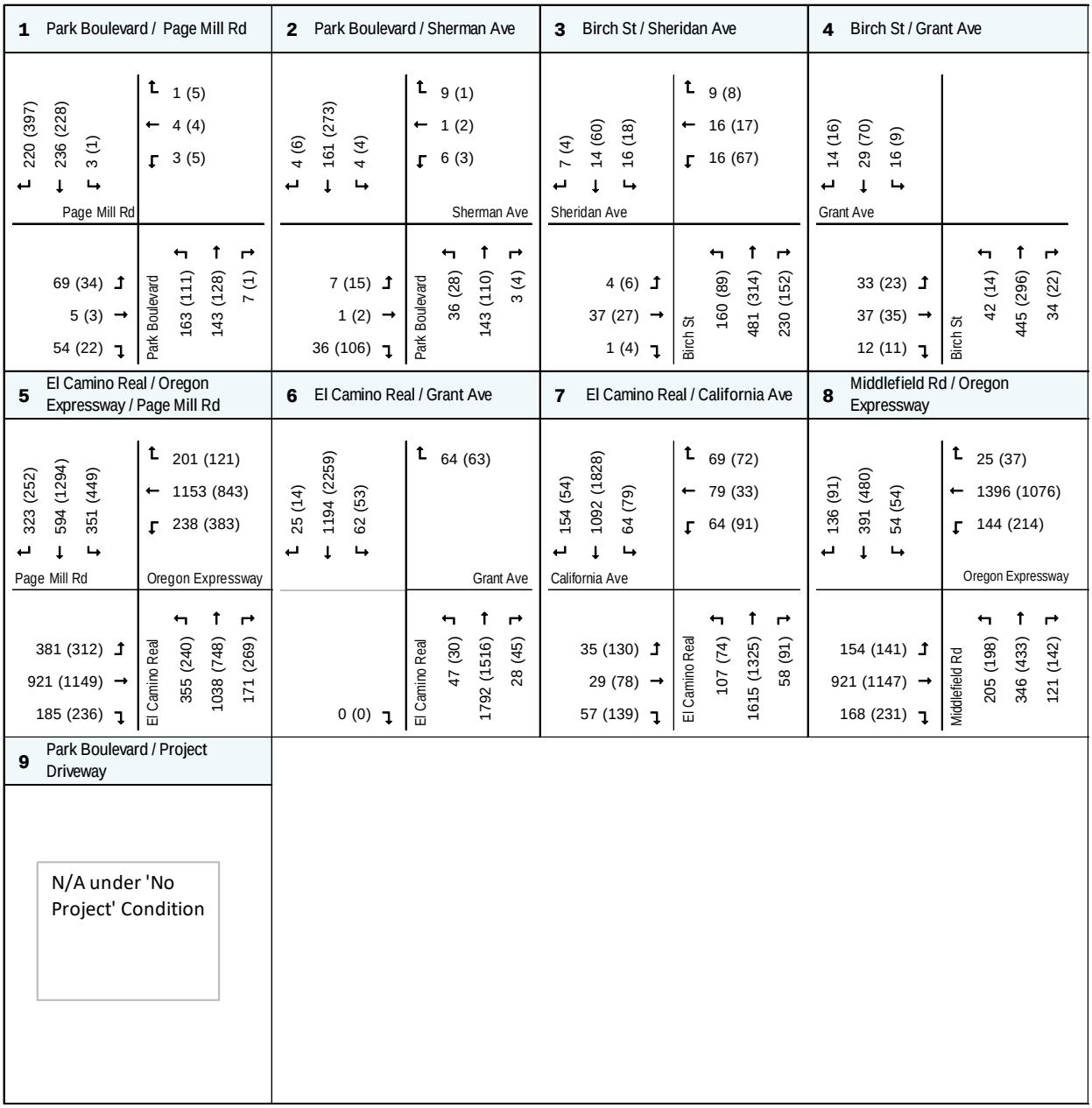

Figure 3-2 Existing Traffic Volumes

Source: AECOM 2021. See Section 3.3 for discussion of how existing traffic volumes were calculated.

Table 3-1 Intersection Performance – Existing Conditions

Int #	Intersection	Peak Hr	LOS Standard	Existing Conditions LOS	Existing Conditions Delay (sec)	Existing Conditions Critical V/C
1	Park Boulevard / Page Mill Rd	AM	D	A	8.4	0.232
1	Park Boulevard / Page Mill Rd	PM	D	A	4.8	0.261
2	Park Boulevard / Sherman Ave*	AM	D	B	10.4	0.010
2	Park Boulevard / Sherman Ave*	PM	D	B	12.6	0.010
3	Birch St / Sheridan Ave*	AM	D	D	28.3	0.190
3	Birch St / Sheridan Ave*	PM	D	C	19.3	0.210
4	Birch St / Grant Ave**	AM	D	B	12.2	0.606
4	Birch St / Grant Ave**	PM	D	A	9.1	0.385
5	El Camino Real / Oregon Expressway/Page Mill Rd (CMP)	AM	E	D	50.3	0.897
5	El Camino Real / Oregon Expressway/Page Mill Rd (CMP)	PM	E	D	47.3	0.824
6	El Camino Real / Grant Ave*	AM	D	B	14.5	0.140
6	El Camino Real / Grant Ave*	PM	D	B	13.2	0.130
7	El Camino Real / California Ave	AM	D	C+	22	0.456
7	El Camino Real / California Ave	PM	D	C	29.1	0.599
8	Middlefield Rd / Oregon Expressway	AM	E	D	44.7	0.777
8	Middlefield Rd / Oregon Expressway	PM	E	D	46.4	0.742
9	Park Boulevard / Project Driveway**	AM	D	N/A	N/A	N/A
9	Park Boulevard / Project Driveway**	PM	D	N/A	N/A	N/A

Source: AECOM 2021

Acronyms: LOS = level of service; V/C = volume to capacity ratio; ECR = El Camino Real; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; N/A = not applicable

Notes:

*LOS and delay reported for worst movement for 2-way stop controlled intersections

**Overall delay reported for AWS controlled intersection

3.5 Approved Projects

The list of approved projects (as obtained from the City of Palo Alto) in the vicinity of this project is shown in **Table 3-2** below.

Table 3-2 List of Approved Projects

Project Name	Project Location	Land Use
2755 El Camino Real Redevelopment	2755 El Camino Real	Residential
Palo Alto Public Safety Building and Public Parking Structure	250 Sherman Avenue	Public Services/Office

Source: City of Palo Alto, 2020.

Background Condition traffic volumes were developed by adding the trips generated by the above projects to the existing traffic volumes. Appendix C presents the approved project trips. Background Condition traffic volumes for the AM and PM peak hours are presented in Figure 3-3.

An additional project that has been included in the Background scenario is the intersection improvements at the intersection of ECR / Oregon Expressway / Page Mill Road (int #5). Design is underway to add an exclusive westbound right-turn lane and to extend the two westbound left-turn storage lanes by more than two hundred feet in total. These improvements, part of the County's Expressway 2040 Program, are expected to be completed by the end of 2022. They are therefore considered as 'approved but not yet completed' projects like the above and reflected under the Background scenario and subsequently in the Cumulative scenario. Figure 3-4 presents the new lane configuration at intersection #5. Appendix D presents the proposed new striping plans at this intersection.

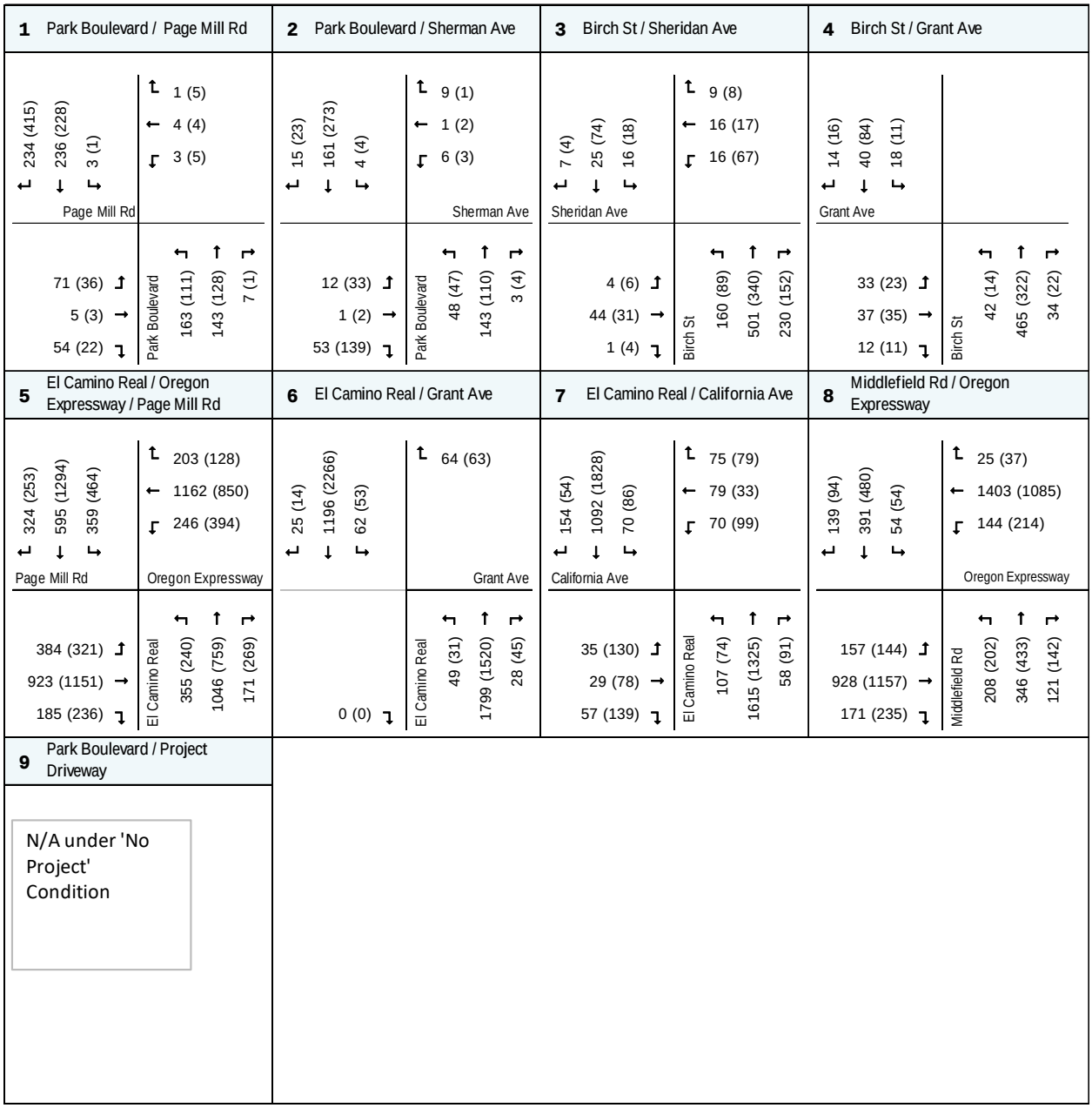

Figure 3-3 Background Intersection Traffic Volumes

Source: AECOM 2021

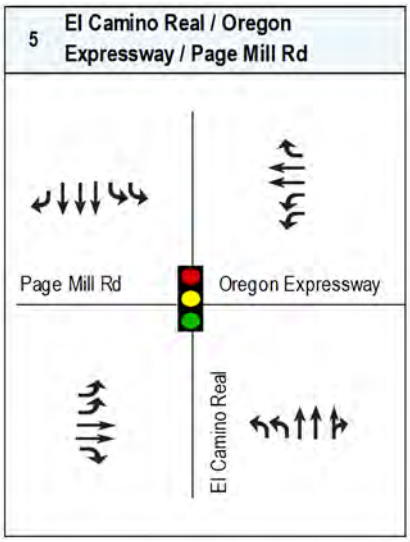

Figure 3-4 New Intersection Geometry for Intersection #5

Source: AECOM 2021

3.6 Background Conditions

Based on the existing traffic volumes and approved project trips and intersection improvements presented earlier, intersection analysis was performed at all the study intersections for the Background Conditions. Lane geometries for this scenario are same as that for the Existing Condition except for intersection #5 as discussed above. **Table 3-3** presents the results and the analysis details are presented in **Appendix E**. All the intersections operated within acceptable levels under the Background Conditions. The peak hour signal warrant for all the unsignalized intersection is also not met during both peak hours.

Table 3-3 Intersection Performance – Background Conditions

Int #	Intersection	Peak Hr	LOS Standard	Background Conditions LOS	Background Conditions Delay (sec)	Background Conditions Critical V/C
1	Park Boulevard / Page Mill Rd	AM	D	A	8.4	0.233
1	Park Boulevard / Page Mill Rd	PM	D	A	4.9	0.273
2	Park Boulevard / Sherman Ave*	AM	D	B	10.6	0.010
2	Park Boulevard / Sherman Ave*	PM	D	B	13.7	0.010
3	Birch St / Sheridan Ave*	AM	D	D	30.9	0.240
3	Birch St / Sheridan Ave*	PM	D	C	20.8	0.230
4	Birch St / Grant Ave**	AM	D	B	12.7	0.632
4	Birch St / Grant Ave**	PM	D	A	9.4	0.418
5	El Camino Real / Oregon Expressway/Page Mill Rd (CMP)	AM	E	D	46.8	0.836
5	El Camino Real / Oregon Expressway/Page Mill Rd (CMP)	PM	E	D	47.3	0.836
6	El Camino Real / Grant Ave*	AM	D	B	14.6	0.150
6	El Camino Real / Grant Ave*	PM	D	B	13.2	0.130
7	El Camino Real / California Ave	AM	D	C+	22.7	0.464
7	El Camino Real / California Ave	PM	D	C	29.8	0.604
8	Middlefield Rd / Oregon Expressway	AM	E	D	44.9	0.784
8	Middlefield Rd / Oregon Expressway	PM	E	D	46.9	0.758
9	Park Boulevard / Project Driveway**	AM	D	N/A	N/A	N/A
9	Park Boulevard / Project Driveway**	PM	D	N/A	N/A	N/A

Source: AECOM 2021

Acronyms: LOS = level of service; V/C = volume to capacity ratio; ECR = El Camino Real; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; N/A = not applicable.

Notes:

*LOS and delay reported for worst movement for 2-way stop controlled intersections

**Overall delay reported for AWS controlled intersection

3.7 Cumulative Conditions

The horizon year for the Cumulative Conditions was determined to be 2030 after consulting with City of Palo Alto so as to coincide with its current Comprehensive Plan adopted in 2017 (Comprehensive Plan 2030, City of Palo Alto). As part of the comprehensive plan study process, the City of Palo Alto evaluated a total of six scenarios with varying degrees of growth for the year 2030. Its City Council eventually adopted a scenario with growth approximately mid-way of the evaluated scenarios.

In order to calculate the volumes at the project study intersections under the Cumulative Conditions, a growth factor will need to be determined. Given that no detailed intersection analysis was needed for the adopted scenario under City of Palo Alto 2030 Comprehensive Plan study, no corresponding intersection volume data was available for use by this project. City staff then advised that data from the studied scenario most closely matching the adopted scenario can be used in developing the growth factor to

be used for this project. The selected study scenario from the Comprehensive Plan Study for the purpose of this project analysis was Scenario 5. **Appendix F** presents a summary of the Comprehensive Plan study scenario parameters.

Comparing the intersection volumes from the 'Existing' scenario and '2030 Scenario 5' of the City of Palo Alto 2030 Comprehensive Plan study, an average growth of 0.7% per year was determined. **Appendix G** shows the relevant intersection volumes extracted from the Comprehensive Plan. This growth factor was used to calculate the 2030 volumes for the local/collector roadways around the project where the surroundings are mostly developed and no significant growth would be expected. For the volumes along major roadways like ECR and Middlefield Road, the specific growth for each roadway was used instead of the average which ranged from 1% to 3% per year. These growth factors were applied to the Background Conditions volumes to arrive at the 2030 cumulative volumes for this project analysis. **Figure 3-5** presents the cumulative intersection volumes. Lane configuration for 2030 is expected to be the same as the Background Conditions. The analysis results for the Cumulative Scenario are presented in **Table 3-4** and the analysis details are presented in **Appendix H**. All the study intersections are expected to operate within acceptable levels under the Cumulative Conditions and the peak hour signal warrant for all the unsignalized intersection is also not met during both peak hour except for intersection #3, Birch Street and Sheridan Avenue**.**

The intersection of Birch Street and Sheridan Avenue is expected to operate at LOS E in the AM peak hour of 2030, below its acceptable standard of LOS D. However, the peak hour signal warrant is not met as shown in the detailed TRAFFIX analysis output.

Table 3-4 Intersection Performance – Cumulative Conditions

Int #	Intersection	Peak Hr	LOS Standard	Cumulative Conditions LOS	Cumulative Conditions Delay (sec)	Cumulative Conditions Critical V/C
1	Park Boulevard / Page Mill Rd	AM	D	A	8.3	0.241
1	Park Boulevard / Page Mill Rd	PM	D	A	5.0	0.286
2	Park Boulevard / Sherman Ave*	AM	D	B	11.0	0.020
2	Park Boulevard / Sherman Ave*	PM	D	B	14.3	0.010
3	Birch St / Sheridan Ave*	AM	D	**E**	**36.5**	**0.290**
3	Birch St / Sheridan Ave*	PM	D	C	23.7	0.270
4	Birch St / Grant Ave**	AM	D	B	14.0	0.681
4	Birch St / Grant Ave**	PM	D	A	9.7	0.451
5	El Camino Real / Oregon Expressway/Page Mill Rd (CMP)	AM	E	D	50.2	0.890
5	El Camino Real / Oregon Expressway/Page Mill Rd (CMP)	PM	E	D-	52.6	0.917
6	El Camino Real / Grant Ave*	AM	D	C	16.2	0.180
6	El Camino Real / Grant Ave*	PM	D	B	14.1	0.150
7	El Camino Real / California Ave	AM	D	C+	22.8	0.519
7	El Camino Real / California Ave	PM	D	C	30.5	0.675
8	Middlefield Rd / Oregon Expressway	AM	E	D	48.9	0.842
8	Middlefield Rd / Oregon Expressway	PM	E	D	48.7	0.808
9	Park Boulevard / Project Driveway**	AM	D	N/A	N/A	N/A
9	Park Boulevard / Project Driveway**	PM	D	N/A	N/A	N/A

Source: AECOM 2021

Acronyms: LOS = level of service; V/C = volume to capacity ratio; ECR = El Camino Real; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; N/A = not applicable.

*LOS and delay reported for worst movement for 2-way stop controlled intersections

**Overall delay reported for AWS controlled intersection

Deficient operations are indicated in **bold**

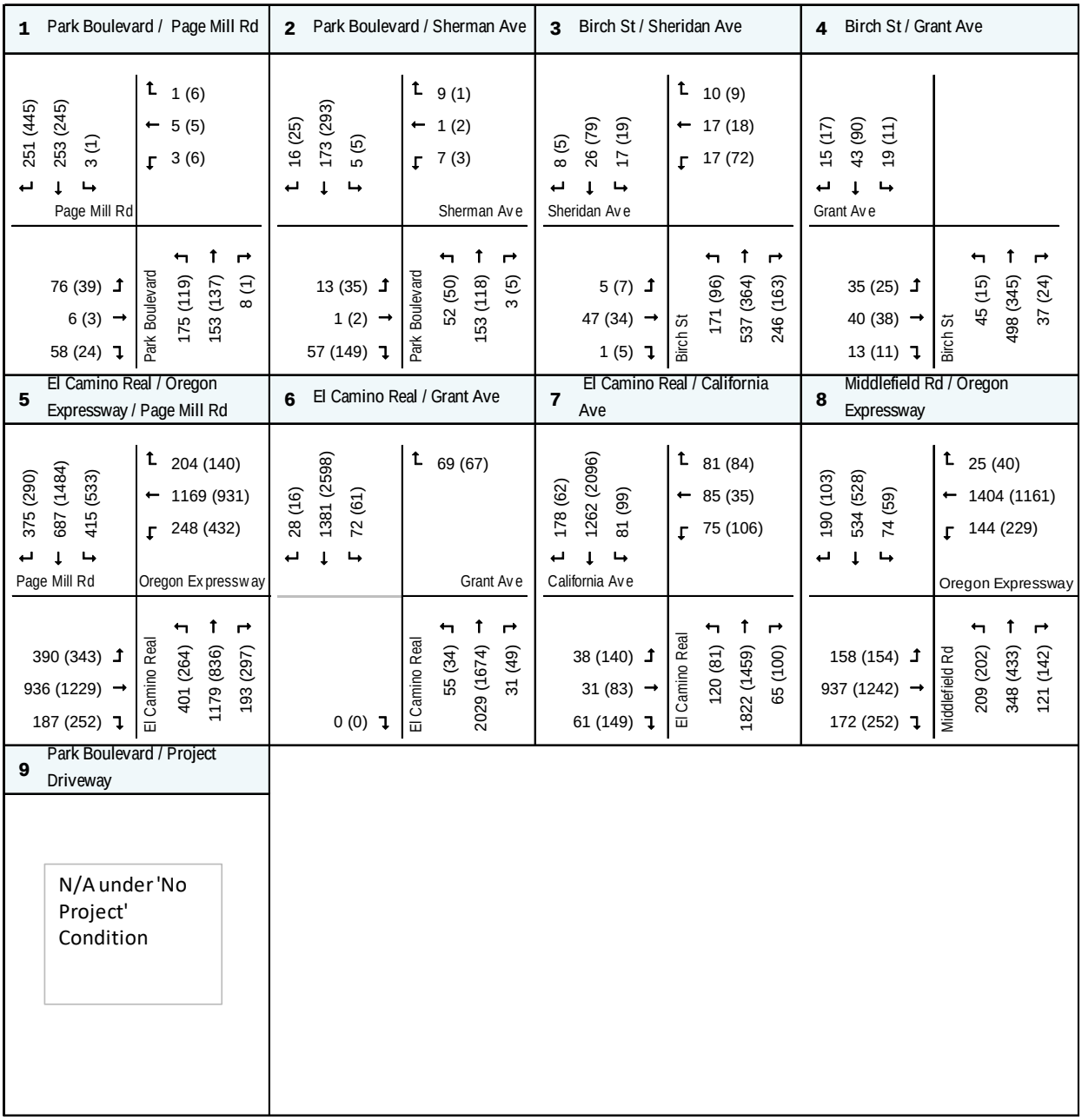

Figure 3-5 Cumulative Intersection Traffic Volumes

Source: AECOM 2021

4 Plus Project Conditions

This chapter looks at the future transportation conditions in the study area as a result of the proposed project. Trips generated by the proposed development are added to the 'no project' scenarios discussed in the earlier chapter to determine the effects of this project. These scenarios are therefore referred to as "plus project" conditions. Any mitigation measures necessary to alleviate potential impacts will also be discussed.

4.1 Trip Generation, Trip Distribution and Project-Only Trip Assignment

This section presents the number of vehicle trips generated by the proposed development. Trip generation rates from the Institute of Transportation Engineers' (ITE) Trip Generation Manual (10th Edition, 2017) were used for determining the number of trips of the future land use at the project site. Trip generation rates and estimates are summarized in **Table 4-1** and **Table 4-2**. As this project replaces an existing office area, the net additional trips will be considered 'project trips'.

Table 4-1 Trip Generation for Proposed Project – AM Peak Hour

Land Use	Size	Rate	In%	In	Out%	Out	Total
Residential (Land Use 221)	110 DU	0.36 per DU	26%	10	74%	29	39
Trip Adjustment for TOD		9 %		(1)		(3)	(4)
Café (Land Use 936)	1,120 SF	101.14 per SF		58		56	113
Total Proposed Trips			**51**	**67**	**49**	**82**	**149**
Office (Land Use 710)	10 employees	0.37 per employee	83%	3	17%	1	4
Total Existing Trips				**3**		**1**	**4**
Net New Trips				**64**		**81**	**145**

Source: Calculated by AECOM 2021 based on generation rates from ITE 2017.

Acronyms: DU = dwelling unit; SF = square feet; TOD = transit oriented development

Table 4-2 Trip Generation for Proposed Project – PM Peak Hour

Land Use	Size	Rate	In%	In	Out%	Out	Total
Residential (Land Use 221)	110 DU	0.44 per DU	61%	30	39%	18	48
Trip Adjustment for TOD		9 %		(3)		(2)	(4)
Café (Land Use 936)	1,120 SF	36.31 per SF		20		20	41
Total Proposed Trips			**50**	**47**	**50**	**38**	**85**
Office (Land Use 710)	10 employees	0.4 per employee	20%	1	80%	3	4
Total Existing Trips				**1**		**3**	**4**
Net New Trips				**46**		**35**	**81**

Source: Calculated by AECOM 2021 based on generation rates from ITE 2017.

Acronyms: DU = dwelling unit; SF = square feet; TOD = transit oriented development

According to VTA's guidelines, because this proposed development is located within 2,000 feet of walking distance from a major transit facility (no more than 0.3 mile, or 1,600 feet from California Avenue Caltrain Station), it is considered a transit-oriented development and a reduction of 9% can be applied to the number of trips generated by the housing portion. This should be coupled with implementing a Transportation Demand Management (TDM) Program. The developer of the project is currently developing a comprehensive TDM program and will be discussed with the County, followed by the City of Palo Alto when more details are available.

Although tenant for the proposed 'flex space' has not been decided at the point of this report, a café type land use (ITE Land Use 936 - Coffee/Donut Shop without Drive-Through Window) was chosen to represent the potential use of this area, as a café is likely to be one of the higher trip generating uses that might use the flex space, and is therefore a conservative assumption. Furthermore, Land Use 936 has a higher trip generation rates compared to another similar café type (ITE Land Use 939 – Bread/Donut/Bagel Shop Without Drive-Through Window) which will result in a more conservative analysis. The project trip generation did not further reduce for pass-by and diverted trips even though a café type use could see some of such trips. Trip generation for the existing office use were determined based on the number of employees rather than by the area of the building. This is because the number of trips calculated using the latter method would generate a higher number of trips which will lower the net new project trips to be generated. Therefore, to maintain a conservative approach, a lower number of existing trips based on actual employee numbers at the existing office were used.

As a result, the proposed project is estimated to generate 145 net new AM peak hour vehicle trips (64 inbound trips and 81 outbound trips) and 81 net new PM peak hour vehicle trips (46 inbound trips and 35 outbound trips).

Trip distribution is defined as the direction of approach and departure that vehicles would use to arrive at and depart from the site. The trip distribution pattern of the traffic generated by the project onto the roadway system was based on recent TIA's completed in the area, prevailing traffic patterns and the site access locations. The project trips were distributed and assigned to the study intersections for traffic impact determination based on the trip distribution percentages shown in **Figure 4-1.** The resulting project only volumes at each of the study intersections are presented in **Figure 4-2**, and existing plus project traffic volumes at each intersection are shown in Error! Reference source not found.**.**

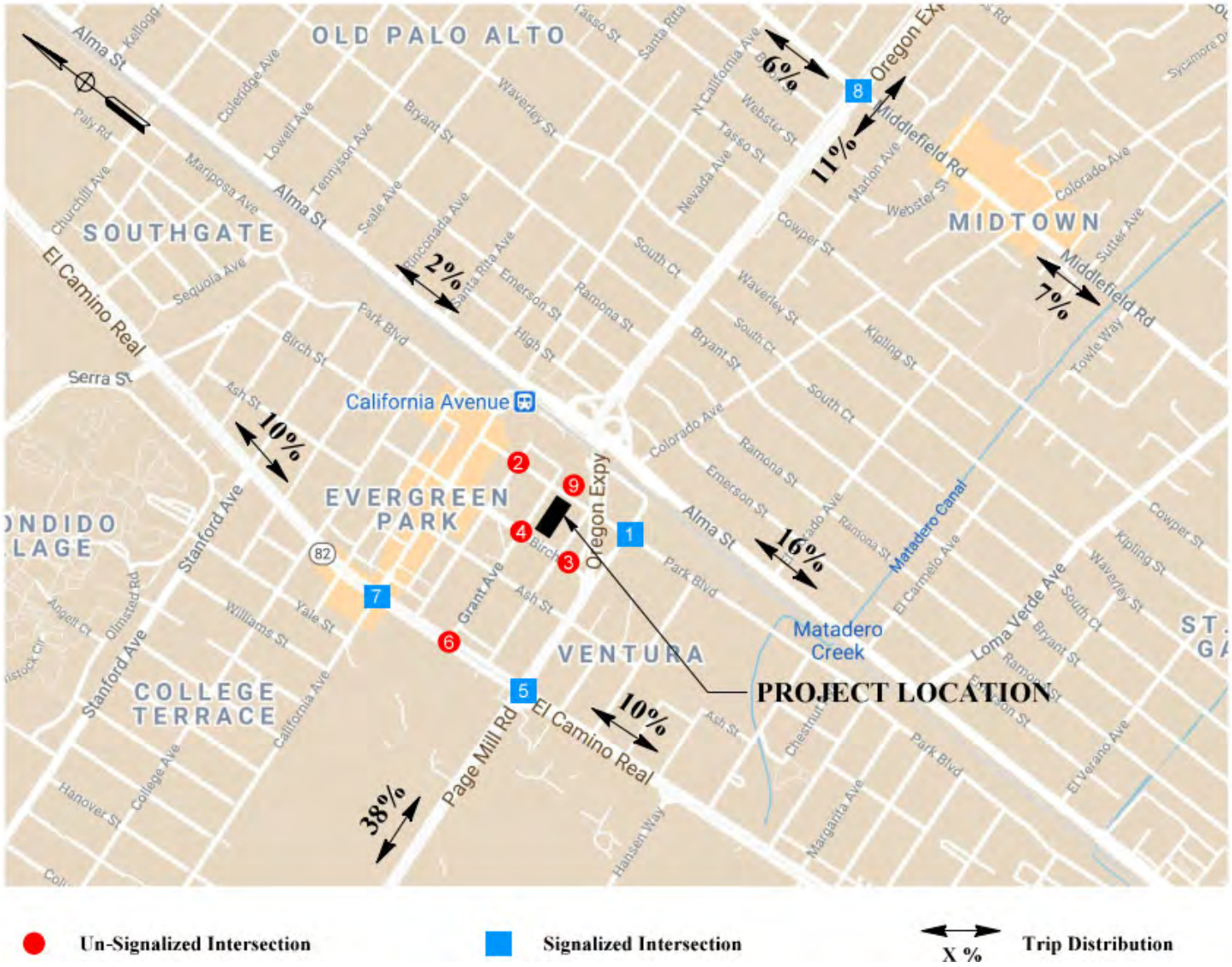

Figure 4-1 Project Trip Distribution

Source: AECOM 2021

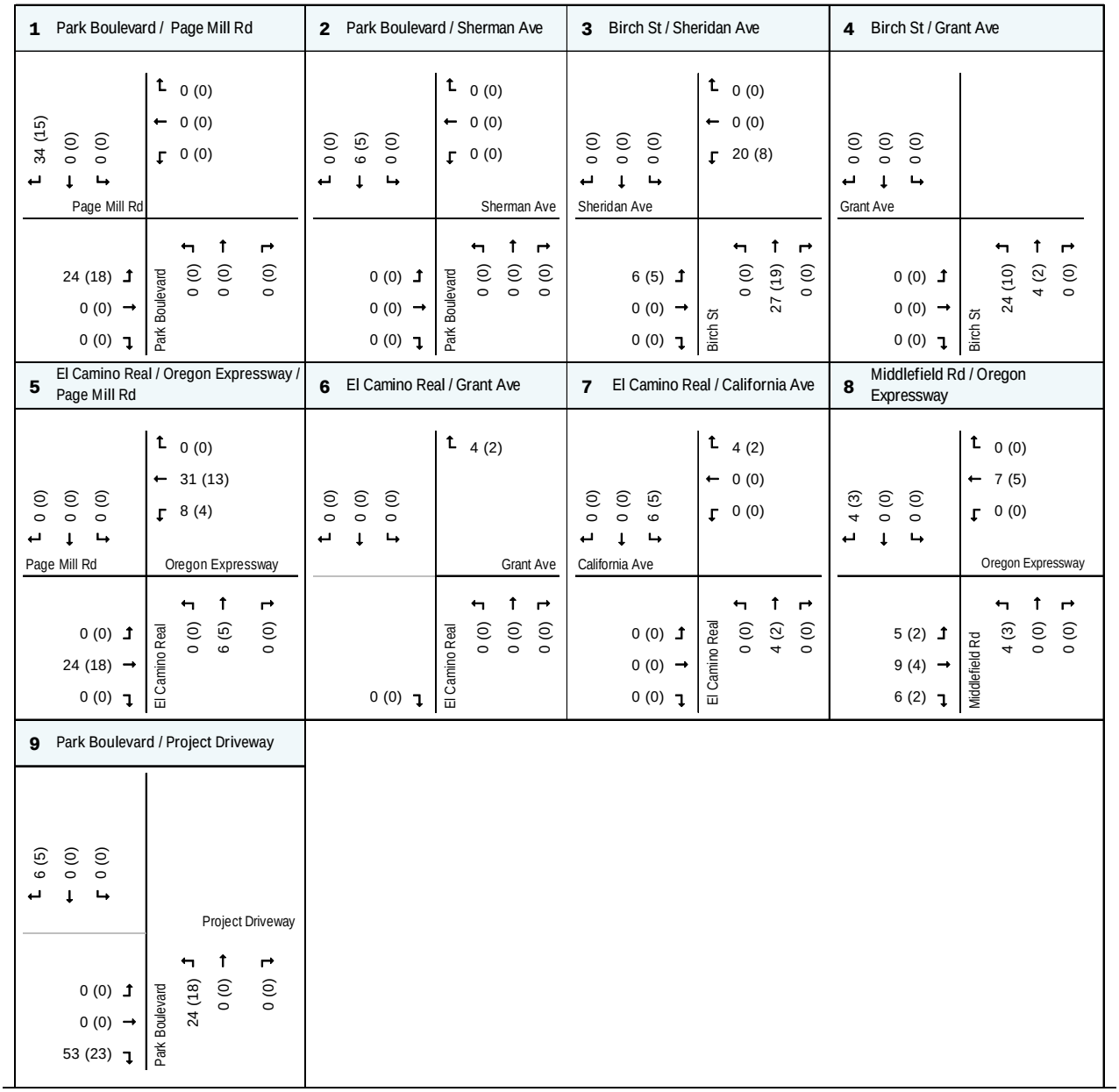

Figure 4-2 Project Only Traffic Volumes

Source: AECOM 2021

4.2 Existing plus Project Conditions

4.2.1 Intersection Operations

A project impact is determined by comparing the operating conditions of 'plus project' and the 'no project' scenarios. The total 'plus project' traffic volumes for all the study intersections under the Existing Conditions are presented in **Figure 4-3**. The comparison table is shown in **Table 4-3.** All the intersections operated within acceptable LOS and the peak hour signal warrant for all unsignalized intersections is not met with and without project. Therefore, no intersection impacts are expected under the 'Existing plus Project' scenario. Details of this analysis are presented in **Appendix B**.

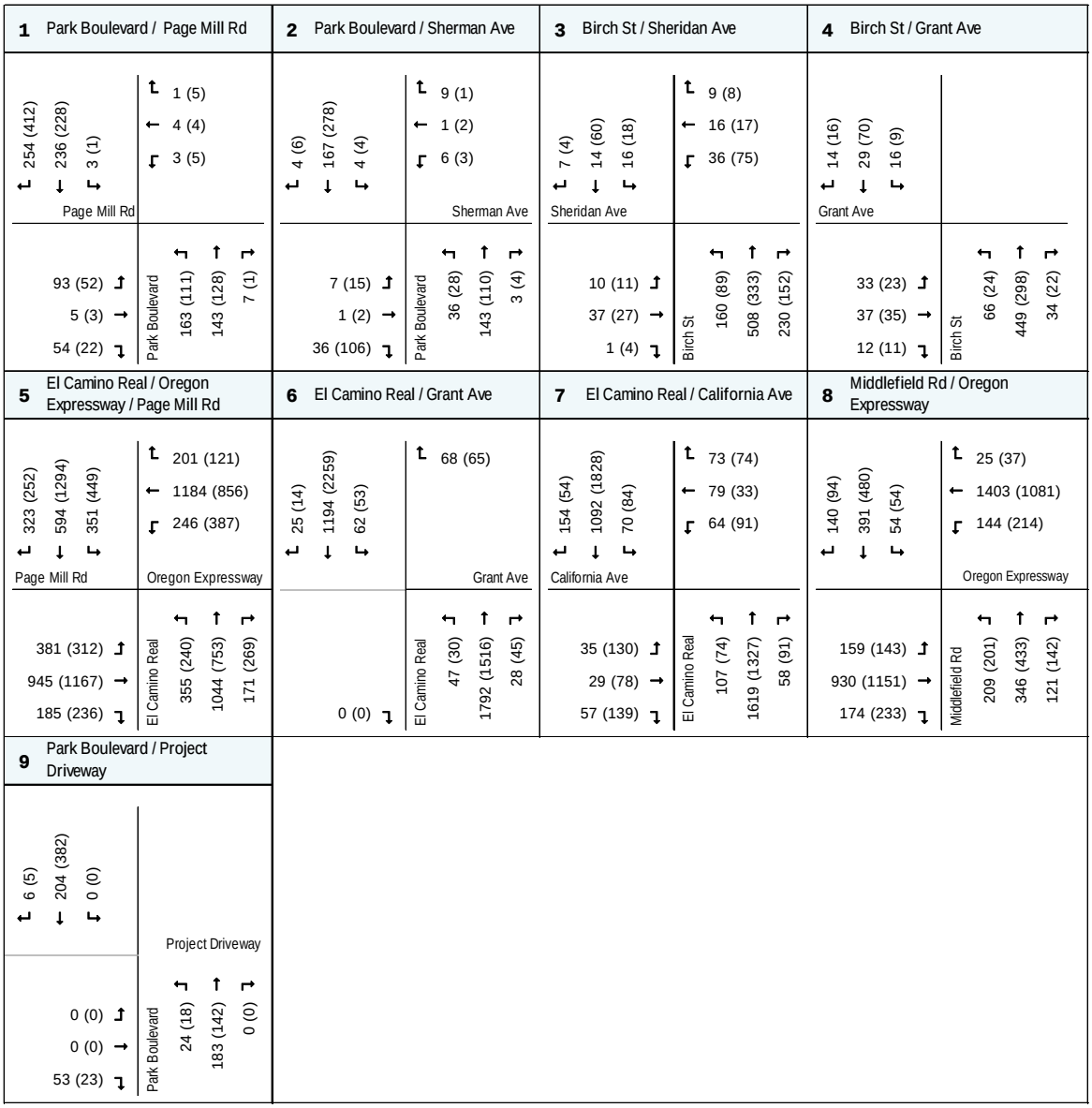

Figure 4-3 Existing+ Project Traffic Volumes

Source: AECOM 2021

Table 4-3 Comparison of Study Intersections LOS – Existing plus Project Conditions

Int #	Intersection	Peak Hr	Existing LOS	Existing Delay (sec)	Existing Critical V/C	Existing Avg Crit Delay (sec)	Existing + Project LOS	Existing + Project Delay (sec)	Existing + Project Critical V/C	Existing + Project Avg Crit Delay (sec)	Δ Delay	Δ Crit V/C	Δ Avg Crit Delay	Impact ?
1	Park Boulevard / Page Mill Rd	AM	A	8.4	0.232	9.6	A	9.5	0.246	11.5	N/C	N/C	N/C	N
1	Park Boulevard / Page Mill Rd	PM	A	4.8	0.261	5.0	A	5.6	0.281	6.6	N/C	N/C	N/C	N
2	Park Boulevard / Sherman Ave*	AM	B	10.4	0.010	2.2	B	10.4	0.010	2.2	N/C	N/C	N/C	N
2	Park Boulevard / Sherman Ave*	PM	B	12.6	0.010	3.0	B	12.7	0.010	3.0	N/C	N/C	N/C	N
3	Birch St / Sheridan Ave*	AM	D	28.3	0.190	3.6	D	30.9	0.210	4.5	N/C	N/C	N/C	N
3	Birch St / Sheridan Ave*	PM	C	19.3	0.210	4.2	C	20.5	0.240	4.5	N/C	N/C	N/C	N
4	Birch St / Grant Ave**	AM	B	12.2	0.606	12.2	B	13	0.640	13.0	N/C	N/C	N/C	N
4	Birch St / Grant Ave**	PM	A	9.1	0.385	9.1	A	9.2	0.400	9.2	N/C	N/C	N/C	N
5	ECR / Oregon E'way / Page Mill Rd (CMP)	AM	D	50.3	0.897	55.6	D-	51	0.908	56.7	N/C	N/C	N/C	N
5	ECR / Oregon E'way / Page Mill Rd (CMP)	PM	D	47.3	0.824	51.4	D	47.5	0.832	51.9	N/C	N/C	N/C	N
6	ECR / Grant Ave*	AM	B	14.5	0.140	0.8	B	14.6	0.150	0.8	N/C	N/C	N/C	N
6	ECR / Grant Ave*	PM	B	13.2	0.130	0.6	B	13.3	0.130	0.6	N/C	N/C	N/C	N
7	ECR / California Ave	AM	C+	22	0.456	19.0	C+	22.2	0.461	19.4	N/C	N/C	N/C	N
7	ECR / California Ave	PM	C	29.1	0.599	29.2	C	29.3	0.599	29.2	N/C	N/C	N/C	N

Int #	Intersection	Peak Hr	Existing LOS	Existing Delay (sec)	Existing Critical V/C	Existing Avg Crit Delay (sec)	Existing + Project LOS	Existing + Project Delay (sec)	Existing + Project Critical V/C	Existing + Project Avg Crit Delay (sec)	Δ Delay	Δ Crit V/C	Δ Avg Crit Delay	Impact ?
8	Middlefield Rd / Oregon E'way	AM	D	44.7	0.777	48.6	D	45.1	0.786	49.3	N/C	N/C	N/C	N
8	Middlefield Rd / Oregon E'way	PM	D	46.4	0.742	47.9	D	46.6	0.743	47.9	N/C	N/C	N/C	N
9	Park Boulevard / Project Driveway*	AM	N/A	N/A	N/A	N/A	A	9.6	0.060	1.5	N/A	N/A	N/A	N
9	Park Boulevard / Project Driveway*	PM	N/A	N/A	N/A	N/A	B	10.6	0.030	0.7	N/A	N/A	N/A	N

Source: AECOM 2021

Acronyms: LOS = level of service; V/C = volume to capacity ratio; ECR = El Camino Real; E'way = Expressway; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; sec = seconds; Δ = difference between existing and existing plus project conditions; N/A = not applicable. N/C = not calculated (Δ only calculated for deficient operations)

Notes:

*LOS and delay reported for worst movement for 2-way stop controlled intersections

**Overall delay reported for AWS controlled intersection

Deficient operations are indicated in **bold**. Δ only calculated for deficient operations.

4.2.2 Queuing Analysis

This section presents the evaluation of the queuing conditions at signalized intersections that have turning pockets using the Traffix software, which is based on the HCM 2000 Methodology. The average queue length under the Existing plus Project Traffic conditions was compared with the existing left-turn storage lengths to identify if there is any queue that spills back out of the turn pockets. A typical vehicle length of 25 feet was used for the queuing analysis. An operational deficiency is assumed to occur if the queue increases by one or more vehicles and if the queue exceeds the turn pocket length. The queue details are provided in Appendix B as part of the intersection analysis results.

Table 4-4 summarizes the queues under the Existing plus Project Conditions. Existing with project queues at all analyzed intersections can be accommodated within storage lane provided during both peak hours except the following:

- Intersection #5 – ECR / Oregon Expressway/Page Mill Rd – southbound right-turn in both the AM and PM peak
- Intersection #5 – ECR / Oregon Expressway/Page Mill Rd – westbound left-turn in the PM peak
- Intersection #8 – Middlefield Rd / Oregon Expressway – northbound left-turn in both the AM and PM peak
- Intersection #8 – Middlefield Rd / Oregon Expressway – eastbound right-turn in both the AM and PM peak

The queue at these movements already exceeded the storage lane provided without the project. In particular, no project trips are expected to make the southbound right movement at the ECR / Oregon Expressway / Page Mill Road (int #5) intersection. However, queuing condition can still be indirectly affected by volume changes in other movements of the intersection.

The queues these two intersections are expected to increase slightly under the ‘with project’ conditions but would not be considered an impact as the change due to the project would be less than one-car length.

For the intersection of ECR / Oregon Expressway / Page Mill Road, work is underway to improve the intersection by providing an exclusive westbound right-turn lane (from Oregon Expressway / Page Mill Road to southbound ECR) and to extend the westbound storage lane by more than two hundred feet (8-car length) in total. This part of the County’s Expressway 2040 Program and will be reflected in the Background Conditions.

Table 4-4 Queuing Analysis – Existing plus Project Conditions

Int #	Intersection	Storage Length (ft)	Movement	Existing AM Peak Hr (Ft)[1,2]	Existing PM Peak Hr (Ft)[1,2]	Existing + Project AM Peak Hr (Ft)[1,2]	Existing + Project AM Peak Hr (Ft)[1,2]
1	Park Boulevard / Page Mill Rd	275	SBR	50	70	70	80
1	Park Boulevard / Page Mill Rd	165	EBL	55	30	70	45
1	Park Boulevard / Page Mill Rd	110	WBL	0	5	0	5
5	ECR / Oregon E'way / Page Mill Rd (CMP)	300	NBL	260	185	265	185
5	ECR / Oregon E'way / Page Mill Rd (CMP)	350	SBL	285	315	290	320
5	ECR / Oregon E'way / Page Mill Rd (CMP)	140	SBR	**385**	**225**	**385**	**230**
5	ECR / Oregon E'way / Page Mill Rd (CMP)	340	EBL	305	210	305	210
5	ECR / Oregon E'way / Page Mill Rd (CMP)	290	EBR	125	185	125	185
5	ECR / Oregon E'way / Page Mill Rd (CMP)	255	WBL	155	**280**	160	**285**
7	ECR / California Ave	235	NBL	125	115	125	115
7	ECR / California Ave	135	SBL	90	105	95	110
7	ECR / California Ave	170	EBL	45	160	45	160
7	ECR / California Ave	150	WBL	90	130	90	130
7	ECR / California Ave	105	WBR	85	85	90	85
8	Middlefield Rd / Oregon E'way (CMP)	235	NBR	115	130	115	130
8	Middlefield Rd / Oregon E'way (CMP)	235	NBL	**290**	**275**	**295**	**280**
8	Middlefield Rd / Oregon E'way (CMP)	155	SBL	80	95	80	95
8	Middlefield Rd / Oregon E'way (CMP)	370	EBL	230	190	240	195
8	Middlefield Rd / Oregon E'way (CMP)	100	EBR	**125**	**190**	**130**	**195**
8	Middlefield Rd / Oregon E'way (CMP)	405	WBL	180	290	180	290
8	Middlefield Rd / Oregon E'way (CMP)	100	WBR	15	25	15	25

Source: AECOM, 2021. Notes: 1. Average queue length rounded up to nearest 5 feet. 2. Queue exceeding storage lane shown in **bold**, queue exceeding storage lane by more than one car length (25 feet) shown in underline, see text for more discussion. Acronyms: ft = feet; ECR = El Camino Real; E'way = Expressway; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left-turn; R = right-turn; > = more than.

4.3 Background plus Project Conditions

4.3.1 Intersection Operations

Traffic volumes under background plus project conditions are shown in **Figure 4-4**, while **Table 4-5** compares the intersection performance under the Background Conditions. All the intersections operated within acceptable LOS with and without project. In addition, the peak hour signal warrant is also not met for all the unsignalized intersections during both peak hours. As such, no intersection impacts are expected under the 'Background plus Project' scenario. Details of this analysis are presented in **Appendix E.**

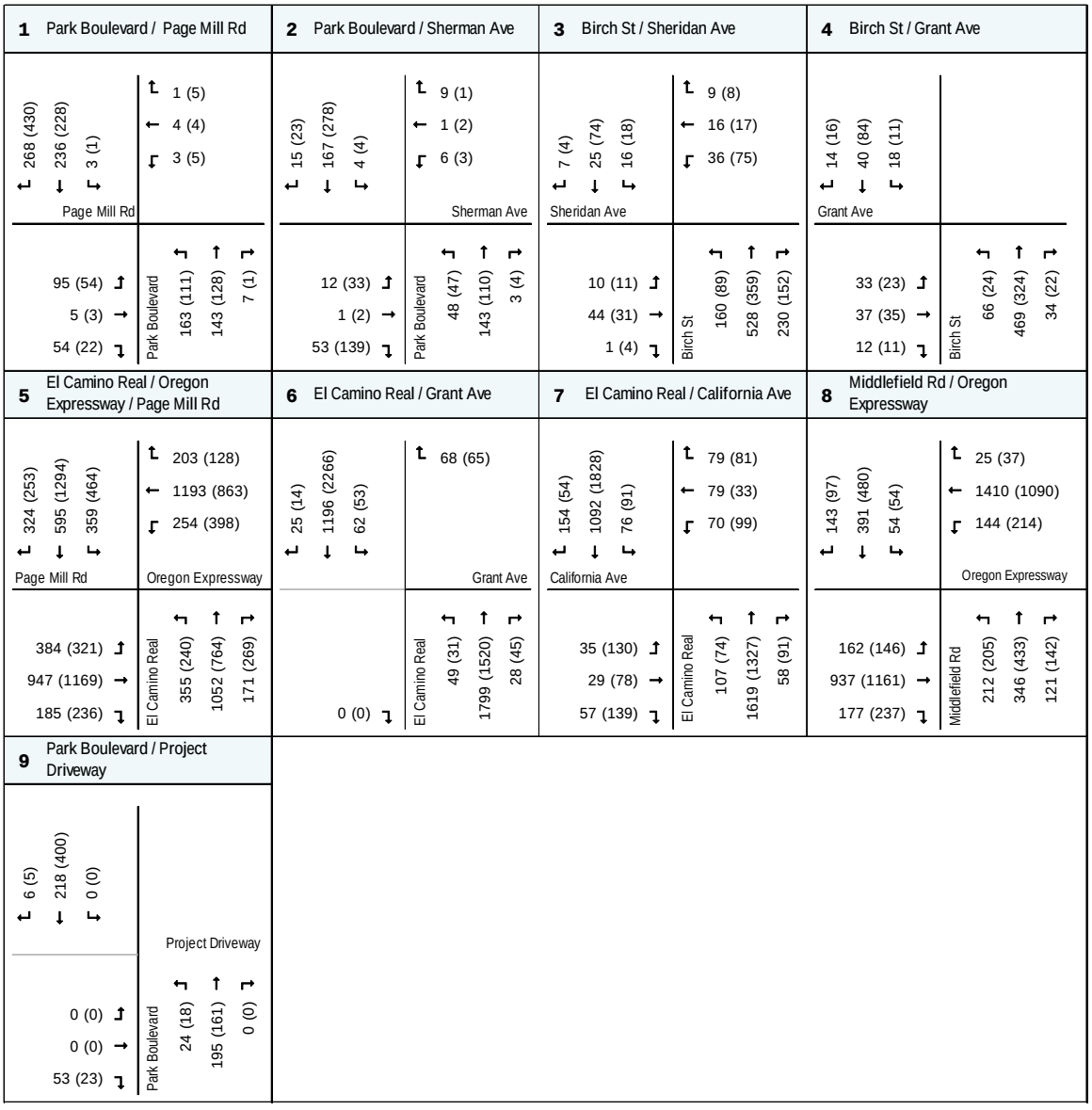

Figure 4-4 Background plus Project Traffic Volumes

Source: AECOM 2021

Table 4-5 Comparison of Study Intersections LOS – Background plus Project Conditions

Int #	Intersection	Peak Hr	Backgrd LOS	Backgrd Delay (sec)	Backgrd Critical V/C	Backgrd Avg Crit Delay (sec)	Backgrd + Project LOS	Backgrd + Project Delay (sec)	Backgrd + Project Critical V/C	Backgrd + Project Avg Crit Delay (sec)	Δ Delay	Δ Crit V/C	Δ Avg Crit Delay	Impact ?
1	Park Boulevard / Page Mill Rd	AM	A	8.4	0.233	9.8	A	9.5	0.247	11.7	N/C	N/C	N/C	N
1	Park Boulevard / Page Mill Rd	PM	A	4.9	0.273	5.1	A	5.7	0.294	6.6	N/C	N/C	N/C	N
2	Park Boulevard / Sherman Ave*	AM	B	10.6	0.010	2.7	B	10.7	0.010	2.7	N/C	N/C	N/C	N
2	Park Boulevard / Sherman Ave*	PM	B	13.7	0.010	4.1	B	13.7	0.010	4.1	N/C	N/C	N/C	N
3	Birch St / Sheridan Ave*	AM	D	30.9	0.240	3.8	D	34.1	0.240	4.9	N/C	N/C	N/C	N
3	Birch St / Sheridan Ave*	PM	C	20.8	0.230	4.3	C	22.3	0.260	4.6	N/C	N/C	N/C	N
4	Birch St / Grant Ave**	AM	B	12.7	0.632	12.7	B	13.6	0.666	13.6	N/C	N/C	N/C	N
4	Birch St / Grant Ave**	PM	A	9.4	0.418	9.4	A	9.5	0.432	9.5	N/C	N/C	N/C	N
5	ECR / Oregon E'way / Page Mill Rd (CMP)	AM	D	46.8	0.836	51.2	D	47.2	0.846	51.8	N/C	N/C	N/C	N
5	ECR / Oregon E'way / Page Mill Rd (CMP)	PM	D	47.3	0.836	52.4	D	47.6	0.844	52.9	N/C	N/C	N/C	N
6	ECR / Grant Ave*	AM	B	14.6	0.150	0.8	B	14.7	0.150	0.8	N/C	N/C	N/C	N
6	ECR / Grant Ave*	PM	B	13.2	0.130	0.6	B	13.3	0.130	0.6	N/C	N/C	N/C	N
7	ECR / California Ave	AM	C+	22.7	0.464	19.9	C+	22.9	0.468	20.4	N/C	N/C	N/C	N
7	ECR / California Ave	PM	C	29.8	0.604	29.8	C	30	0.604	29.8	N/C	N/C	N/C	N

Int #	Intersection	Peak Hr	Backgrd LOS	Backgrd Delay (sec)	Backgrd Critical V/C	Backgrd Avg Crit Delay (sec)	Backgrd + Project LOS	Backgrd + Project Delay (sec)	Backgrd + Project Critical V/C	Backgrd + Project Avg Crit Delay (sec)	Δ Delay	Δ Crit V/C	Δ Avg Crit Delay	Impact ?
8	Middlefield Rd / Oregon E'way	AM	D	44.9	0.784	49.1	D	45.3	0.793	49.8	N/C	N/C	N/C	N
8	Middlefield Rd / Oregon E'way	PM	D	46.9	0.758	52.2	D	47.1	0.762	52.4	N/C	N/C	N/C	N
9	Park Boulevard / Project Driveway*	AM	N/A	N/A	N/A	N/A	A	9.7	0.060	1.4	N/A	N/A	N/A	N
9	Park Boulevard / Project Driveway*	PM	N/A	N/A	N/A	N/A	B	10.7	0.040	0.6	N/A	N/A	N/A	N

Source: AECOM, 2021

Acronyms: LOS = level of service; V/C = volume to capacity ratio; ECR = El Camino Real; E'way= Expressway; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; sec = seconds; Backgrd = Background; Δ = difference between background and background plus project conditions; N/A = not applicable. N/C = not calculated (Δ only calculated for deficient operations)

Notes:

*LOS and delay reported for worst movement for 2-way stop controlled intersections

**Overall delay reported for AWS controlled intersection

Deficient operations are indicated in **bold**. Δ only calculated for deficient operations.

4.3.2 Queuing Analysis

Queuing analysis was conducted for the Background plus Project Traffic conditions at signalized intersections that have turning pockets using the Traffix software, based on the HCM 2000 Methodology. A typical vehicle length of 25 feet was used for the queuing analysis. An operational deficiency is assumed to occur if the queue increases by one or more vehicles and if the queue exceeds the turn pocket length. The queue details are provided in **Appendix E** as part of the intersection analysis results**.**

Table 4-6 summarizes the queues under the Background plus Project Conditions. The queues at all analyzed intersections can be accommodated within the provided storage lanes during both peak hours except the following:

- Intersection #5 – ECR / Oregon Expressway/Page Mill Rd – southbound right-turn in both the AM and PM peak
- Intersection #5 – ECR / Oregon Expressway/Page Mill Rd – westbound right-turn in the AM peak
- Intersection #8 – Middlefield Rd / Oregon Expressway – northbound left-turn in both the AM and PM peak
- Intersection #8 – Middlefield Rd / Oregon Expressway – eastbound right-turn in both the AM and PM peak

Similar to the Existing Conditions, the southbound right-turn queue at the ECR / Oregon Expressway/Page Mill Road intersection (int #5) is expected to exceed the storage capacity provided during both peak hours, without the project. No project trips are expected to be added to this movement and no change to the queue length is expected under the 'with project' conditions.

The queue at the westbound left-turn movement of intersection #5 is expected to be accommodated by the improved (lengthened) left-turn storage that is being planned as part of the County's Expressway 2040 program, with and without the project during both peak hours. However, the westbound right-turn queue could exceed the new right-turn pocket to be provided in the near future during the AM peak hour. No project trips are expected to be added to this movement and no change to the queue length is expected with project.

At the Middlefield Road / Oregon Expressway intersection (int #8), the northbound left-turn and eastbound right-turn continue to see queue exceeding the provided storage lane in both peak hours similar to the Existing Conditions without project. The queues under the 'with project conditions are not expected to increase by more than one-car length and would not be considered to have significant impacts.

Table 4-6 Queuing Analysis – Background plus Project Conditions

Int #	Intersection	Storage Length (ft)	Movement	Backgrd AM Peak Hr (Ft) [1,2]	Backgrd AM Peak Hr (Ft) [1,2]	Backgrd + Project AM Peak Hr (Ft) [1,2]	Backgrd + Project AM Peak Hr (Ft) [1,2]
1	Park Boulevard / Page Mill Rd	275	SBR	55	75	75	85
1	Park Boulevard / Page Mill Rd	165	EBL	55	35	70	50
1	Park Boulevard / Page Mill Rd	110	WBL	0	5	0	5
5	ECR / Oregon E'way / Page Mill Rd (CMP)	300	NBL	245	185	245	185
5	ECR / Oregon E'way / Page Mill Rd (CMP)	350	SBL	270	330	275	330
5	ECR / Oregon E'way / Page Mill Rd (CMP)	140	SBR	**360**	**230**	**360**	**230**
5	ECR / Oregon E'way / Page Mill Rd (CMP)	340	EBL	285	205	290	205
5	ECR / Oregon E'way / Page Mill Rd (CMP)	290	EBR	135	185	135	185
5	ECR / Oregon E'way / Page Mill Rd (CMP)	360	WBL	165	290	170	295
5	ECR / Oregon E'way / Page Mill Rd (CMP)	120	WBR	**155**	95	**155**	95
7	ECR / California Ave	235	NBL	125	115	125	115
7	ECR / California Ave	135	SBL	95	115	100	120
7	ECR / California Ave	170	EBL	45	155	45	155
7	ECR / California Ave	150	WBL	95	140	95	140
7	ECR / California Ave	105	WBR	95	90	100	95
8	Middlefield Rd / Oregon E'way (CMP)	235	NBL	**295**	**280**	**300**	**285**
8	Middlefield Rd / Oregon E'way (CMP)	235	NBR	115	130	115	130
8	Middlefield Rd / Oregon E'way (CMP)	155	SBL	80	80	80	80
8	Middlefield Rd / Oregon E'way (CMP)	370	EBL	235	195	245	200
8	Middlefield Rd / Oregon E'way (CMP)	100	EBR	**130**	**195**	**130**	**200**
8	Middlefield Rd / Oregon E'way (CMP)	405	WBL	180	295	180	295
8	Middlefield Rd / Oregon E'way (CMP)	100	WBR	15	25	15	25

Source: AECOM, 2021. Notes: 1. Average queue length rounded up to nearest 5 feet. 2. Queue exceeding existing storage length shown in **bold**, queue exceedance more than one car length shown in underline, as discussed in text. Acronyms: Backgrd = Background; ft = feet; ECR = El Camino Real; E'way = Expressway; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left-turn; R = right-turn; > = more than.

4.4 Cumulative plus Project Conditions

4.4.1 Intersection Operations

Traffic volumes under cumulative plus project conditions are shown in **Figure 4-4**, while **Table 4-7** compares the intersection performance under the Cumulative Conditions. It can be seen that all intersections would either operate within acceptable LOS with and without the Project, or that it would already operate at LOS E without the Project as in the case of the Birch Street / Sheridan Avenue intersection (int #3). Although the change in delay at the Birch Street / Sheridan Avenue intersection due to the project is expected to be more than four seconds (threshold for impact determination), the intersection would operate without significant change in the V/C ratio. In addition, the peak hour signal warrant for this intersection would not be met during both peak hours. The peak hour signal warrant for the other unsignalized intersections is also not met during both peak hours. Therefore, the project has no significant impact on any of the study intersections under this scenario. Analysis details are presented in **Appendix H**.

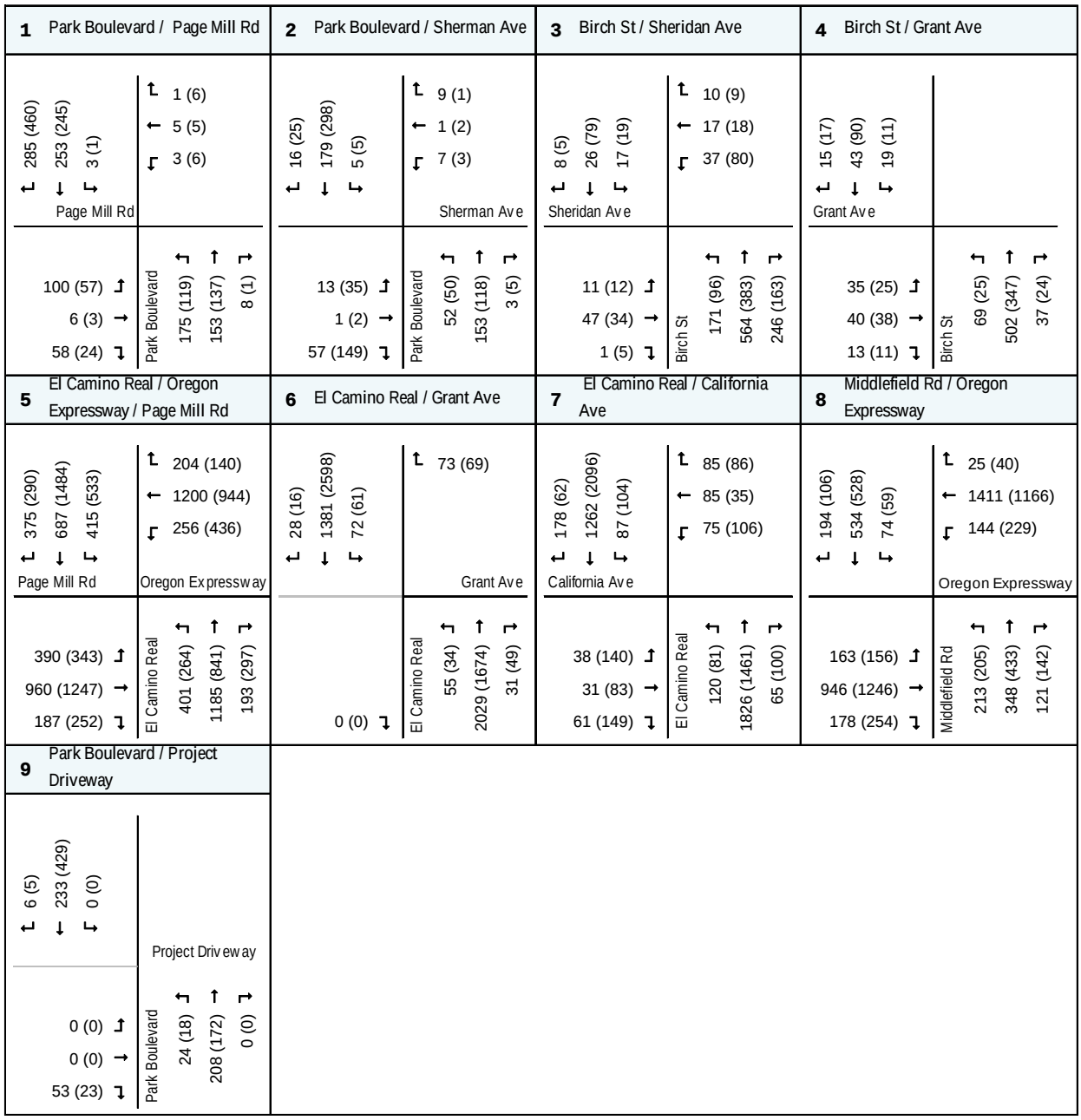

Figure 4-5 Cumulative plus Project Traffic Volumes

Source: AECOM 2021

Table 4-7 Comparison of Study Intersections LOS – Cumulative plus Project Conditions

Int #	Intersection	Peak Hr	Cumul LOS	Cumul Delay (sec)	Cumul Critical V/C	Cumul Avg Crit Delay (sec)	Cumul + Project LOS	Cumul + Project Delay (sec)	Cumul + Project Critical V/C	Cumul + Project Avg Crit Delay (sec)	Δ Delay	Δ Crit V/C	Δ Avg Crit Delay	Impact ?
1	Park Boulevard / Page Mill Rd	AM	A	8.3	0.241	8.7	A	9.6	0.264	11.7	N/C	N/C	N/C	N
1	Park Boulevard / Page Mill Rd	PM	A	5	0.286	4.2	A	5.7	0.314	6.6	N/C	N/C	N/C	N
2	Park Boulevard / Sherman Ave*	AM	B	11	0.020	2.8	B	11	0.020	2.7	N/C	N/C	N/C	N
2	Park Boulevard / Sherman Ave*	PM	B	14.3	0.010	4.2	B	14.4	0.010	4.2	N/C	N/C	N/C	N
3	Birch St / Sheridan Ave*	AM	**E**	**36.5**	**0.290**	**4.3**	**E**	**41.9**	**0.290**	**5.6**	5.4	0.000	1.3	N
3	Birch St / Sheridan Ave*	PM	C	23.7	0.270	4.7	C	25.7	0.310	5.1	N/C	N/C	N/C	N
4	Birch St / Grant Ave**	AM	B	14	0.681	14.0	C	15.1	0.716	15.1	N/C	N/C	N/C	N
4	Birch St / Grant Ave**	PM	A	9.7	0.451	9.7	A	9.9	0.466	9.9	N/C	N/C	N/C	N
5	ECR / Oregon E'way / Page Mill Rd (CMP)	AM	D	50.2	0.890	56.0	D	50.9	0.901	57.0	N/C	N/C	N/C	N
5	ECR / Oregon E'way / Page Mill Rd (CMP)	PM	D-	52.6	0.917	60.6	D-	53.2	0.924	61.6	N/C	N/C	N/C	N
6	ECR / Grant Ave*	AM	C	16.2	0.180	0.9	C	16.3	0.190	1.0	N/C	N/C	N/C	N
6	ECR / Grant Ave*	PM	B	14.1	0.150	0.7	B	14.2	0.150	0.7	N/C	N/C	N/C	N
7	ECR / California Ave	AM	C+	22.8	0.519	20.3	C	23.1	0.523	20.7	N/C	N/C	N/C	N
7	ECR / California Ave	PM	C	30.5	0.675	30.6	C	30.7	0.675	30.6	N/C	N/C	N/C	N

Int #	Intersection	Peak Hr	Cumul LOS	Cumul Delay (sec)	Cumul Critical V/C	Cumul Avg Crit Delay (sec)	Cumul + Project LOS	Cumul + Project Delay (sec)	Cumul + Project Critical V/C	Cumul + Project Avg Crit Delay (sec)	Δ Delay	Δ Crit V/C	Δ Avg Crit Delay	Impact ?
8	Middlefield Rd / Oregon E'way	AM	D	48.9	0.842	54.5	D	49.4	0.851	55.5	N/C	N/C	N/C	N
8	Middlefield Rd / Oregon E'way	PM	D	48.7	0.808	54.8	D	48.9	0.812	55.1	N/C	N/C	N/C	N
9	Park Boulevard / Project Driveway*	AM	N/A	N/A	N/A	N/A	A	9.8	0.070	1.3	N/A	N/A	N/A	N
9	Park Boulevard / Project Driveway*	PM	N/A	N/A	N/A	N/A	B	10.9	0.040	0.6	N/A	N/A	N/A	N

Source: AECOM, 2021

Acronyms: Cumul = Cumulative; LOS = level of service; V/C = volume to capacity ratio; ECR = El Camino Real; E'way = Expressway; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; sec = seconds; Δ = difference between cumulative and cumulative plus project conditions; N/A = not applicable. N/C = not calculated (Δ only calculated for deficient operations)

Notes:

*LOS and delay reported for worst movement for 2-way stop controlled intersections

**Overall delay reported for AWS controlled intersection

Deficient operations are indicated in **bold**. Δ Only calculated for deficient operations

4.4.2 Queuing Analysis

Queuing analysis was conducted for the study intersections under the Cumulative plus Project Traffic conditions at signalized intersections that have turning pockets using the Traffix software, based on the HCM 2000 Methodology. A typical vehicle length of 25 feet was used for the queuing analysis. An operational deficiency is assumed to occur if the queue increases by one or more vehicles and if the queue exceeds the turn pocket length. The queue details are provided in **Appendix H** as part of the intersection analysis results**.**

Table 4-8 summarizes the queues under the Cumulative plus Project Conditions. The queues at all analyzed intersections can be accommodated within provided storage lanes during both peak hours except the following:

- Intersection #5 – ECR / Oregon Expressway/Page Mill Rd – southbound left-turn in both the PM peak
- Intersection #5 – ECR / Oregon Expressway/Page Mill Rd – southbound right-turn in both the AM and PM peak
- Intersection #5 – ECR / Oregon Expressway/Page Mill Rd – westbound right-turn in the AM peak
- Intersection #7 - ECR / California Ave – westbound left-turn in the PM peak
- Intersection #8 – Middlefield Rd / Oregon Expressway – northbound left-turn in both the AM and PM peak
- Intersection #8 – Middlefield Rd / Oregon Expressway – eastbound right-turn in both the AM and PM peak

Southbound left-turn and right-turn queues at the ECR / Oregon Expressway/Page Mill Road intersection (int #5) are expected to exceed the storage capacity provided during the PM and AM peak hour respectively, without the project. No project trips are expected to be added to these movement. However, queuing condition can still be indirectly affected by volume changes in other movements of the intersection. The queue at the westbound left-turn movement of this intersection is expected to still be accommodated by the improved (lengthened) left-turn storage that is being planned, with and without the project during both peak hours. However, the westbound right-turn queue could exceed the new right-turn pocket during the AM peak hour. No project trips are expected to be added to this movement and the queue length is expected to remain the same with project.

Similar to the Background Conditions, the northbound left queue at the Middlefield Rd / Oregon Expressway intersection (int #8) is expected to exceed the storage capacity provided during both peak hours, with and without the project. Since the queue already exceeded the storage lane provided without the project and the change in queue length is less than one car, the project would not be considered to have a significant impact.

Table 4-8 Queuing Analysis – Cumulative plus Project Conditions

Int #	Intersection	Storage Length (ft)	Movement	Cumul AM Peak Hr (Ft)[1]	Cumul AM Peak Hr (Ft)[1]	Cumul + Project AM Peak Hr (Ft)[1,2]	Cumul + Project AM Peak Hr (Ft)[1,2]
1	Park Boulevard / Page Mill Rd	275	SBR	55	85	80	90
1	Park Boulevard / Page Mill Rd	165	EBL	65	35	75	55
1	Park Boulevard / Page Mill Rd	110	WBL	0	5	0	5
5	ECR / Oregon E'way / Page Mill Rd (CMP)	300	NBL	285	215	285	220
5	ECR / Oregon E'way / Page Mill Rd (CMP)	350	SBL	320	**405**	325	**410**
5	ECR / Oregon E'way / Page Mill Rd (CMP)	140	SBR	**425**	**265**	**430**	**265**
5	ECR / Oregon E'way / Page Mill Rd (CMP)	340	EBL	305	225	310	230
5	ECR / Oregon E'way / Page Mill Rd (CMP)	290	EBR	140	205	140	205
5	ECR / Oregon E'way / Page Mill Rd (CMP)	360	WBL	170	340	180	350
5	ECR / Oregon E'way / Page Mill Rd (CMP)	120	WBR	**160**	105	**160**	105
7	ECR / California Ave	235	NBL	140	130	140	130
7	ECR / California Ave	135	SBL	110	130	120	135
7	ECR / California Ave	170	EBL	50	170	50	170
7	ECR / California Ave	150	WBL	105	**160**	105	**160**
7	ECR / California Ave	105	WBR	105	100	**110**	105
8	Middlefield Rd / Oregon E'way (CMP)	235	NBL	**315**	**295**	**320**	**300**
8	Middlefield Rd / Oregon E'way (CMP)	235	NBR	110	135	110	135
8	Middlefield Rd / Oregon E'way (CMP)	155	SBL	110	90	110	90
8	Middlefield Rd / Oregon E'way (CMP)	370	EBL	250	215	260	215
8	Middlefield Rd / Oregon E'way (CMP)	100	EBR	**135**	**210**	**140**	**215**
8	Middlefield Rd / Oregon E'way (CMP)	405	WBL	185	325	190	325
8	Middlefield Rd / Oregon E'way (CMP)	100	WBR	15	25	15	25

Source: AECOM, 2021. Notes: 1. Average queue length rounded up to nearest 5 feet. 2. Queue exceeding existing storage length shown in **bold**, queue exceedance more than one car length shown in underline, as discussed in text. Acronyms: Cumul = Cumulative; ft = feet; ECR = El Camino Real; E'way = Expressway; CMP = Congestion Management Plan intersection; AM = morning; PM = afternoon; NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left-turn; R = right-turn> = more than.

5 Conclusions

The proposed 231 Grant Educator Workforce Housing project is located at 231 Grant Avenue in the City of Palo Alto, California. The proposal is to develop a new four-story mixed-use complex on a site with an existing office building. Having evaluated the current and future traffic conditions at the local intersections in the vicinity of the project, the study concluded that this proposed project would not lead to any significant impacts at the 9 study intersections.

The intersection levels of service analysis showed that all the study intersections are expected to operate within acceptable levels during both peak hours under all scenarios with the exception of the Birch Street / Sheridan Avenue intersection (int #3). This intersection is expected to operate at LOS E in the AM peak under the Cumulative Conditions. However, the project is not expected to cause a significant impact as the increase in V/C ratio is not significant to be considered an impact. In addition, a traffic signal is not warranted at this location. Therefore, it can be concluded that the project will not significantly worsen this intersection performance.

Similarly, the queuing analysis concluded that the project is not expected to significantly worsen the queuing conditions at the analyzed intersections. The storage capacity at all analyzed intersections is expected to accommodate the traffic queues, with and without the project except at three locations. Several movements at ECR / Oregon Expressway / Page Mill Road intersection (int #5) are expected to exceed its storage capacity in one of the peak hours, with and without the project under all scenarios. However, any increase in queue length under the 'with project' conditions was found to be less than one-car length and, therefore, would not constitute a significant impact. In addition, the proposed lengthening of the westbound left-turn storage, to be implemented in the near future under the County's Expressway 2040 Program, is expected accommodate the future queue under the Background and Cumulative Conditions.

Queues at two movements of the Middlefield Road / Oregon Expressway intersection (int 8) are expected to exceed the provided storage capacity in both peak hours under all three scenarios. However, the increase in queue length under the 'with project' conditions is expected to be less than one-car length and, therefore, would not constitute a significant impact.

Under the Cumulative Scenario, the westbound left-turn queue at the ECR / California Avenue intersection (int #7) is expected to exceed the provided storage capacity in the PM peak with and without project. However, the queue length change under the 'with project' condition would not be considered a significant impact as it is expected to be less than one-car length.

6 References

California Department of Transportation (Caltrans). 2020. California Manual on Uniform Traffic Control Devices (CA MUTCD).

City of Palo Alto, 2017. City of Palo Alto Comprehensive Plan.

City of Palo Alto. 2020. Personal Communication. Email from Shrupath Patel, City of Palo Alto Transportation Planner to Nichole Seow, AECOM Transportation Planner dated December 22nd.

Fehr & Peers, May 2018. Traffic Impact Analysis, Palo Alto Public Safety Building and Public Parking Structure.

Hexagon Transportation Consultants, Inc., January 2018. Traffic Impact Analysis, 2755 El Camino Real Redevelopment Project.

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Mercy Housing and Abode Communities, 2020. Conceptual Project Plans for 231 Grant Educator Workforce Housing project.

Transportation Research Board. 2010. Special Report 209, Highway Capacity Manual (HCM).

Valley Transportation Authority (VTA). 2003. Traffic Level of Service Analysis Guidelines. Adopted January 1995, updated June 2003.

APPENDIX A

Traffic Counts

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

File Name : 3AM FINAL
Site Code : 00000003
Start Date : 9/27/2016
Page No : 1

Groups Printed- Vehicles

	PARK BLVD Southbound					PAGE MILL RD Westbound					PARK BLVD Northbound					PAGE MILL RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	18	17	0	0	35	0	0	1	6	7	0	8	8	4	20	1	1	8	7	17	79
07:15 AM	31	29	1	0	61	0	0	0	9	9	0	10	11	5	26	7	2	10	0	19	115
07:30 AM	38	39	1	1	79	1	0	2	54	57	0	16	17	39	72	7	1	13	6	27	235
07:45 AM	59	33	1	0	93	1	0	2	3	6	0	29	34	1	64	8	1	9	6	24	187
Total	146	118	3	1	268	2	0	5	72	79	0	63	70	49	182	23	5	40	19	87	616
08:00 AM	47	52	2	0	101	0	0	1	3	4	1	32	41	2	76	14	1	9	2	26	207
08:15 AM	52	53	1	3	109	0	3	1	20	24	2	23	29	9	63	12	1	17	0	30	226
08:30 AM	49	64	0	0	113	0	0	1	99	100	4	38	37	82	161	17	0	21	4	42	416
08:45 AM	58	52	0	0	110	1	1	0	23	25	0	41	46	18	105	8	3	18	6	35	275
Total	206	221	3	3	433	1	4	3	145	153	7	134	153	111	405	51	5	65	12	133	1124
Grand Total	352	339	6	4	701	3	4	8	217	232	7	197	223	160	587	74	10	105	31	220	1740
Apprch %	50.2	48.4	0.9	0.6		1.3	1.7	3.4	93.5		1.2	33.6	38	27.3		33.6	4.5	47.7	14.1		
Total %	20.2	19.5	0.3	0.2	40.3	0.2	0.2	0.5	12.5	13.3	0.4	11.3	12.8	9.2	33.7	4.3	0.6	6	1.8	12.6	

	PARK BLVD Southbound				PAGE MILL RD Westbound				PARK BLVD Northbound				PAGE MILL RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	47	52	**2**	101	0	0	**1**	1	1	32	41	74	14	1	9	24	200
08:15 AM	52	53	1	106	0	**3**	1	**4**	2	23	29	54	12	1	17	30	194
08:30 AM	49	**64**	0	**113**	0	0	1	1	**4**	38	37	79	**17**	0	**21**	**38**	**231**
08:45 AM	**58**	52	0	110	**1**	1	0	2	0	**41**	**46**	**87**	8	**3**	18	29	228
Total Volume	206	221	3	430	1	4	3	8	7	134	153	294	51	5	65	121	853
% App. Total	47.9	51.4	0.7		12.5	50	37.5		2.4	45.6	52		42.1	4.1	53.7		
PHF	.888	.863	.375	.951	.250	.333	.750	.500	.438	.817	.832	.845	.750	.417	.774	.796	.923

Traffic Data Service

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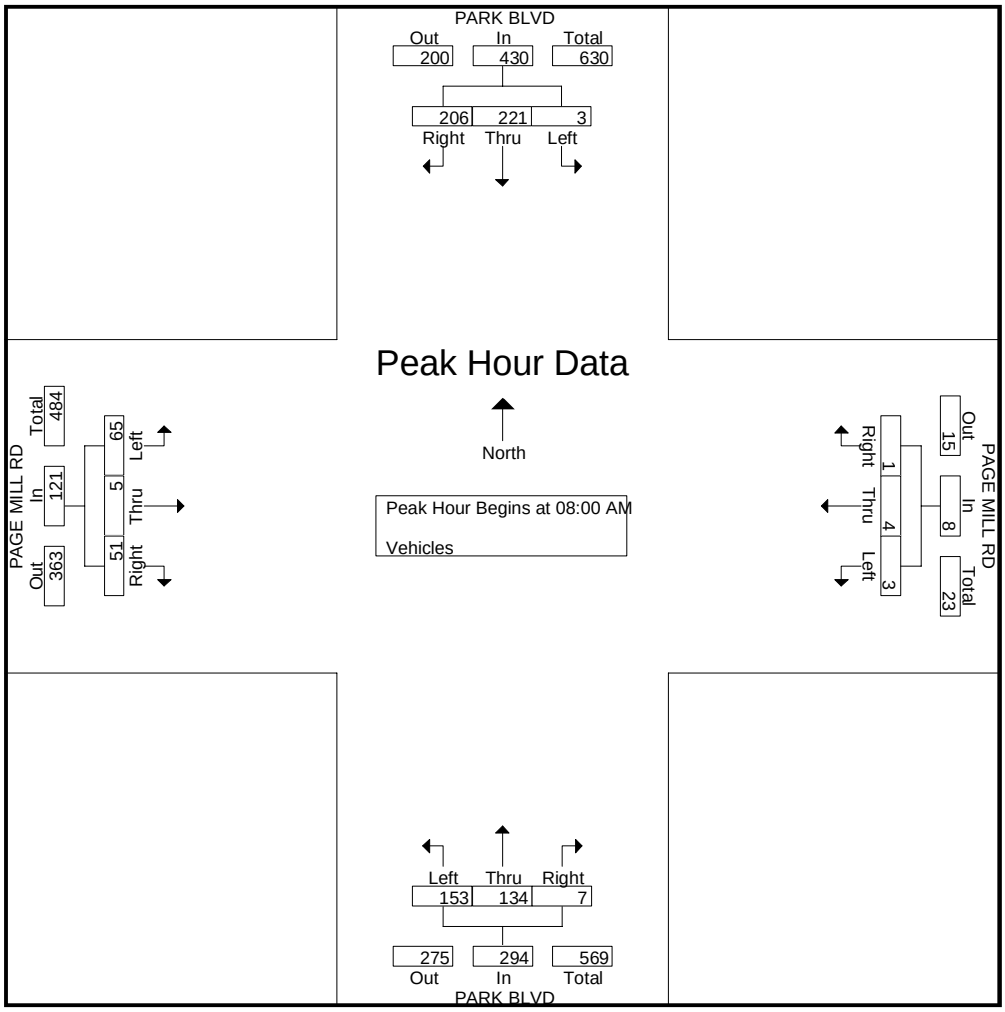
File Name : 3AM FINAL
Site Code : 00000003
Start Date : 9/27/2016
Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 2AM FINAL
Site Code : 00000002
Start Date : 9/27/2016
Page No : 1

Groups Printed- Vehicles

	PARK BLVD Southbound					SHERMAN AVE Westbound					PARK BLVD Northbound					SHERMAN AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	13	0	1	15	0	0	0	3	3	1	7	3	0	11	4	1	0	4	9	38
07:15 AM	1	16	0	0	17	0	0	1	5	6	2	13	4	0	19	8	0	3	1	12	54
07:30 AM	1	20	1	1	23	1	0	1	10	12	1	17	7	1	26	9	0	3	5	17	78
07:45 AM	0	32	0	2	34	1	0	3	2	6	1	22	7	0	30	8	0	1	4	13	83
Total	3	81	1	4	89	2	0	5	20	27	5	59	21	1	86	29	1	7	14	51	253
08:00 AM	2	43	0	1	46	2	0	1	2	5	1	33	4	1	39	3	0	1	2	6	96
08:15 AM	2	35	2	0	39	2	1	1	4	8	1	24	8	0	33	9	0	4	0	13	93
08:30 AM	0	36	0	1	37	4	0	2	5	11	1	35	13	1	50	11	0	1	4	16	114
08:45 AM	0	37	2	0	39	0	0	2	3	5	0	42	9	1	52	11	0	1	3	15	111
Total	4	151	4	2	161	8	1	6	14	29	3	134	34	3	174	34	0	7	9	50	414
Grand Total	7	232	5	6	250	10	1	11	34	56	8	193	55	4	260	63	1	14	23	101	667
Apprch %	2.8	92.8	2	2.4		17.9	1.8	19.6	60.7		3.1	74.2	21.2	1.5		62.4	1	13.9	22.8		
Total %	1	34.8	0.7	0.9	37.5	1.5	0.1	1.6	5.1	8.4	1.2	28.9	8.2	0.6	39	9.4	0.1	2.1	3.4	15.1	

	PARK BLVD Southbound				SHERMAN AVE Westbound				PARK BLVD Northbound				SHERMAN AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**2**	**43**	0	**45**	2	0	1	3	**1**	33	4	38	3	0	1	4	90
08:15 AM	2	35	**2**	39	2	**1**	1	4	1	24	8	33	9	0	**4**	**13**	89
08:30 AM	0	36	0	36	**4**	0	**2**	**6**	1	35	**13**	49	**11**	0	1	12	103
08:45 AM	0	37	2	39	0	0	2	2	0	**42**	9	**51**	11	0	1	12	**104**
Total Volume	4	151	4	159	8	1	6	15	3	134	34	171	34	0	7	41	386
% App. Total	2.5	95	2.5		53.3	6.7	40		1.8	78.4	19.9		82.9	0	17.1		
PHF	.500	.878	.500	.883	.500	.250	.750	.625	.750	.798	.654	.838	.773	.000	.438	.788	.928

Traffic Data Service

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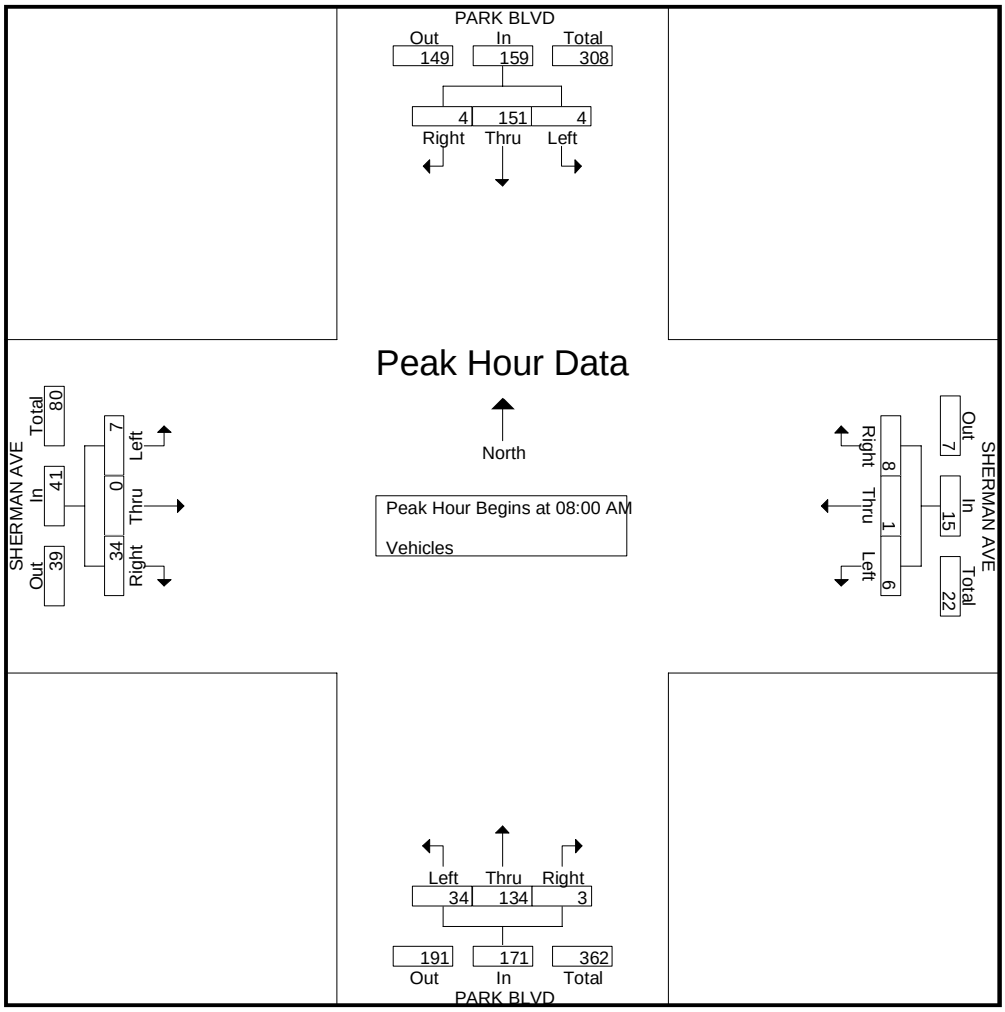
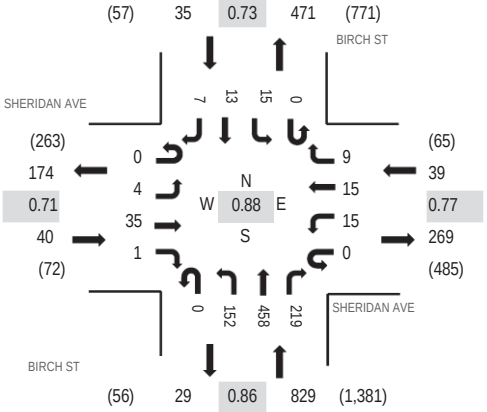
File Name : 2AM FINAL
Site Code : 00000002
Start Date : 9/27/2016
Page No : 2



All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

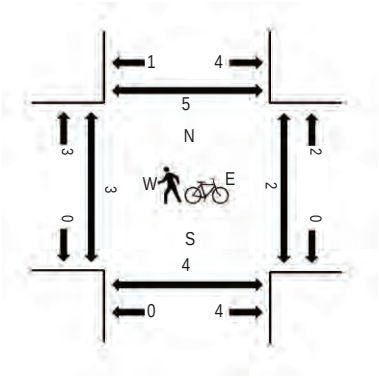
Location: 1 BIRCH ST & SHERIDAN AVE AM
Date and Start Time: Thursday, March 23, 2017
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SHERIDAN AVE Eastbound				SHERIDAN AVE Westbound				BIRCH ST Northbound				BIRCH ST Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	4	0	0	0	0	2	0	8	43	31	0	1	1	0	90	654	1	1	0	2
7:15 AM	0	2	6	0	0	5	0	1	0	14	57	34	0	5	1	0	125	784	1	1	0	1
7:30 AM	0	1	9	1	0	4	1	2	0	25	83	37	0	1	6	2	172	891	0	2	0	0
7:45 AM	0	1	8	0	0	5	3	2	0	63	132	45	0	3	2	3	267	943	1	0	1	1
8:00 AM	0	0	3	0	0	2	2	2	0	41	109	55	0	1	4	1	220	921	1	0	0	3
8:15 AM	0	2	11	1	0	4	5	4	0	28	108	60	0	5	3	1	232		1	0	1	1
8:30 AM	0	1	13	0	0	4	5	1	0	20	109	59	0	6	4	2	224		0	2	0	0
8:45 AM	0	1	7	1	0	4	4	3	0	35	105	80	0	1	4	0	245		0	1	1	3

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Lights	0	4	35	1	0	14	14	9	0	150	451	216	0	15	12	7	928
Mediums	0	0	0	0	0	1	1	0	0	2	7	2	0	0	1	0	14
Total	0	4	35	1	0	15	15	9	0	152	458	219	0	15	13	7	943

Traffic Data Service

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File Name : 6AM FINAL
Site Code : 00000006
Start Date : 9/27/2016
Page No : 1

Groups Printed- Vehicles

	BIRCH ST Southbound					GRANT AVE Westbound					BIRCH ST Northbound					GRANT AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	4	1	1	8	0	0	0	1	1	6	47	3	2	58	2	4	2	0	8	75
07:15 AM	0	0	1	2	3	0	0	0	5	5	5	49	3	0	57	0	7	6	1	14	79
07:30 AM	1	3	0	0	4	0	0	0	4	4	7	60	4	0	71	2	7	2	0	11	90
07:45 AM	0	4	1	0	5	0	0	0	4	4	6	82	16	1	105	0	9	5	1	15	129
Total	3	11	3	3	20	0	0	0	14	14	24	238	26	3	291	4	27	15	2	48	373
08:00 AM	3	6	2	0	11	0	0	0	3	3	8	113	8	0	129	4	8	6	2	20	163
08:15 AM	1	5	1	0	7	0	0	0	1	1	9	105	9	0	123	1	8	5	5	19	150
08:30 AM	6	8	8	0	22	0	0	0	1	1	8	105	7	1	121	1	12	12	1	26	170
08:45 AM	3	8	4	0	15	0	0	0	5	5	7	94	15	3	119	5	7	8	3	23	162
Total	13	27	15	0	55	0	0	0	10	10	32	417	39	4	492	11	35	31	11	88	645
Grand Total	16	38	18	3	75	0	0	0	24	24	56	655	65	7	783	15	62	46	13	136	1018
Apprch %	21.3	50.7	24	4		0	0	0	100		7.2	83.7	8.3	0.9		11	45.6	33.8	9.6		
Total %	1.6	3.7	1.8	0.3	7.4	0	0	0	2.4	2.4	5.5	64.3	6.4	0.7	76.9	1.5	6.1	4.5	1.3	13.4	

	BIRCH ST Southbound				GRANT AVE Westbound				BIRCH ST Northbound				GRANT AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	6	2	11	0	0	0	0	8	**113**	8	**129**	4	8	6	18	158
08:15 AM	1	5	1	7	0	0	0	0	**9**	105	9	123	1	8	5	14	144
08:30 AM	**6**	**8**	**8**	**22**	0	0	0	0	8	105	7	120	1	**12**	**12**	**25**	**167**
08:45 AM	3	8	4	15	0	0	0	0	7	94	**15**	116	**5**	7	8	20	151
Total Volume	13	27	15	55	0	0	0	0	32	417	39	488	11	35	31	77	620
% App. Total	23.6	49.1	27.3		0	0	0		6.6	85.5	8		14.3	45.5	40.3		
PHF	.542	.844	.469	.625	.000	.000	.000	.000	.889	.923	.650	.946	.550	.729	.646	.770	.928

Traffic Data Service

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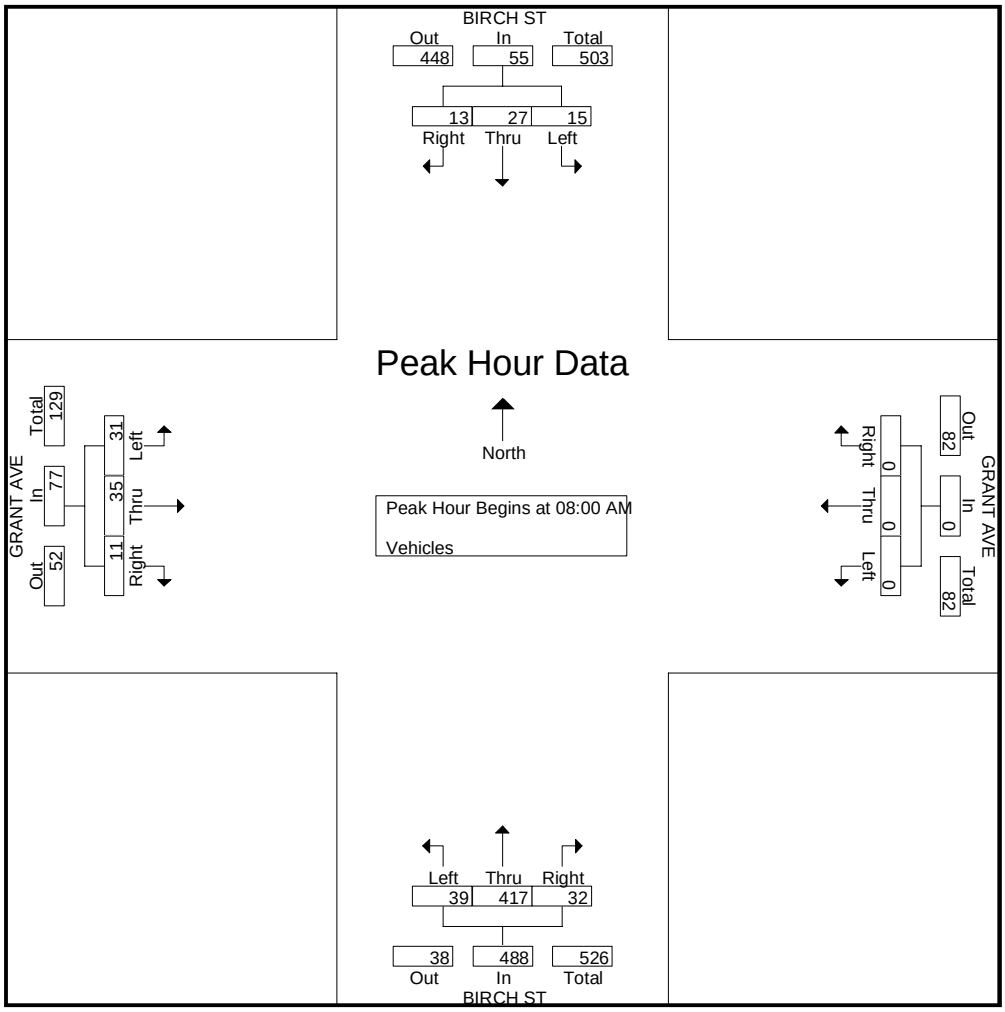
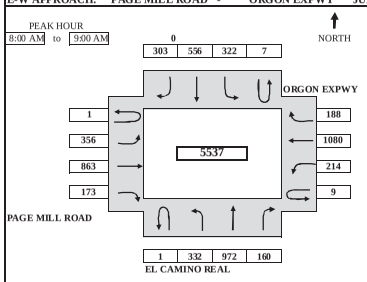
File Name : 6AM FINAL
Site Code : 00000006
Start Date : 9/27/2016
Page No : 2

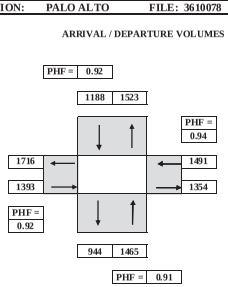


B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: TRAFFIC COUNTS IN PALO ALTO — **SURVEY DATE:** 10/4/2016 — **DAY:** TUESDAY
N-S APPROACH: EL CAMINO REAL — **SURVEY TIME:** 7:00 AM — **TO** 9:00 AM
E-W APPROACH: PAGE MILL ROAD - ORGON EXPWY — **JURISDICTION:** PALO ALTO — **FILE:** 3610078





TIME PERIOD	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																	
7:00 AM to 7:15 AM	0	55	189	32	0	34	60	36	0	62	119	28	1	56	230	66	**968**
7:15 AM to 7:30 AM	1	106	325	68	0	63	139	71	0	126	245	52	2	94	426	113	**1831**
7:30 AM to 7:45 AM	2	200	646	124	0	108	236	121	0	217	429	97	8	174	706	183	**3251**
7:45 AM to 8:00 AM	2	262	877	166	0	179	380	187	0	298	590	131	10	229	913	228	**4452**
8:00 AM to 8:15 AM	2	361	1111	212	0	278	537	248	0	393	821	185	11	288	1196	283	**5926**
8:15 AM to 8:30 AM	2	432	1315	245	3	357	656	303	1	479	1037	221	14	339	1474	328	**7206**
8:30 AM to 8:45 AM	2	509	1597	289	4	432	789	386	1	554	1243	260	16	401	1757	376	**8616**
8:45 AM to 9:00 AM	3	594	1849	326	7	501	936	490	1	654	1453	304	19	443	1993	416	**9989**
TOTAL BY PERIOD																	
7:00 AM to 7:15 AM	0	55	189	32	0	34	60	36	0	62	119	28	1	56	230	66	**968**
7:15 AM to 7:30 AM	1	51	136	36	0	29	79	35	0	64	126	24	1	38	196	47	**863**
7:30 AM to 7:45 AM	1	94	321	56	0	45	97	50	0	91	184	45	6	80	280	70	**1420**
7:45 AM to 8:00 AM	0	62	231	42	0	71	144	66	0	81	161	34	2	55	207	45	**1201**
8:00 AM to 8:15 AM	0	99	234	46	0	99	157	61	0	95	231	54	1	59	283	55	**1474**
8:15 AM to 8:30 AM	0	71	204	33	3	79	119	55	1	86	216	36	3	51	278	45	**1280**
8:30 AM to 8:45 AM	0	77	282	44	1	75	133	83	0	75	206	39	2	62	283	48	**1410**
8:45 AM to 9:00 AM	1	85	252	37	3	69	147	104	0	100	210	44	3	42	236	40	**1373**
HOURLY TOTALS																	
7:00 AM to 8:00 AM	2	262	877	166	0	179	380	187	0	298	590	131	10	229	913	228	**4452**
7:15 AM to 8:15 AM	2	306	922	180	0	244	477	212	0	331	702	157	10	232	966	217	**4958**
7:30 AM to 8:30 AM	1	326	990	177	3	294	517	232	1	353	792	169	12	245	1048	215	**5375**
7:45 AM to 8:45 AM	0	309	951	165	4	324	553	265	1	337	814	163	8	227	1051	193	**5365**
8:00 AM to 9:00 AM	1	332	972	160	7	322	556	303	1	356	863	173	9	214	1080	188	**5537**

PEAK HOUR SUMMARY

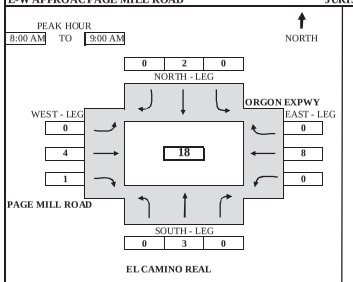
8:00 AM to 9:00 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	1	332	972	160	7	322	556	303	1	356	863	173	9	214	1080	188	**5537**
PHF BY MOVEMENT	0.25	0.84	0.86	0.87	0.58	0.81	0.89	0.73	0.25	0.89	0.93	0.80	0.75	0.86	0.95	0.85	OVERALL
PHF BY APPROACH		0.91				0.92				0.92				0.94			0.94
BICYCLE		3				2				5				8			**18**
PEDESTRIAN BY DIR:		46				12				8				26			**92**
		N-LEG				**S-LEG**				**E-LEG**				**W-LEG**			
PEDESTRIAN BY LEG:		23				11				33				25			**92**

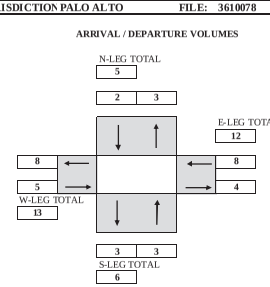
TEL: (510) 232 - 1271 EMAIL: BAYMETRICS@GMAIL.COM

B.A.Y.M.E.T.R.I.C.S.

BICYCLE MOVEMENT SUMMARY

PROJECT: TRAFFIC COUNTS IN PALO ALTO — **SURVEY DATE:** 10/4/2016 — **DAY:** TUESDAY
N-S APPROACH: EL CAMINO REAL — **SURVEY TIME:** 7:00 AM — **TO** 9:00 AM
E-W APPROACH: PAGE MILL ROAD — **JURISDICTION:** PALO ALTO — **FILE:** 3610078





TIME PERIOD	NB (SOUTH - LEG)			SB (NORTH - LEG)			EB (WEST - LEG)			WB (EAST - LEG)			TOTAL
From To	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	
SURVEY DATA													
7:00 AM to 7:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	**2**
7:15 AM to 7:30 AM	0	1	0	0	0	1	0	2	0	0	1	0	**5**
7:30 AM to 7:45 AM	0	1	0	0	1	1	0	3	0	0	1	0	**7**
7:45 AM to 8:00 AM	0	4	0	0	1	1	0	3	0	0	1	0	**10**
8:00 AM to 8:15 AM	0	5	0	0	1	1	0	3	1	0	2	0	**13**
8:15 AM to 8:30 AM	0	5	0	0	3	1	0	4	1	0	8	0	**22**
8:30 AM to 8:45 AM	0	6	0	0	3	1	0	6	1	0	8	0	**25**
8:45 AM to 9:00 AM	0	7	0	0	3	1	0	7	1	0	9	0	**28**
TOTAL BY PERIOD													
7:00 AM to 7:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	**2**
7:15 AM to 7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	**3**
7:30 AM to 7:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	**2**
7:45 AM to 8:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM to 8:15 AM	0	1	0	0	0	0	0	1	0	0	1	0	**3**
8:15 AM to 8:30 AM	0	0	0	0	2	0	0	1	0	0	6	0	**9**
8:30 AM to 8:45 AM	0	1	0	0	0	0	0	2	0	0	0	0	**3**
8:45 AM to 9:00 AM	0	1	0	0	0	0	0	1	0	0	1	0	**3**
HOURLY TOTALS													
7:00 AM to 8:00 AM	0	4	0	0	1	1	0	3	0	0	1	0	**10**
7:15 AM to 8:15 AM	0	4	0	0	1	0	0	3	1	0	2	0	**11**
7:30 AM to 8:30 AM	0	4	0	0	3	0	0	2	1	0	7	0	**17**
7:45 AM to 8:45 AM	0	5	0	0	2	0	0	3	1	0	7	0	**18**
8:00 AM to 9:00 AM	0	3	0	0	2	0	0	4	1	0	8	0	**18**

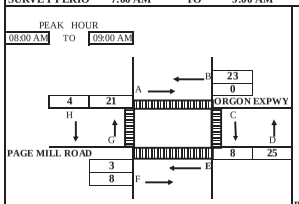
TEL: (510) 232 - 1271 EMAIL: BAYMETRICS@GMAIL.COM

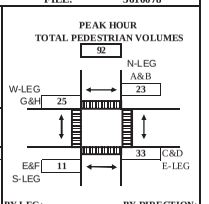
8:00 AM to 9:00 AM					
VOLUME BY APPROACH	NBT	SBT	EBT	WBT	TOTAL
BICYCLE	3	2	5	8	**18**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

PROJECT: TRAFFIC COUNTS IN PALO ALTO — **SURVEY DATE:** 10/4/2016
N-S APPROACH EL CAMINO REAL — **DAY:** TUESDAY
E-W APPROACH PAGE MILL ROAD — **JURISDICTION** PALO ALTO
SURVEY PERIO 7:00 AM TO 9:00 AM — **FILE:** 3610078





BY LEG:		BY DIRECTION:	
(A&B)	23	NB(D+G)	46
(E&F)	11	SB(C+H)	12
(C&D)	33	EB(A+F)	8
(G&H)	25	WB(B+E)	26

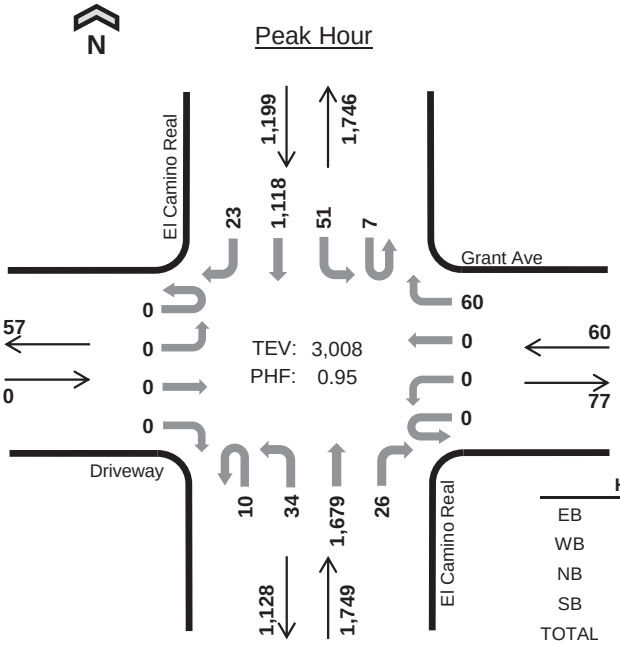
TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		To	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*TOTAL*
SURVEY DATA											
07:00 AM	---	07:15 AM	0	3	2	0	0	1	2	0	***8***
07:15 AM	---	07:30 AM	2	5	5	1	0	4	2	1	***20***
07:30 AM	---	07:45 AM	3	6	5	6	0	4	9	1	***34***
07:45 AM	---	08:00 AM	5	11	7	6	0	6	10	1	***46***
08:00 AM	---	08:15 AM	5	13	8	13	2	7	10	1	***59***
08:15 AM	---	08:30 AM	5	24	11	21	2	8	12	2	***85***
08:30 AM	---	08:45 AM	5	25	11	23	2	11	19	2	***98***
08:45 AM	---	09:00 AM	5	34	15	31	3	14	31	5	***138***
TOTAL BY PERIOD											
07:00 AM	---	07:15 AM	0	3	2	0	0	1	2	0	***8***
07:15 AM	---	07:30 AM	2	2	3	1	0	3	0	1	***12***
07:30 AM	---	07:45 AM	1	1	0	5	0	0	7	0	***14***
07:45 AM	---	08:00 AM	2	5	2	0	0	2	1	0	***12***
08:00 AM	---	08:15 AM	0	2	1	7	2	1	0	0	***13***
08:15 AM	---	08:30 AM	0	11	3	8	0	1	2	1	***26***
08:30 AM	---	08:45 AM	0	1	0	2	0	3	7	0	***13***
08:45 AM	---	09:00 AM	0	9	4	8	1	3	12	3	***40***
HOURLY TOTALS											
07:00 AM	---	08:00 AM	5	11	7	6	0	6	10	1	***46***
07:15 AM	---	08:15 AM	5	10	6	13	2	6	8	1	***51***
07:30 AM	---	08:30 AM	3	19	6	20	2	4	10	1	***65***
07:45 AM	---	08:45 AM	2	19	6	17	2	7	10	1	***64***
08:00 AM	---	09:00 AM	0	23	8	25	3	8	21	4	***92***

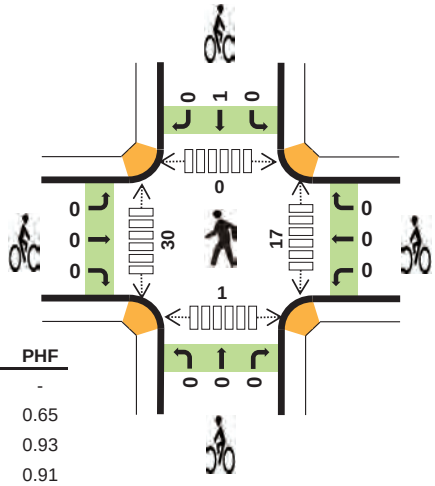
Tel : (510) 232-1271 ***EMAIL: BAYMETRICS@GMAIL.COM***

8:00 AM to 9:00 AM					
VOLUME BY DIRECTION	NB	SB	EB	WB	TOTAL
PEDESTRIAN	46	12	8	26	**92**
VOLUME BY LEG	N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN	23	11	33	25	**92**

El Camino Real
Grant Ave

Date: 03/08/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	-	-
WB	1.7%	0.65
NB	3.6%	0.93
SB	5.3%	0.91
TOTAL	4.2%	0.95

Two-Hour Count Summaries

Interval Start		Driveway Eastbound				Grant Ave Westbound				El Camino Real Northbound				El Camino Real Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	0	0	5	3	3	260	3	1	2	144	2	423	0
7:15 AM		0	0	0	0	0	0	0	6	2	3	310	6	1	4	154	0	486	0
7:30 AM		0	0	0	0	0	0	0	5	4	3	358	1	2	9	248	2	632	0
7:45 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**1**	**3**	**461**	**7**	**0**	**3**	**237**	**4**	**739**	2,280
8:00 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**5**	**8**	**405**	**7**	**1**	**19**	**307**	**2**	**774**	2,631
8:15 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**16**	**433**	**3**	**3**	**15**	**300**	**9**	**788**	2,933
8:30 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**4**	**7**	**380**	**9**	**3**	**14**	**274**	**8**	**707**	**3,008**
8:45 AM		0	0	0	0	0	1	0	10	0	12	385	8	1	9	264	8	698	2,967
Count Total		0	0	0	0	0	1	0	86	19	55	2,992	44	12	75	1,928	35	5,247	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**60**	**10**	**34**	**1,679**	**26**	**7**	**51**	**1,118**	**23**	**3,008**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**62**	**0**	**0**	**0**	**63**	**0**	**127**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2%**	**0%**	**3%**	**4%**	**0%**	**0%**	**0%**	**6%**	**0%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	11	10	*21*	0	0	2	0	*2*	3	3	0	0	*6*
7:15 AM	0	0	18	8	*26*	0	0	0	0	*0*	6	9	0	0	*15*
7:30 AM	0	0	11	11	*22*	0	0	0	0	*0*	5	13	1	0	*19*
7:45 AM	**0**	**0**	**11**	**15**	***26***	**0**	**0**	**0**	**0**	***0***	**8**	**11**	**0**	**0**	*19*
8:00 AM	**0**	**1**	**16**	**13**	***30***	**0**	**0**	**0**	**0**	***0***	**3**	**10**	**0**	**0**	*13*
8:15 AM	**0**	**0**	**16**	**21**	***37***	**0**	**0**	**0**	**1**	***1***	**4**	**1**	**0**	**0**	*5*
8:30 AM	**0**	**0**	**20**	**14**	***34***	**0**	**0**	**0**	**0**	***0***	**2**	**8**	**0**	**1**	***11***
8:45 AM	0	0	9	14	*23*	0	0	0	1	*1*	4	11	1	1	*17*
Count Total	0	1	112	106	*219*	0	0	2	2	*4*	35	66	2	2	*105*
Peak Hour	**0**	**1**	**63**	**63**	***127***	**0**	**0**	**0**	**1**	***1***	**17**	**30**	**0**	**1**	***48***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Grant Ave				El Camino Real				El Camino Real				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	11	0	0	1	9	0	21	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	18	0	0	0	8	0	26	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	11	0	0	1	10	0	22	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**15**	**0**	**26**	95
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**16**	**0**	**0**	**0**	**13**	**0**	**30**	104
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**0**	**0**	**0**	**21**	**0**	**37**	115
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**14**	**0**	**34**	**127**
8:45 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	14	0	23	124
Count Total	0	0	0	0	0	0	0	1	0	1	111	0	0	2	104	0	219	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**62**	**0**	**0**	**0**	**63**	**0**	**127**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Grant Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	2	0
7:15 AM	0	0	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	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**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**	**1**	**0**	**1**	1
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Count Total	0	0	0	0	0	0	1	1	0	0	2	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

File Name : 13AM FINAL
Site Code : 00000013
Start Date : 9/27/2016
Page No : 1

Groups Printed- Vehicles

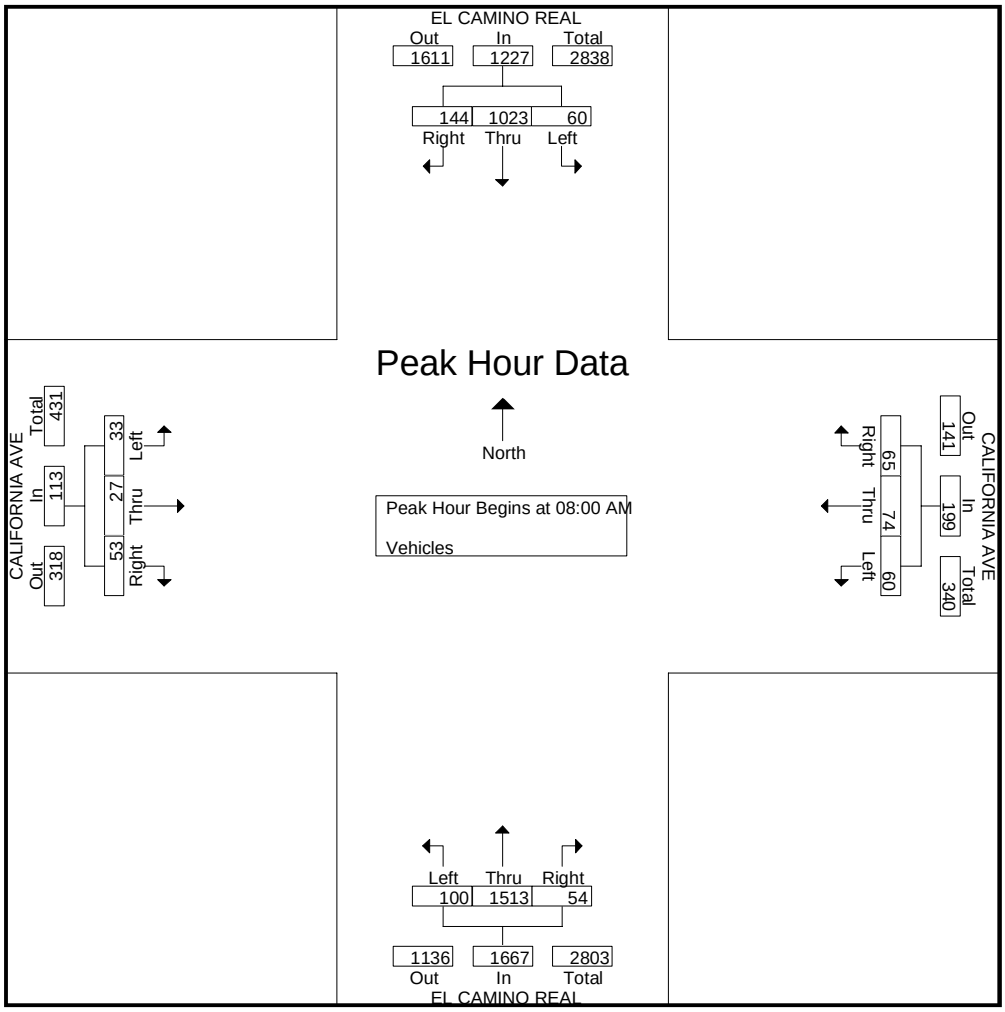
	EL CAMINO REAL Southbound					CALIFORNIA AVE Westbound					EL CAMINO REAL Northbound					CALIFORNIA AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	13	115	7	6	141	6	9	7	1	23	15	204	15	6	240	6	0	3	1	10	414
07:15 AM	23	136	15	3	177	4	4	4	1	13	13	249	16	12	290	4	1	1	1	7	487
07:30 AM	20	194	12	12	238	9	13	13	3	38	14	282	12	21	329	13	5	11	4	33	638
07:45 AM	20	224	6	3	253	16	16	9	0	41	14	346	14	23	397	15	8	5	3	31	722
Total	76	669	40	24	809	35	42	33	5	115	56	1081	57	62	1256	38	14	20	9	81	2261
08:00 AM	28	248	13	11	300	22	18	11	0	51	15	452	21	10	498	7	5	12	4	28	877
08:15 AM	40	276	14	11	341	8	18	21	1	48	13	375	22	16	426	15	9	6	6	36	851
08:30 AM	33	225	14	4	276	14	15	13	6	48	13	346	30	15	404	19	8	8	4	39	767
08:45 AM	43	274	19	13	349	21	23	15	3	62	13	340	27	27	407	12	5	7	7	31	849
Total	144	1023	60	39	1266	65	74	60	10	209	54	1513	100	68	1735	53	27	33	21	134	3344
Grand Total	220	1692	100	63	2075	100	116	93	15	324	110	2594	157	130	2991	91	41	53	30	215	5605
Apprch %	10.6	81.5	4.8	3		30.9	35.8	28.7	4.6		3.7	86.7	5.2	4.3		42.3	19.1	24.7	14		
Total %	3.9	30.2	1.8	1.1	37	1.8	2.1	1.7	0.3	5.8	2	46.3	2.8	2.3	53.4	1.6	0.7	0.9	0.5	3.8	

	EL CAMINO REAL Southbound				CALIFORNIA AVE Westbound				EL CAMINO REAL Northbound				CALIFORNIA AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	28	248	13	289	**22**	18	11	51	**15**	**452**	21	**488**	7	5	**12**	24	**852**
08:15 AM	40	**276**	14	330	8	18	**21**	47	13	375	22	410	15	**9**	6	30	817
08:30 AM	33	225	14	272	14	15	13	42	13	346	**30**	389	**19**	8	8	**35**	738
08:45 AM	**43**	274	**19**	**336**	21	**23**	15	**59**	13	340	27	380	12	5	7	24	799
Total Volume	144	1023	60	1227	65	74	60	199	54	1513	100	1667	53	27	33	113	3206
% App. Total	11.7	83.4	4.9		32.7	37.2	30.2		3.2	90.8	6		46.9	23.9	29.2		
PHF	.837	.927	.789	.913	.739	.804	.714	.843	.900	.837	.833	.854	.697	.750	.688	.807	.941

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

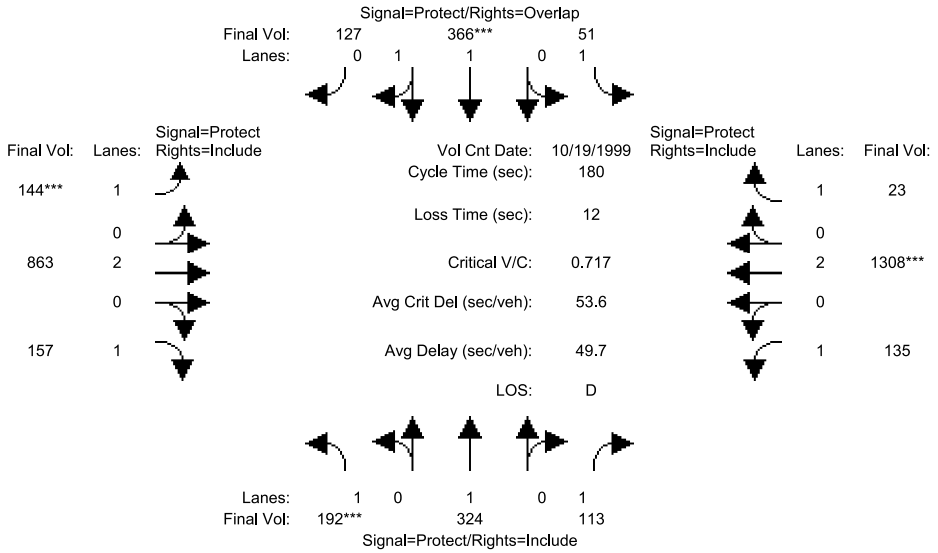
File Name : 13AM FINAL
Site Code : 00000013
Start Date : 9/27/2016
Page No : 2



SD16-0223
Palo Alto PSB TIA
Existing AM

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #10: PAGEMILL-OREGON EXPWY/MIDDLEFIELD RD



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	65	10
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: >> Count Date: 19 Oct 1999 << 7:00-9:00												
Base Vol:	192	324	113	51	366	127	144	863	157	135	1308	23
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:	192	324	113	51	366	127	144	863	157	135	1308	23
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:	192	324	113	51	366	127	144	863	157	135	1308	23
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:	192	324	113	51	366	127	144	863	157	135	1308	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	192	324	113	51	366	127	144	863	157	135	1308	23
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:	192	324	113	51	366	127	144	863	157	135	1308	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.47	0.53	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	2746	953	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.17	0.06	0.03	0.13	0.13	0.08	0.23	0.09	0.08	0.34	0.01
Crit Moves:	****				****		****				****	
Green Time:	27.5	46.0	46.0	15.0	33.4	54.1	20.6	79.9	79.9	27.1	86.4	86.4
Volume/Cap:	0.72	0.67	0.25	0.35	0.72	0.44	0.72	0.51	0.20	0.51	0.72	0.03
Delay/Veh:	81.5	63.7	53.6	79.4	72.5	51.1	88.6	36.3	30.7	72.0	38.5	24.7
User DelAdj:	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:	81.5	63.7	53.6	79.4	72.5	51.1	88.6	36.3	30.7	72.0	38.5	24.7
LOS by Move:	F	E	D-	E-	E	D-	F	D+	C	E	D+	C
HCM2k95thQ:	22	29	10	6	25	20	18	29	11	15	46	1

Note: Queue reported is the number of cars per lane.

Traffic Data Service

San Jose, CA

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File Name : 3PM FINAL
Site Code : 00000003
Start Date : 9/27/2016
Page No : 1

Groups Printed- Vehicles

	PARK BLVD Southbound					PAGE MILL RD Westbound					PARK BLVD Northbound					PAGE MILL RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	72	29	0	9	110	0	5	0	34	39	1	21	26	23	71	5	1	13	8	27	247
04:15 PM	71	28	0	0	99	0	3	0	4	7	0	22	29	6	57	3	0	7	10	20	183
04:30 PM	80	35	1	0	116	0	1	0	10	11	0	22	25	7	54	1	0	6	4	11	192
04:45 PM	75	41	0	2	118	1	0	0	13	14	1	20	38	7	66	4	0	10	2	16	214
Total	298	133	1	11	443	1	9	0	61	71	2	85	118	43	248	13	1	36	24	74	836
05:00 PM	101	60	0	5	166	2	0	2	89	93	0	23	25	84	132	1	0	9	4	14	405
05:15 PM	90	57	0	2	149	0	0	2	15	17	0	30	23	9	62	6	0	6	5	17	245
05:30 PM	86	41	0	1	128	0	2	1	30	33	0	33	28	20	81	2	1	9	5	17	259
05:45 PM	95	56	0	2	153	3	2	0	18	23	0	34	28	15	77	12	2	8	4	26	279
Total	372	214	0	10	596	5	4	5	152	166	0	120	104	128	352	21	3	32	18	74	1188
Grand Total	670	347	1	21	1039	6	13	5	213	237	2	205	222	171	600	34	4	68	42	148	2024
Apprch %	64.5	33.4	0.1	2		2.5	5.5	2.1	89.9		0.3	34.2	37	28.5		23	2.7	45.9	28.4		
Total %	33.1	17.1	0	1	51.3	0.3	0.6	0.2	10.5	11.7	0.1	10.1	11	8.4	29.6	1.7	0.2	3.4	2.1	7.3	

	PARK BLVD Southbound				PAGE MILL RD Westbound				PARK BLVD Northbound				PAGE MILL RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**101**	**60**	0	**161**	2	0	**2**	4	0	23	25	48	1	0	**9**	10	223
05:15 PM	90	57	0	147	0	0	2	2	0	30	23	53	6	0	6	12	214
05:30 PM	86	41	0	127	0	**2**	1	3	0	33	**28**	61	2	1	9	12	203
05:45 PM	95	56	0	151	**3**	2	0	**5**	0	**34**	28	**62**	**12**	**2**	8	**22**	**240**
Total Volume	372	214	0	586	5	4	5	14	0	120	104	224	21	3	32	56	880
% App. Total	63.5	36.5	0		35.7	28.6	35.7		0	53.6	46.4		37.5	5.4	57.1		
PHF	.921	.892	.000	.910	.417	.500	.625	.700	.000	.882	.929	.903	.438	.375	.889	.636	.917

Traffic Data Service

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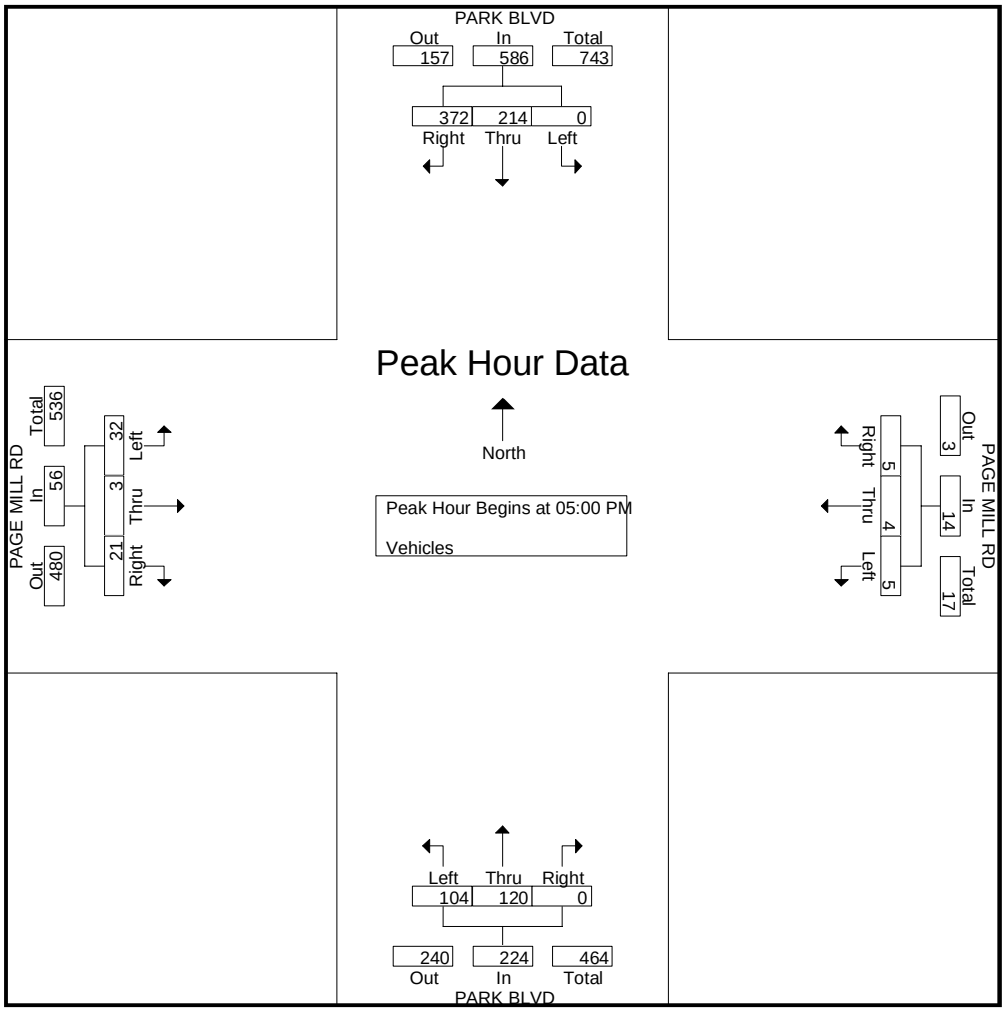
File Name : 3PM FINAL
Site Code : 00000003
Start Date : 9/27/2016
Page No : 2



Traffic Data Service

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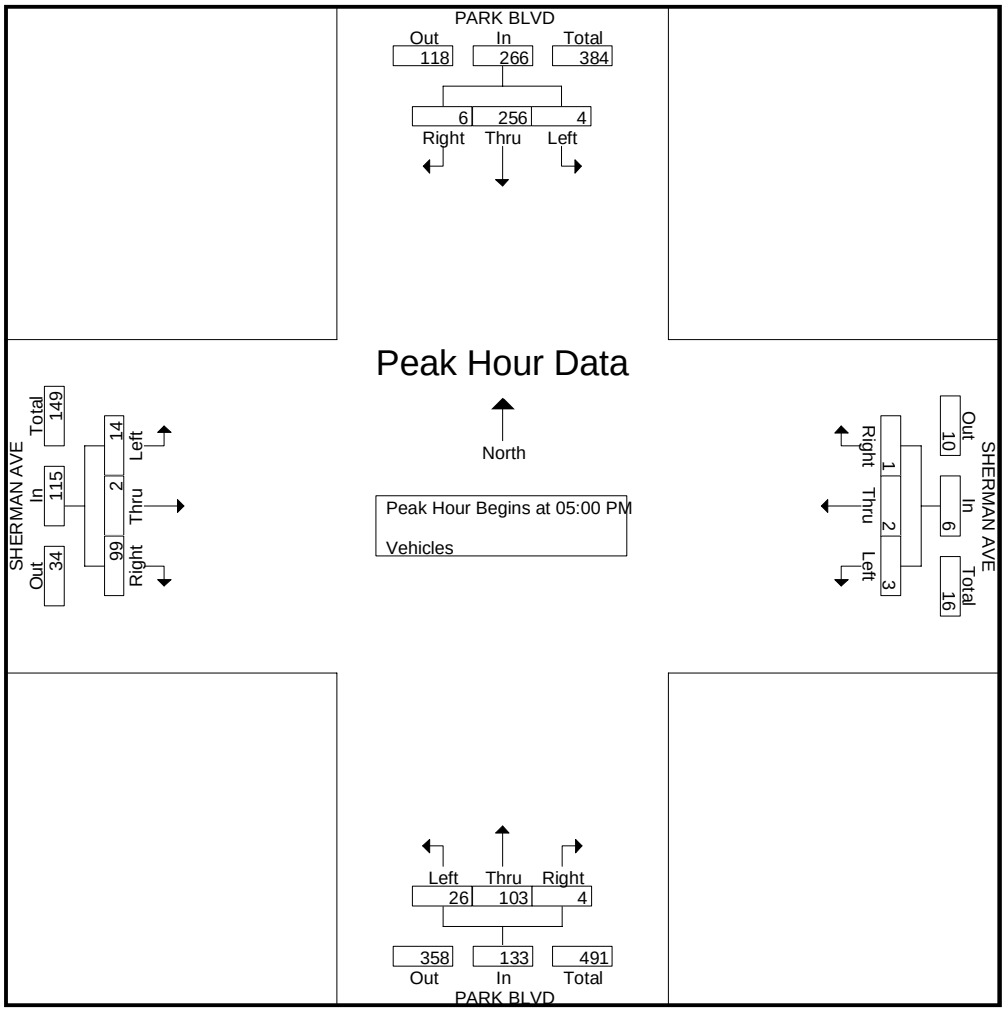
File Name : 2PM FINAL
Site Code : 00000002
Start Date : 9/27/2016
Page No : 2



Traffic Data Service

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tdsbay@cs.com

File Name : 2PM FINAL
Site Code : 00000002
Start Date : 9/27/2016
Page No : 1

Groups Printed- Vehicles

	PARK BLVD Southbound					SHERMAN AVE Westbound					PARK BLVD Northbound					SHERMAN AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	2	52	3	1	58	0	3	3	6	12	1	22	4	2	29	12	0	1	8	21	120
04:15 PM	2	47	0	1	50	2	1	2	1	6	2	24	3	1	30	17	0	1	10	28	114
04:30 PM	0	58	0	0	58	0	0	2	0	2	0	17	7	0	24	15	0	3	4	22	106
04:45 PM	0	50	0	1	51	1	1	2	5	9	0	21	5	0	26	13	0	1	2	16	102
Total	4	207	3	3	217	3	5	9	12	29	3	84	19	3	109	57	0	6	24	87	442
05:00 PM	1	65	1	5	72	0	1	0	5	6	2	36	8	2	48	29	0	4	8	41	167
05:15 PM	2	67	1	0	70	0	0	2	9	11	1	15	4	0	20	24	0	5	8	37	138
05:30 PM	3	56	0	0	59	1	1	1	6	9	0	24	6	1	31	22	2	4	16	44	143
05:45 PM	0	68	2	1	71	0	0	0	9	9	1	28	8	1	38	24	0	1	3	28	146
Total	6	256	4	6	272	1	2	3	29	35	4	103	26	4	137	99	2	14	35	150	594
Grand Total	10	463	7	9	489	4	7	12	41	64	7	187	45	7	246	156	2	20	59	237	1036
Apprch %	2	94.7	1.4	1.8		6.2	10.9	18.8	64.1		2.8	76	18.3	2.8		65.8	0.8	8.4	24.9		
Total %	1	44.7	0.7	0.9	47.2	0.4	0.7	1.2	4	6.2	0.7	18.1	4.3	0.7	23.7	15.1	0.2	1.9	5.7	22.9	

	PARK BLVD Southbound				SHERMAN AVE Westbound				PARK BLVD Northbound				SHERMAN AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	65	1	67	0	**1**	0	1	**2**	**36**	**8**	**46**	**29**	0	4	**33**	**147**
05:15 PM	2	67	1	**70**	0	0	**2**	2	1	15	4	20	24	0	**5**	29	121
05:30 PM	**3**	56	0	59	**1**	1	1	**3**	0	24	6	30	22	**2**	4	28	120
05:45 PM	0	**68**	**2**	70	0	0	0	0	1	28	8	37	24	0	1	25	132
Total Volume	6	256	4	266	1	2	3	6	4	103	26	133	99	2	14	115	520
% App. Total	2.3	96.2	1.5		16.7	33.3	50		3	77.4	19.5		86.1	1.7	12.2		
PHF	.500	.941	.500	.950	.250	.500	.375	.500	.500	.715	.813	.723	.853	.250	.700	.871	.884

All Traffic Data Services Inc.

(303) 216-2439
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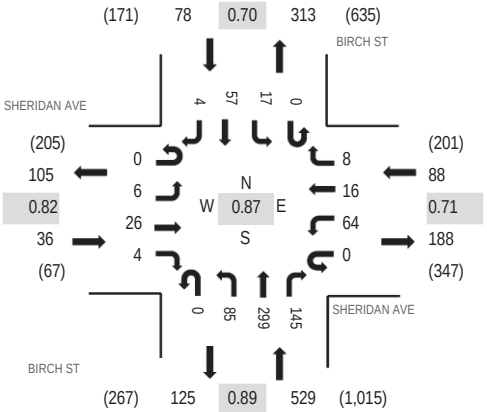
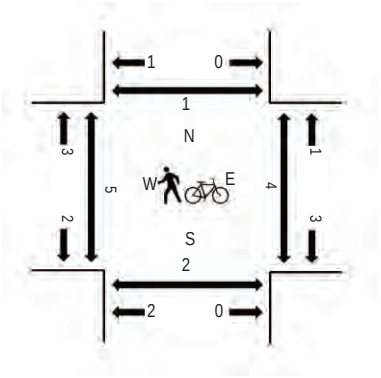
Location: 2 BIRCH ST & SHERIDAN AVE PM
Date and Start Time: Tuesday, April 25, 2017
Peak Hour: 05:30 PM - 06:30 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SHERIDAN AVE Eastbound				SHERIDAN AVE Westbound				BIRCH ST Northbound				BIRCH ST Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:30 PM	0	1	7	1	0	10	7	1	0	14	83	24	0	2	13	1	164	723	1	0	0	4
4:45 PM	0	2	6	0	0	12	8	1	0	18	84	32	0	7	24	2	196	710	1	0	0	4
5:00 PM	0	1	4	1	0	30	9	4	0	14	75	34	0	7	19	0	198	697	0	0	0	0
5:15 PM	0	0	7	1	0	15	9	7	0	18	63	27	0	2	16	0	165	710	0	0	0	0
5:30 PM	0	2	6	1	0	17	1	2	0	19	56	33	0	4	10	0	151	731	0	1	2	0
5:45 PM	0	0	8	0	0	16	8	4	0	16	75	34	0	7	13	2	183		2	1	0	0
6:00 PM	0	0	6	2	0	19	5	1	0	16	91	42	0	3	24	2	211		1	0	0	0
6:15 PM	0	4	6	1	0	12	2	1	0	34	77	36	0	3	10	0	186		2	2	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	6	24	4	0	64	16	8	0	85	299	145	0	17	56	4	728
Mediums	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	3
Total	0	6	26	4	0	64	16	8	0	85	299	145	0	17	57	4	731

Traffic Data Service

San Jose, CA
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File Name : 6PM FINAL
Site Code : 00000006
Start Date : 9/27/2016
Page No : 1

Groups Printed- Vehicles

	BIRCH ST Southbound					GRANT AVE Westbound					BIRCH ST Northbound					GRANT AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	5	16	2	0	23	0	0	0	2	2	6	76	2	1	85	3	4	7	1	15	125
04:15 PM	7	16	3	2	28	0	0	0	3	3	9	56	4	3	72	1	7	0	2	10	113
04:30 PM	1	12	1	2	16	0	0	0	2	2	2	57	4	0	63	5	11	4	2	22	103
04:45 PM	2	22	2	0	26	0	0	0	2	2	4	88	3	1	96	1	11	11	2	25	149
Total	15	66	8	4	93	0	0	0	9	9	21	277	13	5	316	10	33	22	7	72	490
05:00 PM	1	16	2	0	19	0	0	0	6	6	5	56	4	1	66	2	10	5	1	18	109
05:15 PM	0	19	1	0	20	0	0	0	3	3	2	53	6	0	61	5	9	3	3	20	104
05:30 PM	1	19	3	1	24	0	0	0	7	7	2	81	6	0	89	2	6	2	5	15	135
05:45 PM	1	19	3	1	24	0	0	0	2	2	6	66	7	0	79	4	6	1	2	13	118
Total	3	73	9	2	87	0	0	0	18	18	15	256	23	1	295	13	31	11	11	66	466
Grand Total	18	139	17	6	180	0	0	0	27	27	36	533	36	6	611	23	64	33	18	138	956
Apprch %	10	77.2	9.4	3.3		0	0	0	100		5.9	87.2	5.9	1		16.7	46.4	23.9	13		
Total %	1.9	14.5	1.8	0.6	18.8	0	0	0	2.8	2.8	3.8	55.8	3.8	0.6	63.9	2.4	6.7	3.5	1.9	14.4	

	BIRCH ST Southbound				GRANT AVE Westbound				BIRCH ST Northbound				GRANT AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	5	16	2	23	0	0	0	0	6	76	2	84	3	4	7	14	121
04:15 PM	**7**	16	**3**	**26**	0	0	0	0	**9**	56	**4**	69	1	7	0	8	103
04:30 PM	1	12	1	14	0	0	0	0	2	57	4	63	**5**	**11**	4	20	97
04:45 PM	2	**22**	2	26	0	0	0	0	4	**88**	3	**95**	1	11	**11**	**23**	**144**
Total Volume	15	66	8	89	0	0	0	0	21	277	13	311	10	33	22	65	465
% App. Total	16.9	74.2	9		0	0	0		6.8	89.1	4.2		15.4	50.8	33.8		
PHF	.536	.750	.667	.856	.000	.000	.000	.000	.583	.787	.813	.818	.500	.750	.500	.707	.807

Traffic Data Service

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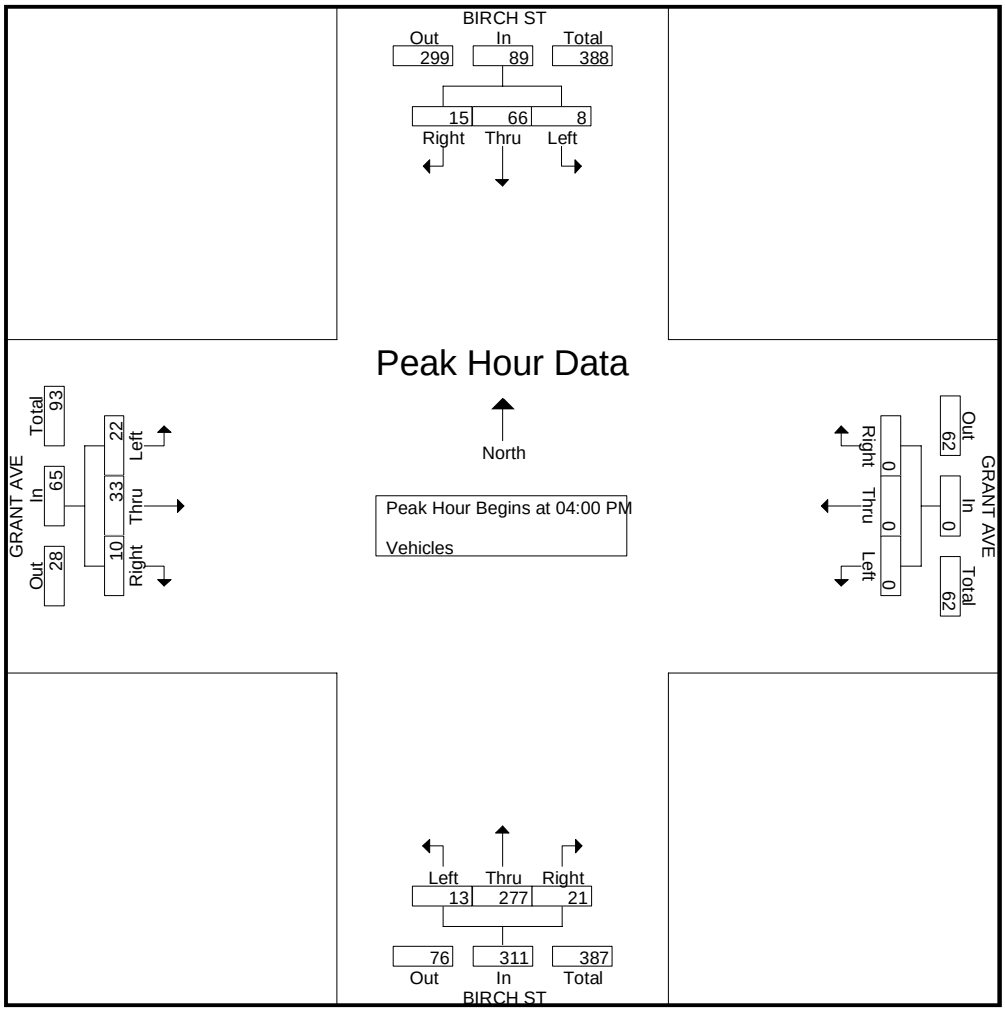
File Name : 6PM FINAL
Site Code : 00000006
Start Date : 9/27/2016
Page No : 2



Vistro File: C:\...\VTA_2019_Existing_PM_V2020_PTV_staff_05152020.vistro

Scenario: Base Scenario

Report File: C:\...\Page Mill & ECR Volume.pdf

11/16/2020

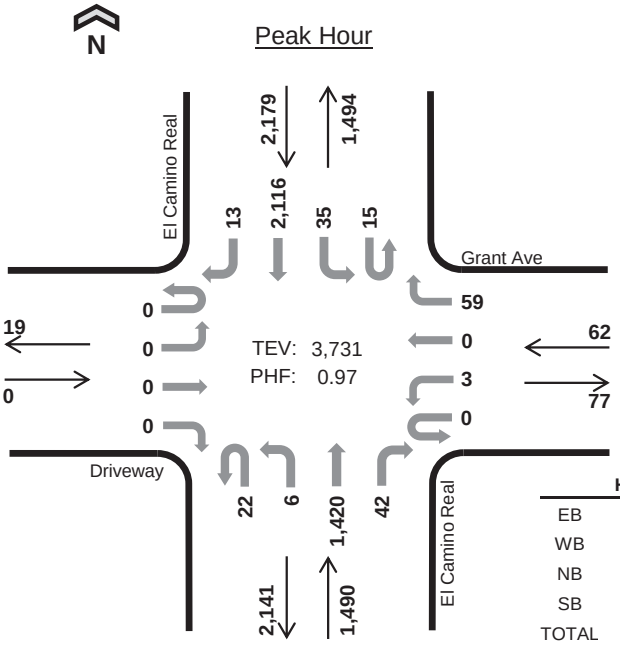
Turning Movement Volume: Summary

ID	Intersection Name	Northbound				Southbound				Eastbound			
		U-T	Left	Thru	Right	U-T	Left	Thru	Right	U-T	Left	Thru	Right
1104	El Camino Real (Rte. 82) & Page Mill Rd./Oregon Expwy.	2	305	1130	232	12	365	829	119	8	434	1273	248

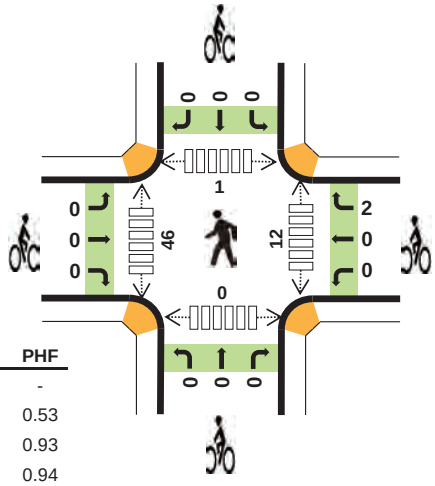
Westbound				Total Volume
U-T	Left	Thru	Right	
14	222	736	265	6194

El Camino Real
Grant Ave

Date: 03/08/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	-	-
WB	0.0%	0.53
NB	1.7%	0.93
SB	1.1%	0.94
TOTAL	1.3%	0.97



Two-Hour Count Summaries

Interval Start		Driveway Eastbound				Grant Ave Westbound				El Camino Real Northbound				El Camino Real Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	1	0	9	5	5	315	11	1	8	435	4	794	0
4:15 PM		0	0	0	0	0	0	0	13	5	5	315	9	5	11	449	4	816	0
4:30 PM		0	0	0	0	0	0	0	12	1	4	330	10	2	11	498	11	879	0
4:45 PM		0	0	0	0	0	0	0	9	2	6	339	19	4	12	471	3	865	3,354
5:00 PM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**5**	**2**	**343**	**11**	**4**	**8**	**523**	**2**	**908**	3,468
5:15 PM		**0**	**0**	**0**	**0**	**0**	**1**	**0**	**11**	**8**	**2**	**342**	**10**	**5**	**12**	**554**	**6**	**951**	3,603
5:30 PM		**0**	**0**	**0**	**0**	**0**	**2**	**0**	**27**	**6**	**0**	**354**	**7**	**4**	**5**	**552**	**3**	**960**	3,684
5:45 PM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**3**	**2**	**381**	**14**	**2**	**10**	**487**	**2**	**912**	**3,731**
Count Total		0	0	0	0	0	4	0	102	35	26	2,719	91	27	77	3,969	35	7,085	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**59**	**22**	**6**	**1,420**	**42**	**15**	**35**	**2,116**	**13**	**3,731**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**0**	**0**	**0**	**23**	**0**	**48**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**0%**	**0%**	**2%**	**0%**	**0%**	**0%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	8	7	*15*	0	0	0	0	*0*	5	22	0	0	*27*
4:15 PM	0	0	9	9	*18*	0	0	0	1	*1*	6	17	0	0	*23*
4:30 PM	0	0	4	10	*14*	0	0	0	0	*0*	3	17	0	0	*20*
4:45 PM	0	0	8	6	*14*	0	0	0	0	*0*	5	19	1	0	*25*
5:00 PM	**0**	**0**	**4**	**6**	***10***	**0**	**0**	**0**	**0**	***0***	**4**	**9**	**1**	**0**	*14*
5:15 PM	**0**	**0**	**9**	**4**	***13***	**0**	**2**	**0**	**0**	***2***	**4**	**19**	**0**	**0**	*23*
5:30 PM	**0**	**0**	**5**	**7**	***12***	**0**	**0**	**0**	**0**	***0***	**1**	**8**	**0**	**0**	*9*
5:45 PM	**0**	**0**	**7**	**6**	***13***	**0**	**0**	**0**	**0**	***0***	**3**	**10**	**0**	**0**	***13***
Count Total	0	0	54	55	*109*	0	2	0	1	*3*	31	121	2	0	*154*
Peak Hour	**0**	**0**	**25**	**23**	***48***	**0**	**2**	**0**	**0**	***2***	**12**	**46**	**1**	**0**	***59***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Grant Ave				El Camino Real				El Camino Real				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	7	0	15	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	0	18	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0	14	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	7	1	0	1	5	0	14	61
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**10**	56
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**4**	**0**	**13**	51
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**0**	**12**	49
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**6**	**0**	**13**	**48**
Count Total	0	0	0	0	0	0	0	0	0	0	53	1	0	1	54	0	109	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**0**	**0**	**0**	**23**	**0**	**48**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Grant Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	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	0
4:30 PM	0	0	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	0	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Count Total	0	0	0	0	0	2	0	0	0	0	1	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

File Name : 13PM FINAL
Site Code : 00000013
Start Date : 9/27/2016
Page No : 1

Groups Printed- Vehicles

	EL CAMINO REAL Southbound					CALIFORNIA AVE Westbound					EL CAMINO REAL Northbound					CALIFORNIA AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	10	341	1	12	364	21	11	23	1	56	18	312	23	17	370	30	8	15	12	65	855
04:15 PM	9	425	0	16	450	22	6	18	6	52	20	288	19	18	345	28	11	20	7	66	913
04:30 PM	18	441	2	15	476	10	10	26	2	48	23	283	27	17	350	34	11	17	4	66	940
04:45 PM	9	452	1	9	471	28	8	15	5	56	18	302	17	21	358	35	18	25	8	86	971
Total	46	1659	4	52	1761	81	35	82	14	212	79	1185	86	73	1423	127	48	77	31	283	3679
05:00 PM	14	424	23	10	471	17	5	24	3	49	22	289	24	21	356	43	20	23	5	91	967
05:15 PM	12	482	15	16	525	23	12	19	2	56	20	274	12	21	327	41	19	29	6	95	1003
05:30 PM	13	399	19	19	450	13	4	20	5	42	25	329	17	25	396	26	19	38	7	90	978
05:45 PM	12	407	17	15	451	14	10	22	2	48	18	349	16	32	415	20	15	32	3	70	984
Total	51	1712	74	60	1897	67	31	85	12	195	85	1241	69	99	1494	130	73	122	21	346	3932
Grand Total	97	3371	78	112	3658	148	66	167	26	407	164	2426	155	172	2917	257	121	199	52	629	7611
Apprch %	2.7	92.2	2.1	3.1		36.4	16.2	41	6.4		5.6	83.2	5.3	5.9		40.9	19.2	31.6	8.3		
Total %	1.3	44.3	1	1.5	48.1	1.9	0.9	2.2	0.3	5.3	2.2	31.9	2	2.3	38.3	3.4	1.6	2.6	0.7	8.3	

	EL CAMINO REAL Southbound				CALIFORNIA AVE Westbound				EL CAMINO REAL Northbound				CALIFORNIA AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**14**	424	**23**	461	17	5	**24**	46	22	289	**24**	335	**43**	**20**	23	86	928
05:15 PM	12	**482**	15	**509**	**23**	**12**	19	**54**	20	274	12	306	41	19	29	**89**	**958**
05:30 PM	13	399	19	431	13	4	20	37	**25**	329	17	371	26	19	**38**	83	922
05:45 PM	12	407	17	436	14	10	22	46	18	**349**	16	**383**	20	15	32	67	932
Total Volume	51	1712	74	1837	67	31	85	183	85	1241	69	1395	130	73	122	325	3740
% App. Total	2.8	93.2	4		36.6	16.9	46.4		6.1	89	4.9		40	22.5	37.5		
PHF	.911	.888	.804	.902	.728	.646	.885	.847	.850	.889	.719	.911	.756	.913	.803	.913	.976

Traffic Data Service

San Jose, CA
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File Name : 13PM FINAL
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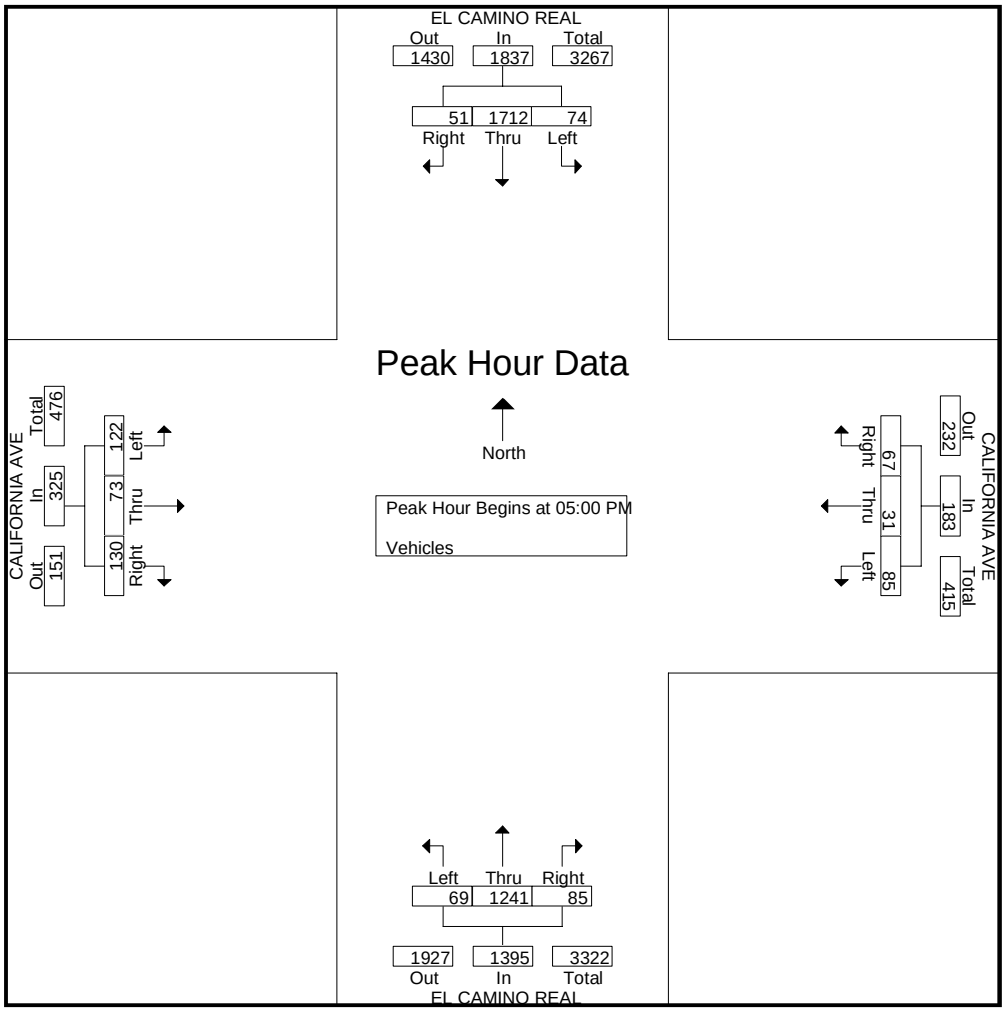


Oregon Expressway & Middlefield Rd - Intersection Volume Counts

Peak Period	Middlefield Rd			Middlefield Rd			Oregon Expressway			Oregon Expressway		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
PM	192	419	137	52	464	88	136	1110	223	207	1041	36

Notes

* Count date on November 1, 2018 from 5:15-6:15 PM

APPENDIX B

Existing Conditions

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

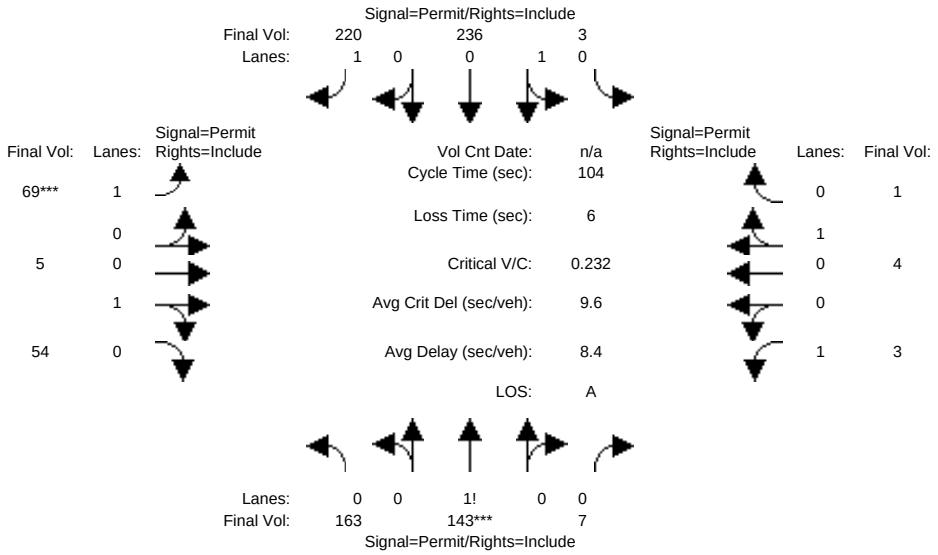
Summary Scenario Comparison Report (With Average Critical Delay)
Future Volume Alternative

Intersection		Existing AM				Existing + Project AM				Existing PM						Existing + Project PM			
		LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Crit V/C Change	Avg Crit Del (sec)	Avg Crit Del Change	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)
#1	Park Blvd/ Page Mill Rd	A	8.4	0.232	9.6	A	9.5	0.246	11.5	A	4.8	0.261	+ 0.015	5.0	- 6.5	A	5.6	0.281	6.6
#2	Park Blvd /Sherman Ave	B	2.2	0.041	2.2	B	2.2	0.041	2.2	B	3.0	0.138	+ 0.097	3.0	+ 0.9	B	3.0	0.139	3.0
#3	Birch St/ Sheridan Ave	D	3.6	0.192	3.6	D	4.5	0.214	4.5	C	4.2	0.208	- 0.006	4.2	- 0.3	C	4.5	0.240	4.5
#4	Birch St/ Grant Ave	B	12.2	0.606	12.2	B	13.0	0.640	13.0	A	9.1	0.385	- 0.254	9.1	- 3.9	A	9.2	0.400	9.2
#5	El Camino Real/ Page Mill Rd/ Oregon Expwy	D	50.3	0.897	55.6	D-	51.0	0.908	56.7	D	47.3	0.824	- 0.083	51.4	- 5.3	D	47.5	0.832	51.9
#6	El Camino Real/ Grant Ave	C	0.8	0.182	0.8	C	0.8	0.182	0.8	C	0.6	0.132	- 0.050	0.6	- 0.2	C	0.6	0.132	0.6
#7	El Camino Real/ California Ave	C+	22.0	0.456	19.0	C+	22.2	0.461	19.4	C	29.1	0.599	+ 0.138	29.2	+ 9.8	C	29.3	0.599	29.2
#8	Middlefield Rd/ Oregon Expwy	D	44.7	0.777	48.6	D	45.1	0.786	49.3	D	46.4	0.742	- 0.044	47.9	- 1.4	D	46.6	0.743	47.9
#9	Park Blvd/ Access#1	A	0.0	0.000	0.0	A	1.5	0.063	1.5	A	0.0	0.000	- 0.063	0.0	- 1.5	B	0.7	0.034	0.7

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1: Park Blvd/ Page Mill Rd



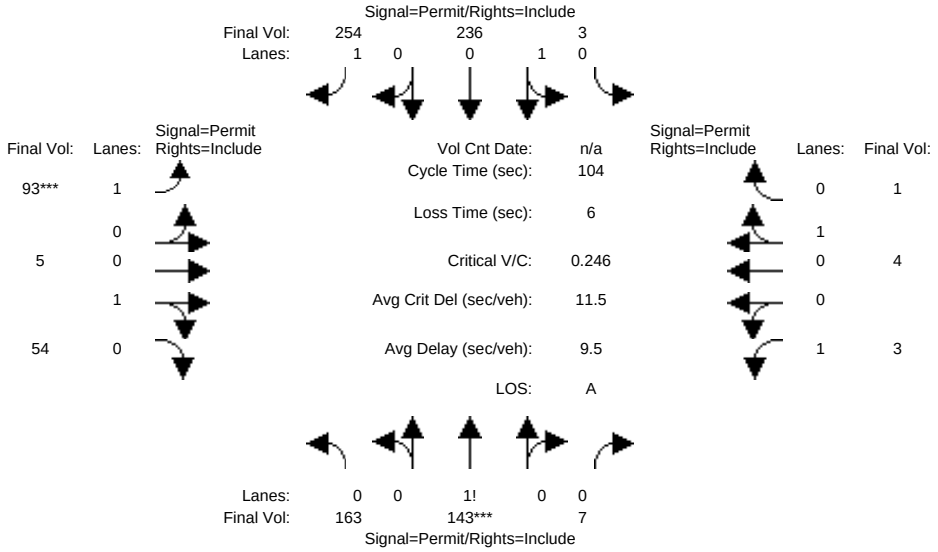
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	163	143	7	3	236	220	69	5	54	3	4	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:	163	143	7	3	236	220	69	5	54	3	4	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:	163	143	7	3	236	220	69	5	54	3	4	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:	163	143	7	3	236	220	69	5	54	3	4	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	143	7	3	236	220	69	5	54	3	4	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:	163	143	7	3	236	220	69	5	54	3	4	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.52	0.46	0.02	0.01	0.99	1.00	1.00	0.08	0.92	1.00	0.80	0.20
Final Sat.:	911	800	39	23	1777	1750	1750	153	1647	1750	1440	360
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.13	0.13	0.13	0.04	0.03	0.03	0.00	0.00	0.00
Crit Moves:		****					****					
Green Time:	80.3	80.3	80.3	80.3	80.3	80.3	17.7	17.7	17.7	17.7	17.7	17.7
Volume/Cap:	0.23	0.23	0.23	0.17	0.17	0.16	0.23	0.19	0.19	0.01	0.02	0.02
Delay/Veh:	3.4	3.4	3.4	3.2	3.2	3.1	37.7	37.3	37.3	35.9	35.9	35.9
User DelAdj:	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:	3.4	3.4	3.4	3.2	3.2	3.1	37.7	37.3	37.3	35.9	35.9	35.9
LOS by Move:	A	A	A	A	A	A	D+	D+	D+	D+	D+	D+
HCM2kAvgQ:	76	76	76	53	53	50	54	45	45	2	4	4

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project AM

Intersection #1: Park Blvd/ Page Mill Rd



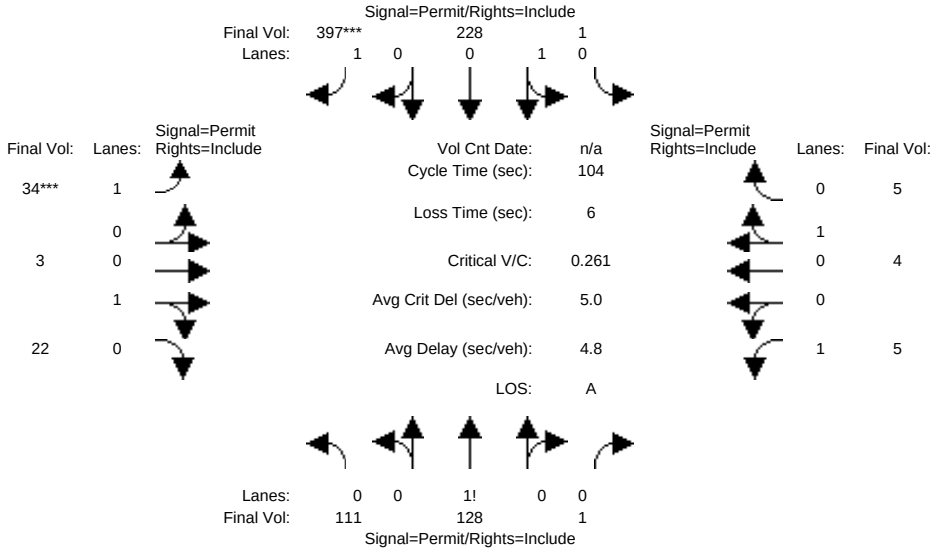
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	163	143	7	3	236	220	69	5	54	3	4	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:	163	143	7	3	236	220	69	5	54	3	4	1
Added Vol:	0	0	0	0	0	34	24	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	163	143	7	3	236	254	93	5	54	3	4	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:	163	143	7	3	236	254	93	5	54	3	4	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	143	7	3	236	254	93	5	54	3	4	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:	163	143	7	3	236	254	93	5	54	3	4	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.52	0.46	0.02	0.01	0.99	1.00	1.00	0.08	0.92	1.00	0.80	0.20
Final Sat.:	911	800	39	23	1777	1750	1750	153	1647	1750	1440	360
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.13	0.13	0.15	0.05	0.03	0.03	0.00	0.00	0.00
Crit Moves:		****					****					
Green Time:	75.6	75.6	75.6	75.6	75.6	75.6	22.4	22.4	22.4	22.4	22.4	22.4
Volume/Cap:	0.25	0.25	0.25	0.18	0.18	0.20	0.25	0.15	0.15	0.01	0.01	0.01
Delay/Veh:	4.8	4.8	4.8	4.6	4.6	4.6	34.1	33.2	33.2	32.0	32.1	32.1
User DelAdj:	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:	4.8	4.8	4.8	4.6	4.6	4.6	34.1	33.2	33.2	32.0	32.1	32.1
LOS by Move:	A	A	A	A	A	A	C-	C-	C-	C-	C-	C-
HCM2kAvgQ:	90	90	90	63	63	70	68	41	41	2	3	3

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #1: Park Blvd/ Page Mill Rd



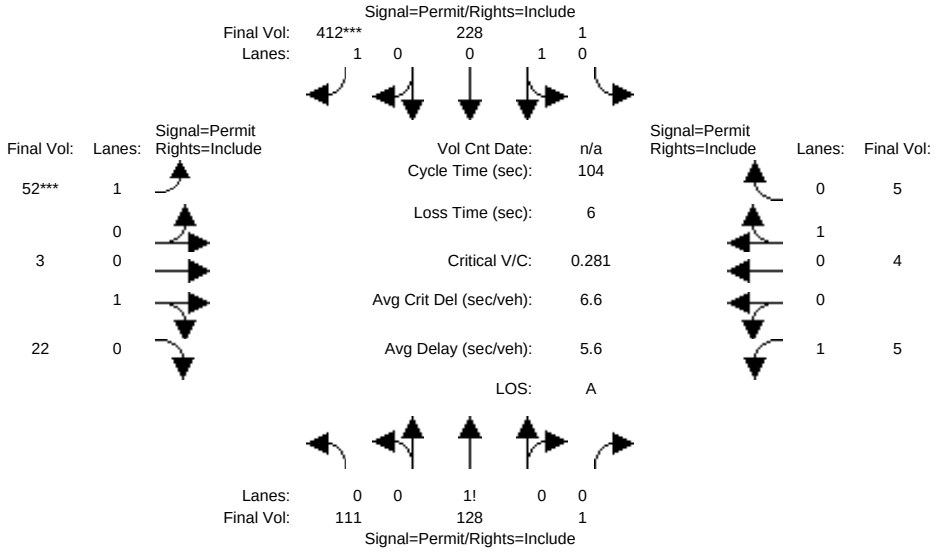
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	111	128	1	1	228	397	34	3	22	5	4	5
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:	111	128	1	1	228	397	34	3	22	5	4	5
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:	111	128	1	1	228	397	34	3	22	5	4	5
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:	111	128	1	1	228	397	34	3	22	5	4	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	128	1	1	228	397	34	3	22	5	4	5
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:	111	128	1	1	228	397	34	3	22	5	4	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.46	0.53	0.01	0.01	0.99	1.00	1.00	0.12	0.88	1.00	0.44	0.56
Final Sat.:	809	933	7	8	1792	1750	1750	216	1584	1750	800	1000
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.13	0.13	0.23	0.02	0.01	0.01	0.00	0.01	0.01
Crit Moves:						****	****					
Green Time:	88.0	88.0	88.0	88.0	88.0	88.0	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.16	0.16	0.16	0.15	0.15	0.27	0.20	0.14	0.14	0.03	0.05	0.05
Delay/Veh:	1.5	1.5	1.5	1.5	1.5	1.7	43.9	43.5	43.5	42.7	42.8	42.8
User DelAdj:	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:	1.5	1.5	1.5	1.5	1.5	1.7	43.9	43.5	43.5	42.7	42.8	42.8
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	38	38	38	35	35	71	31	22	22	4	8	8

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project PM

Intersection #1: Park Blvd/ Page Mill Rd



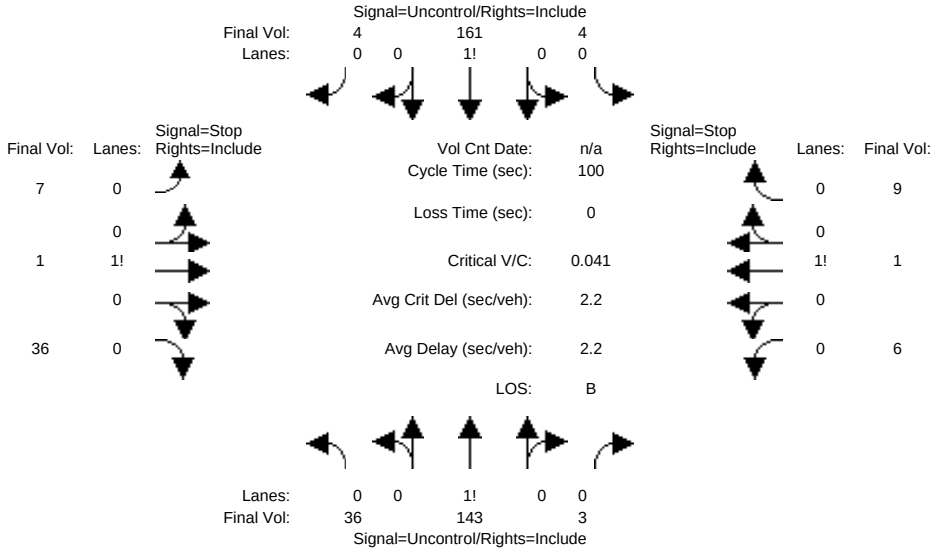
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	111	128	1	1	228	397	34	3	22	5	4	5
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:	111	128	1	1	228	397	34	3	22	5	4	5
Added Vol:	0	0	0	0	0	15	18	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	111	128	1	1	228	412	52	3	22	5	4	5
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:	111	128	1	1	228	412	52	3	22	5	4	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	128	1	1	228	412	52	3	22	5	4	5
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:	111	128	1	1	228	412	52	3	22	5	4	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.46	0.53	0.01	0.01	0.99	1.00	1.00	0.12	0.88	1.00	0.44	0.56
Final Sat.:	809	933	7	8	1792	1750	1750	216	1584	1750	800	1000
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.13	0.13	0.24	0.03	0.01	0.01	0.00	0.01	0.01
Crit Moves:						****	****					
Green Time:	87.0	87.0	87.0	87.0	87.0	87.0	11.0	11.0	11.0	11.0	11.0	11.0
Volume/Cap:	0.16	0.16	0.16	0.15	0.15	0.28	0.28	0.13	0.13	0.03	0.05	0.05
Delay/Veh:	1.7	1.7	1.7	1.6	1.6	1.9	43.7	42.5	42.5	41.8	41.9	41.9
User DelAdj:	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:	1.7	1.7	1.7	1.6	1.6	1.9	43.7	42.5	42.5	41.8	41.9	41.9
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	41	41	41	37	37	79	47	21	21	4	7	7

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	36	143	3	4	161	4	7	1	36	6	1	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:	36	143	3	4	161	4	7	1	36	6	1	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:	36	143	3	4	161	4	7	1	36	6	1	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:	36	143	3	4	161	4	7	1	36	6	1	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	36	143	3	4	161	4	7	1	36	6	1	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	165	xxxx	xxxxx	146	xxxx	xxxxx	393	389	163	406	390	145
Potent Cap.:	1426	xxxx	xxxxx	1448	xxxx	xxxxx	571	549	887	559	549	908
Move Cap.:	1426	xxxx	xxxxx	1448	xxxx	xxxxx	552	534	887	524	533	908
Volume/Cap:	0.03	xxxx	xxxx	0.00	xxxx	xxxx	0.01	0.00	0.04	0.01	0.00	0.01
Level Of Service Module:												
2Way95thQ:	1.9	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	798	xxxxx	xxxx	688	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx	xxxxx	10.4	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			9.8			10.4		
ApproachLOS:	*			*			A			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	36	143	3	4	161	4	7	1	36	6	1	9
ApproachDel:	xxxxxx			xxxxxx			9.8			10.4		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=411]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=411]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	36	143	3	4	161	4	7	1	36	6	1	9

Major Street Volume: 351
Minor Approach Volume: 44
Minor Approach Volume Threshold: 499

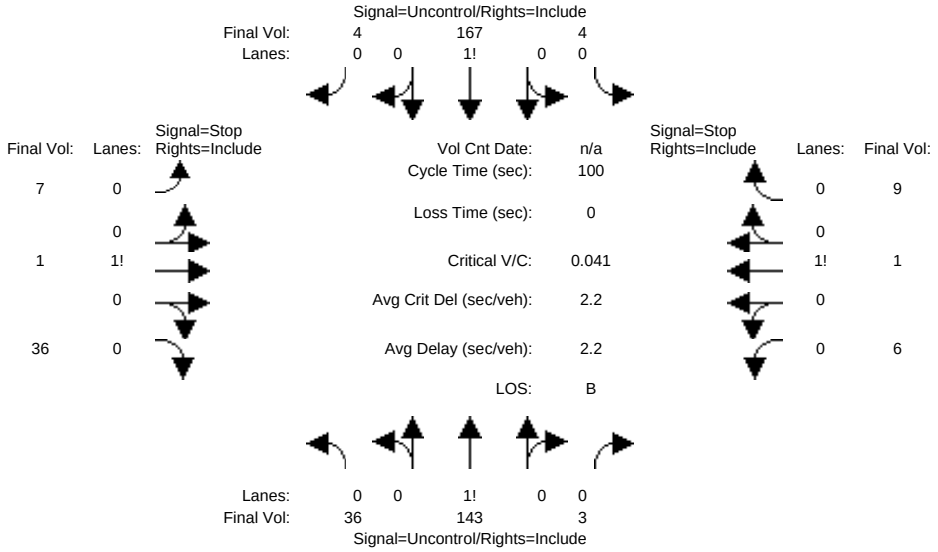
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing + Project AM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	36	143	3	4	161	4	7	1	36	6	1	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:	36	143	3	4	161	4	7	1	36	6	1	9
Added Vol:	0	0	0	0	6	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	143	3	4	167	4	7	1	36	6	1	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:	36	143	3	4	167	4	7	1	36	6	1	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	36	143	3	4	167	4	7	1	36	6	1	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	171	xxxx	xxxxx	146	xxxx	xxxxx	399	395	169	412	396	145
Potent Cap.:	1418	xxxx	xxxxx	1448	xxxx	xxxxx	565	545	880	554	545	908
Move Cap.:	1418	xxxx	xxxxx	1448	xxxx	xxxxx	547	529	880	519	529	908
Volume/Cap:	0.03	xxxx	xxxx	0.00	xxxx	xxxx	0.01	0.00	0.04	0.01	0.00	0.01
Level Of Service Module:												
2Way95thQ:	2.0	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	791	xxxxx	xxxx	685	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx	xxxxx	10.4	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			9.8			10.4		
ApproachLOS:	*			*			A			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	36	143	3	4	167	4	7	1	36	6	1	9
ApproachDel:	xxxxxx			xxxxxx			9.8			10.4		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=417]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=417]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	36	143	3	4	167	4	7	1	36	6	1	9

Major Street Volume: 357
Minor Approach Volume: 44
Minor Approach Volume Threshold: 494

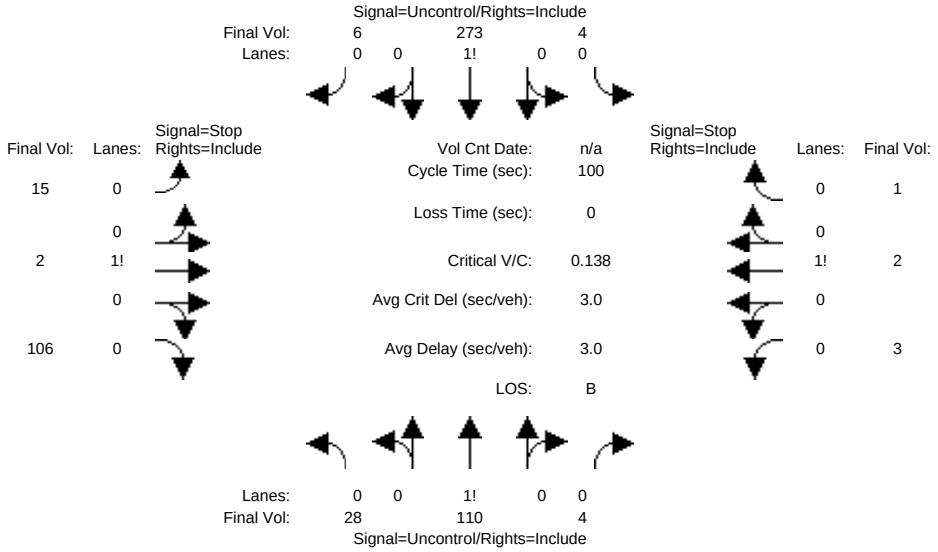
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #2: Park Blvd /Sherman Ave




```
Street Name:            Park Blvd                    Park Blvd /Sherman Ave
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      28  110     4     4  273     6    15    2   106     3    2     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:   28  110     4     4  273     6    15    2   106     3    2     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:   28  110     4     4  273     6    15    2   106     3    2     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:    28  110     4     4  273     6    15    2   106     3    2     1
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   28  110     4     4  273     6    15    2   106     3    2     1
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  279 xxxx xxxxx   114 xxxx xxxxx   454  454   276   506  455   112
Potent Cap.: 1295 xxxx xxxxx  1488 xxxx xxxxx   520  505   768   480  504   947
Move Cap.:   1295 xxxx xxxxx  1488 xxxx xxxxx   508  492   768   405  492   947
Volume/Cap:  0.02 xxxx  xxxx  0.00 xxxx  xxxx  0.03 0.00  0.14  0.01 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    1.7 xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.8 xxxx xxxxx   7.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  716 xxxxx  xxxx  479 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.6 xxxxx xxxxx  0.0 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.1 xxxxx xxxxx 12.6 xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx              11.1             12.6
ApproachLOS:         *                *                 B                B
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Park Blvd /Sherman Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	28	110	4	4	273	6	15	2	106	3	2	1
ApproachDel:	xxxxxx			xxxxxx			11.1			12.6		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=123]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=554]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=554]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	28	110	4	4	273	6	15	2	106	3	2	1

Major Street Volume: 425
Minor Approach Volume: 123
Minor Approach Volume Threshold: 448

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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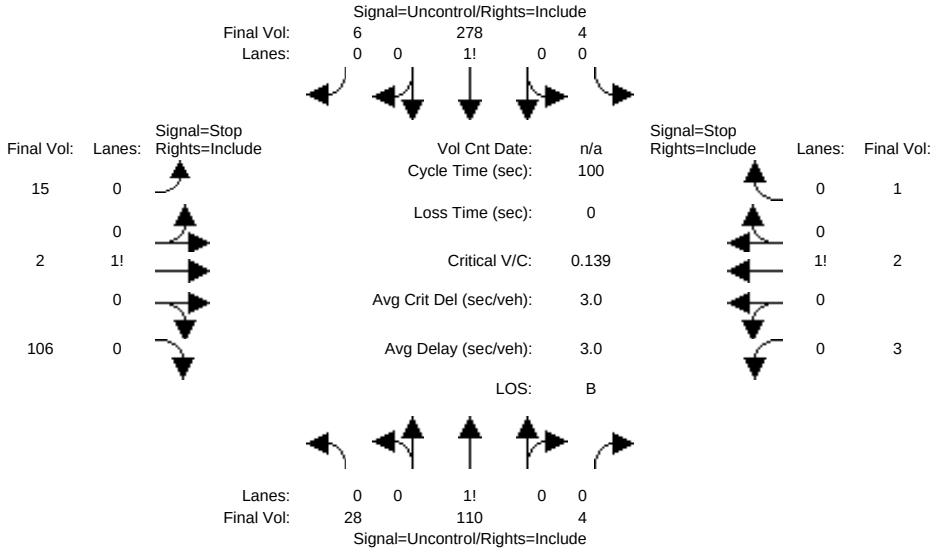
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing + Project PM

Intersection #2: Park Blvd /Sherman Ave




```
Street Name:            Park Blvd                    Park Blvd /Sherman Ave
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      28  110     4     4  273     6    15    2   106     3    2     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:   28  110     4     4  273     6    15    2   106     3    2     1
Added Vol:      0    0     0     0    5     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   28  110     4     4  278     6    15    2   106     3    2     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:    28  110     4     4  278     6    15    2   106     3    2     1
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   28  110     4     4  278     6    15    2   106     3    2     1
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  284 xxxx xxxxx   114 xxxx xxxxx   459  459   281   511  460   112
Potent Cap.: 1290 xxxx xxxxx  1488 xxxx xxxxx   516  502   763   476  501   947
Move Cap.:   1290 xxxx xxxxx  1488 xxxx xxxxx   504  489   763   401  489   947
Volume/Cap:  0.02 xxxx  xxxx  0.00 xxxx  xxxx  0.03 0.00  0.14  0.01 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    1.7 xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.9 xxxx xxxxx   7.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  712 xxxxx  xxxx  475 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.6 xxxxx xxxxx  0.0 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.1 xxxxx xxxxx 12.7 xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx              11.1             12.7
ApproachLOS:         *                *                 B                B
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Park Blvd /Sherman Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	28	110	4	4	278	6	15	2	106	3	2	1
ApproachDel:	xxxxxx			xxxxxx			11.1			12.7		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=123]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=559]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=559]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	28	110	4	4	278	6	15	2	106	3	2	1

Major Street Volume: 430
Minor Approach Volume: 123
Minor Approach Volume Threshold: 444

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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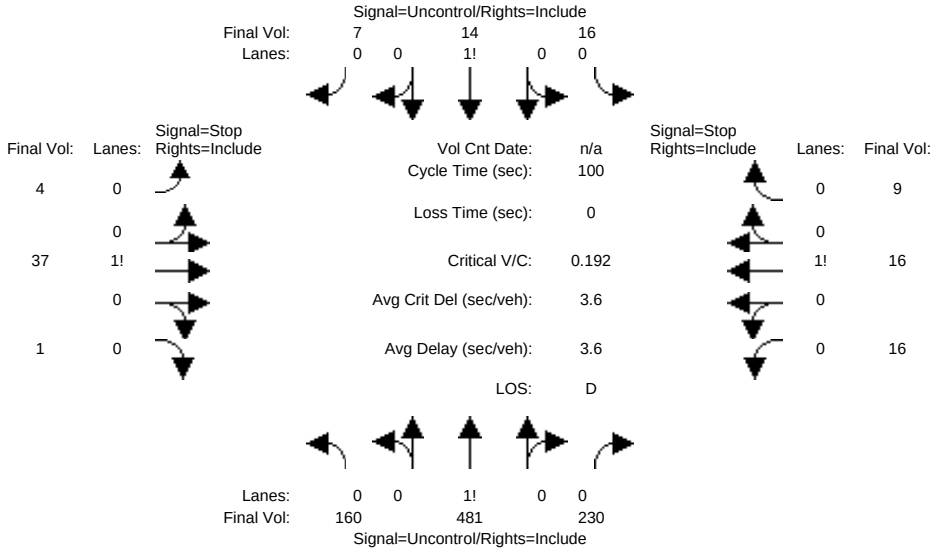
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	160	481	230	16	14	7	4	37	1	16	16	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:	160	481	230	16	14	7	4	37	1	16	16	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:	160	481	230	16	14	7	4	37	1	16	16	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:	160	481	230	16	14	7	4	37	1	16	16	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	160	481	230	16	14	7	4	37	1	16	16	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	21	xxxx	xxxxx	711	xxxx	xxxxx	978	1081	18	985	969	596
Potent Cap.:	1608	xxxx	xxxxx	898	xxxx	xxxxx	232	220	1067	229	256	507
Move Cap.:	1608	xxxx	xxxxx	898	xxxx	xxxxx	195	192	1067	177	224	507
Volume/Cap:	0.10	xxxx	xxxx	0.02	xxxx	xxxx	0.02	0.19	0.00	0.09	0.07	0.02
Level Of Service Module:												
2Way95thQ:	8.3	xxxx	xxxxx	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	9.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	196	xxxxx	xxxx	228	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.8	xxxxx	xxxxx	0.6	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	28.3	xxxxx	xxxxx	24.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	D	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			28.3			24.2		
ApproachLOS:	*			*			D			C		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	160	481	230	16	14	7	4	37	1	16	16	9
ApproachDel:	xxxxxx			xxxxxx			28.3			24.2		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=42]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=991]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=991]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	160	481	230	16	14	7	4	37	1	16	16	9

Major Street Volume: 908
Minor Approach Volume: 42
Minor Approach Volume Threshold: 245

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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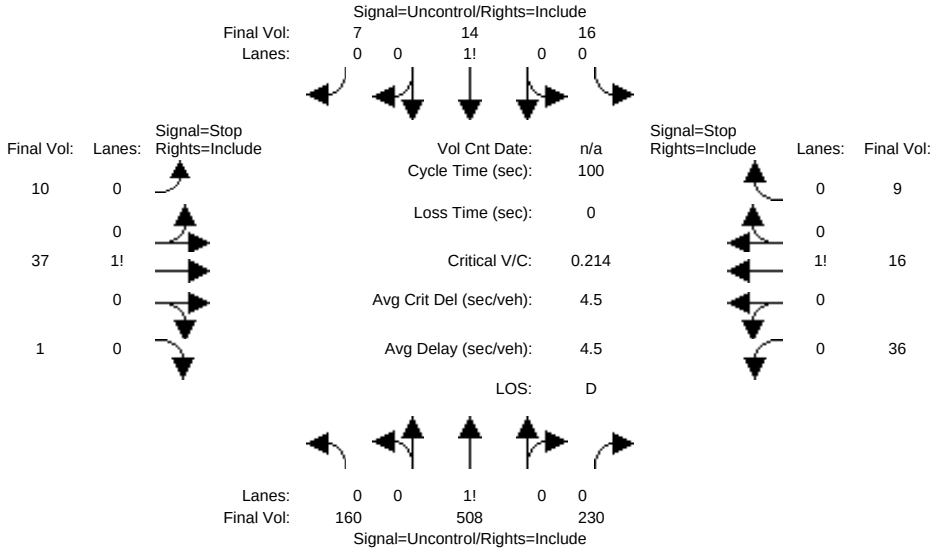
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing + Project AM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	160	481	230	16	14	7	4	37	1	16	16	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:	160	481	230	16	14	7	4	37	1	16	16	9
Added Vol:	0	27	0	0	0	0	6	0	0	20	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	160	508	230	16	14	7	10	37	1	36	16	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:	160	508	230	16	14	7	10	37	1	36	16	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	160	508	230	16	14	7	10	37	1	36	16	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	21	xxxx	xxxxx	738	xxxx	xxxxx	1005	1108	18	1012	996	623
Potent Cap.:	1608	xxxx	xxxxx	877	xxxx	xxxxx	222	212	1067	220	246	490
Move Cap.:	1608	xxxx	xxxxx	877	xxxx	xxxxx	186	185	1067	169	215	490
Volume/Cap:	0.10	xxxx	xxxx	0.02	xxxx	xxxx	0.05	0.20	0.00	0.21	0.07	0.02
Level Of Service Module:												
2Way95thQ:	8.3	xxxx	xxxxx	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	189	xxxxx	xxxx	199	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.0	xxxxx	xxxxx	1.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	30.5	xxxxx	xxxxx	30.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	D	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			30.5			30.9		
ApproachLOS:	*			*			D			D		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	160	508	230	16	14	7	10	37	1	36	16	9
ApproachDel:	xxxxxx			xxxxxx			30.5			30.9		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=48]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1044]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=61]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1044]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	160	508	230	16	14	7	10	37	1	36	16	9

Major Street Volume: 935
Minor Approach Volume: 61
Minor Approach Volume Threshold: 237

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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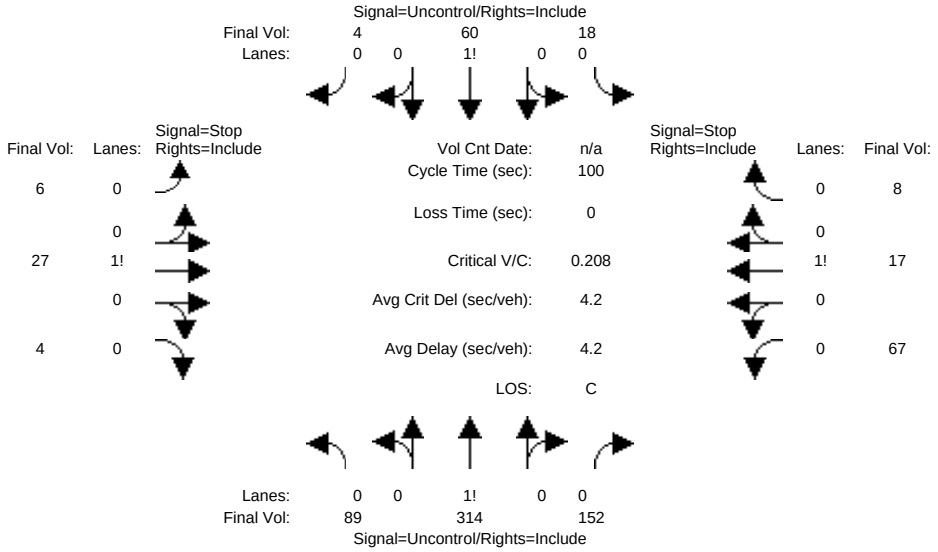
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	89	314	152	18	60	4	6	27	4	67	17	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:	89	314	152	18	60	4	6	27	4	67	17	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:	89	314	152	18	60	4	6	27	4	67	17	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:	89	314	152	18	60	4	6	27	4	67	17	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	89	314	152	18	60	4	6	27	4	67	17	8
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	64	xxxx	xxxxx	466	xxxx	xxxxx	679	742	62	682	668	390
Potent Cap.:	1551	xxxx	xxxxx	1106	xxxx	xxxxx	369	346	1009	367	382	663
Move Cap.:	1551	xxxx	xxxxx	1106	xxxx	xxxxx	331	320	1009	322	353	663
Volume/Cap:	0.06	xxxx	xxxx	0.02	xxxx	xxxx	0.02	0.08	0.00	0.21	0.05	0.01
Level Of Service Module:												
2Way95thQ:	4.6	xxxx	xxxxx	1.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	347	xxxxx	xxxx	343	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	1.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	16.6	xxxxx	xxxxx	19.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			16.6			19.3		
ApproachLOS:	*			*			C			C		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	89	314	152	18	60	4	6	27	4	67	17	8
ApproachDel:	xxxxxx			xxxxxx			16.6			19.3		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=37]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=766]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=92]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=766]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	89	314	152	18	60	4	6	27	4	67	17	8

Major Street Volume: 637
Minor Approach Volume: 92
Minor Approach Volume Threshold: 340

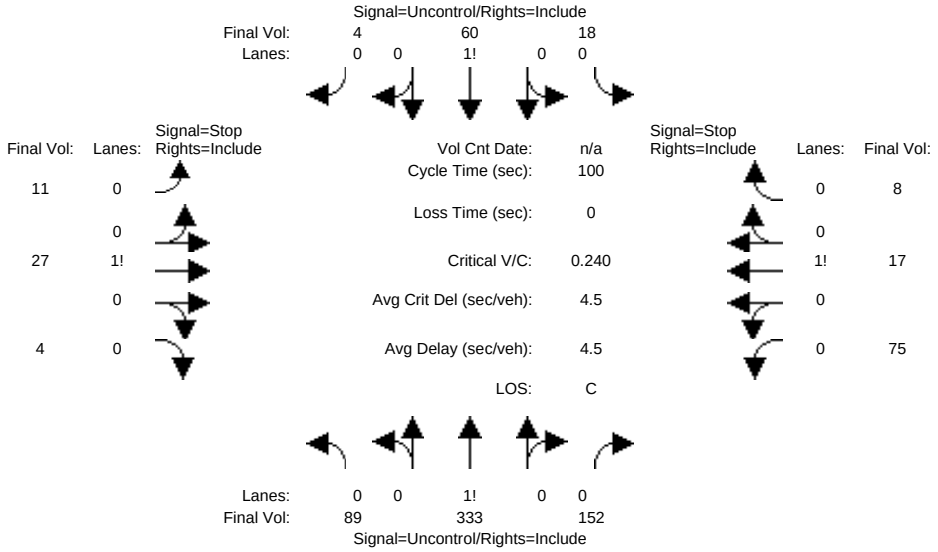
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing + Project PM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	89	314	152	18	60	4	6	27	4	67	17	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:	89	314	152	18	60	4	6	27	4	67	17	8
Added Vol:	0	19	0	0	0	0	5	0	0	8	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	89	333	152	18	60	4	11	27	4	75	17	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:	89	333	152	18	60	4	11	27	4	75	17	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	89	333	152	18	60	4	11	27	4	75	17	8
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	64	xxxx	xxxxx	485	xxxx	xxxxx	698	761	62	701	687	409
Potent Cap.:	1551	xxxx	xxxxx	1088	xxxx	xxxxx	358	337	1009	356	372	647
Move Cap.:	1551	xxxx	xxxxx	1088	xxxx	xxxxx	321	312	1009	312	344	647
Volume/Cap:	0.06	xxxx	xxxx	0.02	xxxx	xxxx	0.03	0.09	0.00	0.24	0.05	0.01
Level Of Service Module:												
2Way95thQ:	4.6	xxxx	xxxxx	1.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	336	xxxxx	xxxx	331	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	1.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	17.2	xxxxx	xxxxx	20.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			17.2			20.5		
ApproachLOS:	*			*			C			C		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	89	333	152	18	60	4	11	27	4	75	17	8
ApproachDel:	xxxxxx			xxxxxx			17.2			20.5		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=42]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=798]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=100]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=798]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	89	333	152	18	60	4	11	27	4	75	17	8

Major Street Volume: 656
Minor Approach Volume: 100
Minor Approach Volume Threshold: 332

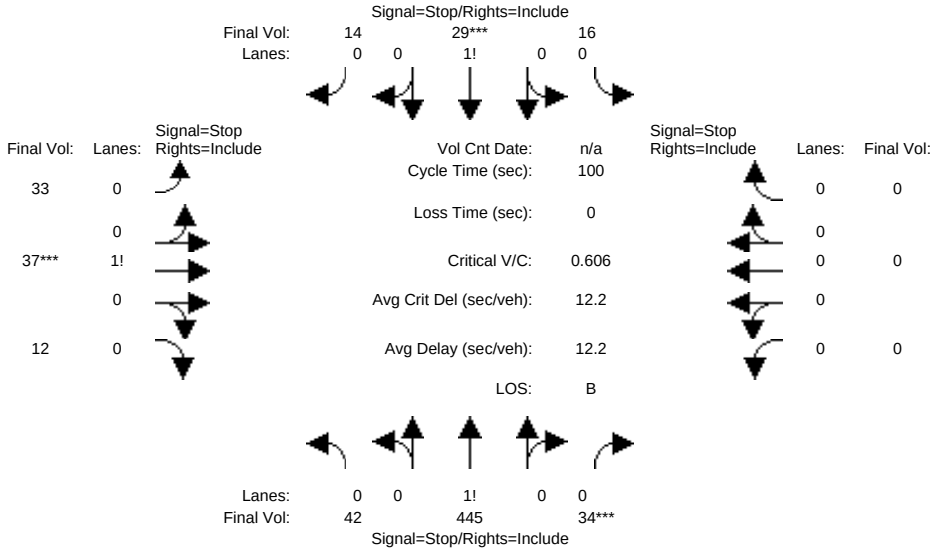
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing AM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	42	445	34	16	29	14	33	37	12	0	0	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:	42	445	34	16	29	14	33	37	12	0	0	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:	42	445	34	16	29	14	33	37	12	0	0	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:	42	445	34	16	29	14	33	37	12	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	445	34	16	29	14	33	37	12	0	0	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:	42	445	34	16	29	14	33	37	12	0	0	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:	0.08	0.85	0.07	0.27	0.49	0.24	0.40	0.45	0.15	0.00	0.00	0.00
Final Sat.:	69	735	56	208	378	182	261	293	95	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.61	0.61	0.61	0.08	0.08	0.08	0.13	0.13	0.13	xxxx	xxxx	xxxx
Crit Moves:			****		****			****				
Delay/Veh:	13.2	13.2	13.2	7.9	7.9	7.9	8.7	8.7	8.7	0.0	0.0	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:	13.2	13.2	13.2	7.9	7.9	7.9	8.7	8.7	8.7	0.0	0.0	0.0
LOS by Move:	B	B	B	A	A	A	A	A	A	*	*	*
ApproachDel:	13.2			7.9			8.7			xxxxxx		
Delay Adj:	1.00			1.00			1.00			xxxxx		
ApprAdjDel:	13.2			7.9			8.7			xxxxxx		
LOS by Appr:	B			A			A			*		
AllWayAvgQ:	36.1	36.1	36.1	1.9	1.9	1.9	3.0	3.0	3.0	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 0 0	0	
Initial Vol:	42	445	34	16	29	14	33	37	12	0	0	0

Major Street Volume: 580
Minor Approach Volume: 82
Minor Approach Volume Threshold: 365

SIGNAL WARRANT DISCLAIMER

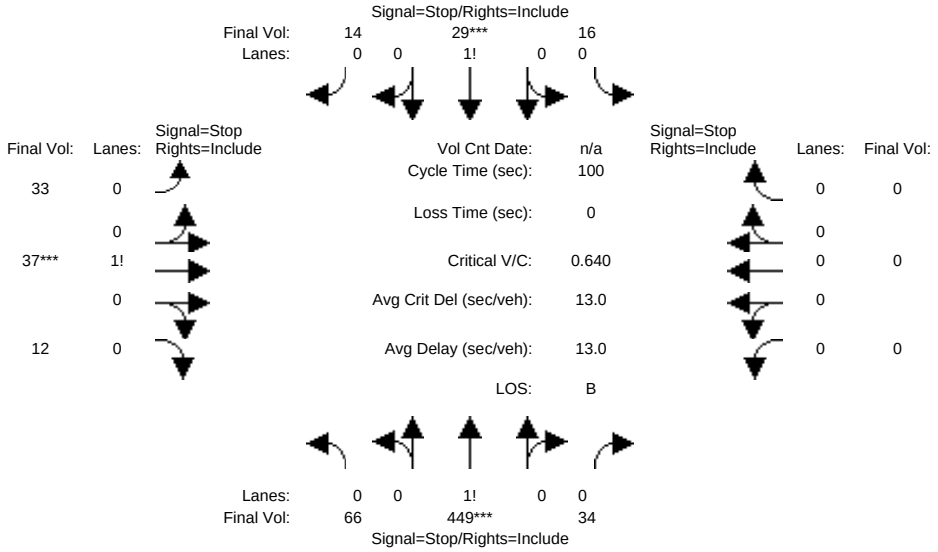
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing + Project AM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	42	445	34	16	29	14	33	37	12	0	0	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:	42	445	34	16	29	14	33	37	12	0	0	0
Added Vol:	24	4	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:	66	449	34	16	29	14	33	37	12	0	0	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:	66	449	34	16	29	14	33	37	12	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	449	34	16	29	14	33	37	12	0	0	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:	66	449	34	16	29	14	33	37	12	0	0	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:	0.12	0.82	0.06	0.27	0.49	0.24	0.40	0.45	0.15	0.00	0.00	0.00
Final Sat.:	103	702	53	207	375	181	258	289	94	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.64	0.64	0.64	0.08	0.08	0.08	0.13	0.13	0.13	xxxx	xxxx	xxxx
Crit Moves:		****			****			****				
Delay/Veh:	14.1	14.1	14.1	7.9	7.9	7.9	8.8	8.8	8.8	0.0	0.0	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:	14.1	14.1	14.1	7.9	7.9	7.9	8.8	8.8	8.8	0.0	0.0	0.0
LOS by Move:	B	B	B	A	A	A	A	A	A	*	*	*
ApproachDel:		14.1			7.9			8.8			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		14.1			7.9			8.8			xxxxxx	
LOS by Appr:		B			A			A			*	
AllWayAvgQ:	41.5	41.5	41.5	1.9	1.9	1.9	3.0	3.0	3.0	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	66	449	34	16	29	14	33	37	12	0	0	0

Major Street Volume: 608
Minor Approach Volume: 82
Minor Approach Volume Threshold: 352

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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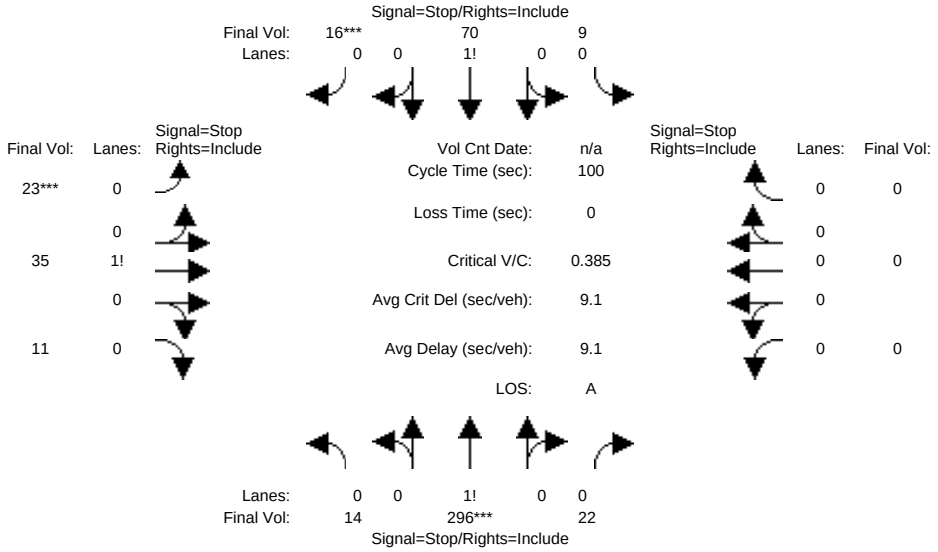
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing PM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	14	296	22	9	70	16	23	35	11	0	0	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:	14	296	22	9	70	16	23	35	11	0	0	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:	14	296	22	9	70	16	23	35	11	0	0	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:	14	296	22	9	70	16	23	35	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	296	22	9	70	16	23	35	11	0	0	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:	14	296	22	9	70	16	23	35	11	0	0	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:	0.04	0.89	0.07	0.09	0.74	0.17	0.33	0.51	0.16	0.00	0.00	0.00
Final Sat.:	36	768	57	77	601	137	236	359	113	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.39	0.39	0.39	0.12	0.12	0.12	0.10	0.10	0.10	xxxx	xxxx	xxxx
Crit Moves:		****				****	****					
Delay/Veh:	9.6	9.6	9.6	7.8	7.8	7.8	8.2	8.2	8.2	0.0	0.0	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:	9.6	9.6	9.6	7.8	7.8	7.8	8.2	8.2	8.2	0.0	0.0	0.0
LOS by Move:	A	A	A	A	A	A	A	A	A	*	*	*
ApproachDel:		9.6			7.8			8.2			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		9.6			7.8			8.2			xxxxxx	
LOS by Appr:		A			A			A			*	
AllWayAvgQ:	15.1	15.1	15.1	3.1	3.1	3.1	2.3	2.3	2.3	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	14	296	22	9	70	16	23	35	11	0	0	0

Major Street Volume: 427
Minor Approach Volume: 69
Minor Approach Volume Threshold: 446

SIGNAL WARRANT DISCLAIMER

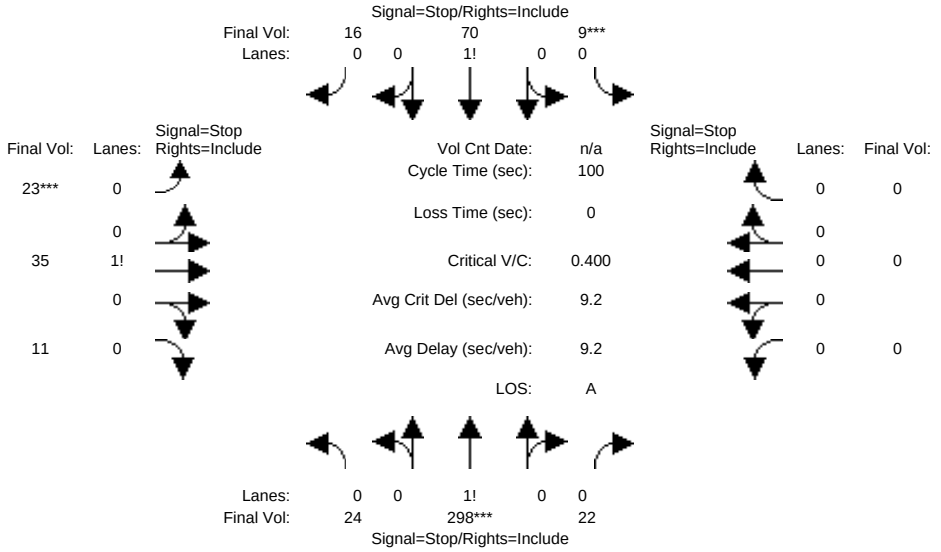
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing + Project PM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	14	296	22	9	70	16	23	35	11	0	0	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:	14	296	22	9	70	16	23	35	11	0	0	0
Added Vol:	10	2	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:	24	298	22	9	70	16	23	35	11	0	0	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:	24	298	22	9	70	16	23	35	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	298	22	9	70	16	23	35	11	0	0	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:	24	298	22	9	70	16	23	35	11	0	0	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:	0.07	0.87	0.06	0.09	0.74	0.17	0.33	0.51	0.16	0.00	0.00	0.00
Final Sat.:	60	745	55	77	599	137	234	357	112	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.40	0.40	0.40	0.12	0.12	0.12	0.10	0.10	0.10	xxxx	xxxx	xxxx
Crit Moves:		****			****			****				
Delay/Veh:	9.8	9.8	9.8	7.9	7.9	7.9	8.2	8.2	8.2	0.0	0.0	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:	9.8	9.8	9.8	7.9	7.9	7.9	8.2	8.2	8.2	0.0	0.0	0.0
LOS by Move:	A	A	A	A	A	A	A	A	A	*	*	*
ApproachDel:		9.8			7.9			8.2			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		9.8			7.9			8.2			xxxxxx	
LOS by Appr:		A			A			A			*	
AllWayAvgQ:	16.0	16.0	16.0	3.1	3.1	3.1	2.3	2.3	2.3	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	24	298	22	9	70	16	23	35	11	0	0	0

Major Street Volume: 439
Minor Approach Volume: 69
Minor Approach Volume Threshold: 439

SIGNAL WARRANT DISCLAIMER

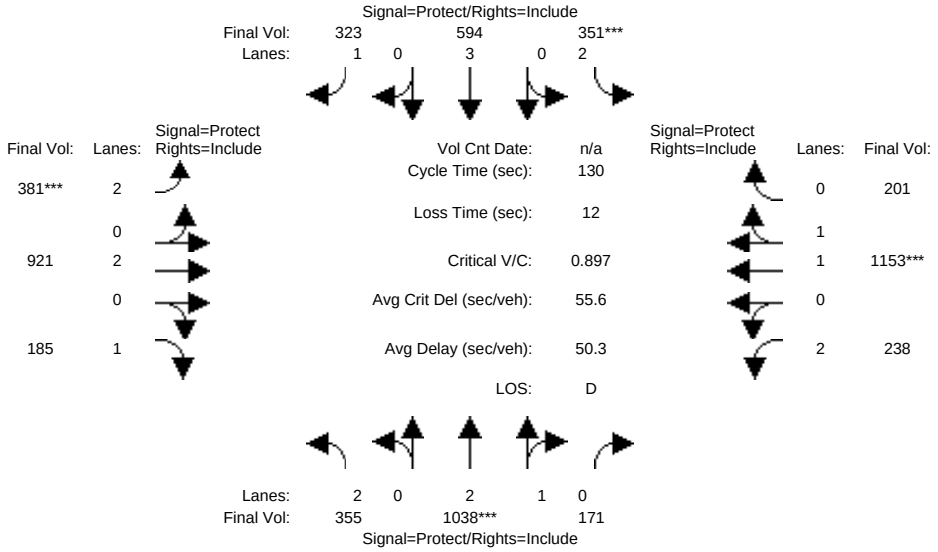
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



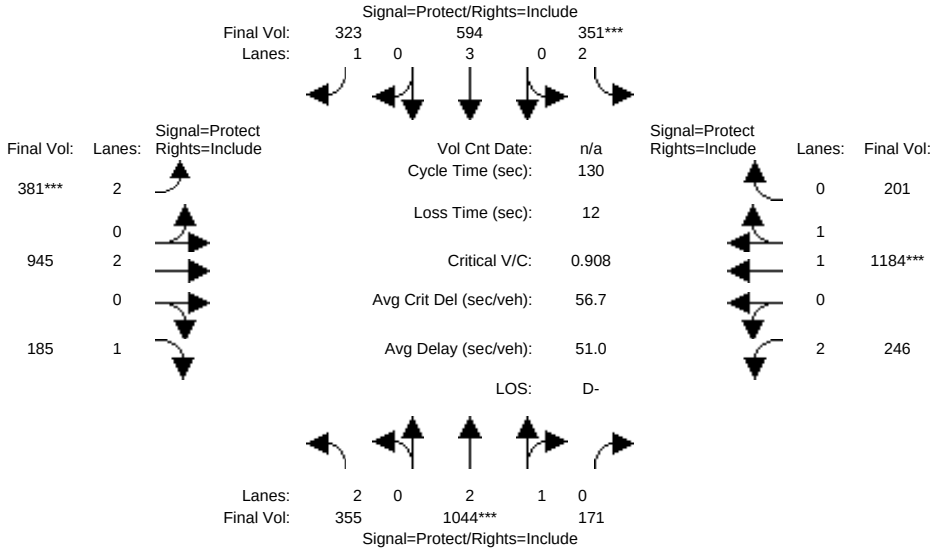
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	355	1038	171	351	594	323	381	921	185	238	1153	201
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:	355	1038	171	351	594	323	381	921	185	238	1153	201
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:	355	1038	171	351	594	323	381	921	185	238	1153	201
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:	355	1038	171	351	594	323	381	921	185	238	1153	201
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	355	1038	171	351	594	323	381	921	185	238	1153	201
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:	355	1038	171	351	594	323	381	921	185	238	1153	201
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.56	0.44	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.69	0.31
Final Sat.:	3150	4807	792	3150	5700	1750	3150	3800	1750	3150	3150	549
Capacity Analysis Module:												
Vol/Sat:	0.11	0.22	0.22	0.11	0.10	0.18	0.12	0.24	0.11	0.08	0.37	0.37
Crit Moves:		****		****			****				****	
Green Time:	18.0	31.3	31.3	16.1	29.5	29.5	17.5	53.8	53.8	16.8	53.0	53.0
Volume/Cap:	0.81	0.90	0.90	0.90	0.46	0.81	0.90	0.59	0.26	0.59	0.90	0.90
Delay/Veh:	65.6	56.1	56.1	78.6	43.7	59.9	76.5	30.1	25.2	55.6	43.4	43.4
User DelAdj:	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:	65.6	56.1	56.1	78.6	43.7	59.9	76.5	30.1	25.2	55.6	43.4	43.4
LOS by Move:	E	E+	E+	E-	D	E+	E-	C	C	E+	D	D
HCM2kAvgQ:	262	479	479	285	175	383	303	356	127	154	726	726

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project AM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



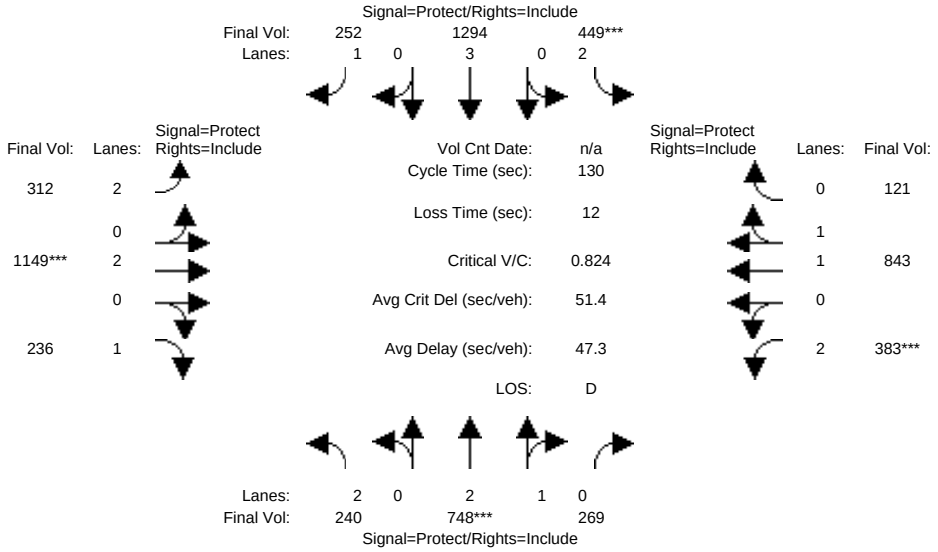
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	355	1038	171	351	594	323	381	921	185	238	1153	201
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:	355	1038	171	351	594	323	381	921	185	238	1153	201
Added Vol:	0	6	0	0	0	0	0	24	0	8	31	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	355	1044	171	351	594	323	381	945	185	246	1184	201
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:	355	1044	171	351	594	323	381	945	185	246	1184	201
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	355	1044	171	351	594	323	381	945	185	246	1184	201
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:	355	1044	171	351	594	323	381	945	185	246	1184	201
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.56	0.44	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.70	0.30
Final Sat.:	3150	4811	788	3150	5700	1750	3150	3800	1750	3150	3163	537
Capacity Analysis Module:												
Vol/Sat:	0.11	0.22	0.22	0.11	0.10	0.18	0.12	0.25	0.11	0.08	0.37	0.37
Crit Moves:		****		****			****				****	
Green Time:	17.8	31.1	31.1	16.0	29.2	29.2	17.3	54.0	54.0	17.0	53.6	53.6
Volume/Cap:	0.82	0.91	0.91	0.91	0.46	0.82	0.91	0.60	0.25	0.60	0.91	0.91
Delay/Veh:	66.4	57.3	57.3	80.8	43.9	60.9	78.6	30.2	25.0	55.8	44.1	44.1
User DelAdj:	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:	66.4	57.3	57.3	80.8	43.9	60.9	78.6	30.2	25.0	55.8	44.1	44.1
LOS by Move:	E	E+	E+	F	D	E	E-	C	C	E+	D	D
HCM2kAvgQ:	264	487	487	288	176	386	307	368	127	160	751	751

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



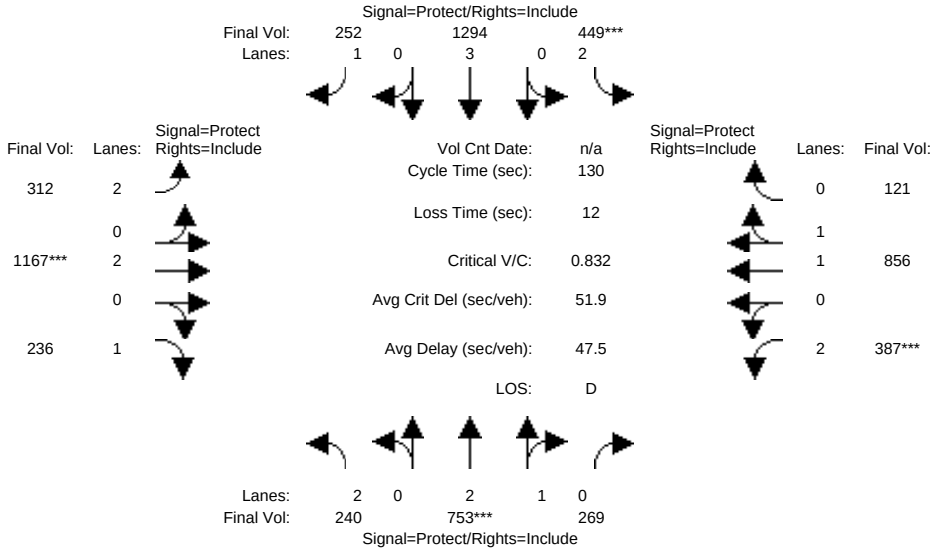
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	240	748	269	449	1294	252	312	1149	236	383	843	121
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:	240	748	269	449	1294	252	312	1149	236	383	843	121
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:	240	748	269	449	1294	252	312	1149	236	383	843	121
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:	240	748	269	449	1294	252	312	1149	236	383	843	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	240	748	269	449	1294	252	312	1149	236	383	843	121
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:	240	748	269	449	1294	252	312	1149	236	383	843	121
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.18	0.82	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.74	0.26
Final Sat.:	3150	4117	1481	3150	5700	1750	3150	3800	1750	3150	3235	464
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.18	0.14	0.23	0.14	0.10	0.30	0.13	0.12	0.26	0.26
Crit Moves:		****		****				****		****		
Green Time:	12.8	28.7	28.7	22.5	38.3	38.3	18.4	47.7	47.7	19.2	48.4	48.4
Volume/Cap:	0.77	0.82	0.82	0.82	0.77	0.49	0.70	0.82	0.37	0.82	0.70	0.70
Delay/Veh:	68.3	52.9	52.9	61.8	44.1	38.5	58.0	41.5	30.5	65.2	36.2	36.2
User DelAdj:	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:	68.3	52.9	52.9	61.8	44.1	38.5	58.0	41.5	30.5	65.2	36.2	36.2
LOS by Move:	E	D-	D-	E	D	D+	E+	D	C	E	D+	D+
HCM2kAvgQ:	186	382	382	317	427	227	211	565	184	280	433	433

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project PM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



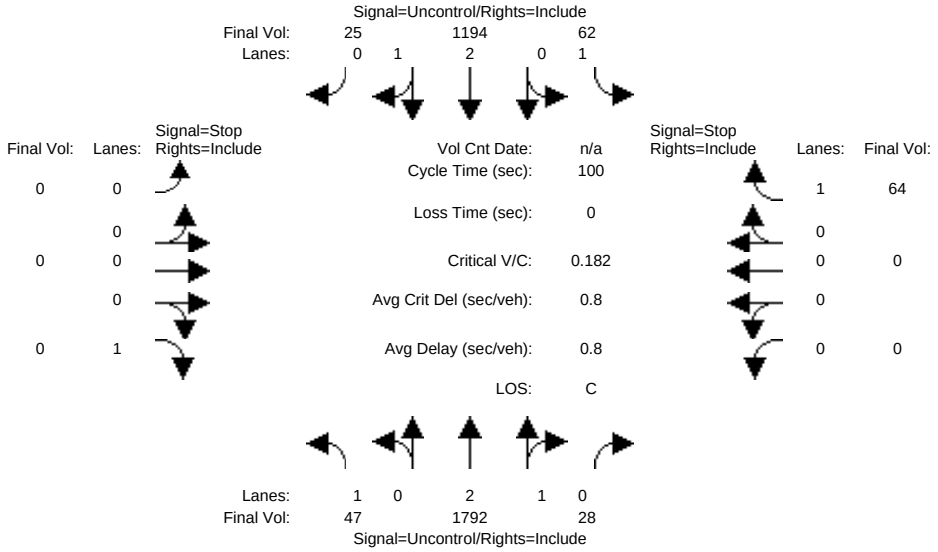
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	240	748	269	449	1294	252	312	1149	236	383	843	121
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:	240	748	269	449	1294	252	312	1149	236	383	843	121
Added Vol:	0	5	0	0	0	0	0	18	0	4	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	240	753	269	449	1294	252	312	1167	236	387	856	121
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:	240	753	269	449	1294	252	312	1167	236	387	856	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	240	753	269	449	1294	252	312	1167	236	387	856	121
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:	240	753	269	449	1294	252	312	1167	236	387	856	121
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.18	0.82	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.75	0.25
Final Sat.:	3150	4124	1473	3150	5700	1750	3150	3800	1750	3150	3241	458
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.18	0.14	0.23	0.14	0.10	0.31	0.13	0.12	0.26	0.26
Crit Moves:		****		****				****		****		
Green Time:	12.8	28.5	28.5	22.3	38.0	38.0	18.3	48.0	48.0	19.2	48.9	48.9
Volume/Cap:	0.78	0.83	0.83	0.83	0.78	0.49	0.70	0.83	0.37	0.83	0.70	0.70
Delay/Veh:	68.9	53.4	53.4	62.6	44.4	38.7	58.3	41.7	30.3	65.9	36.0	36.0
User DelAdj:	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:	68.9	53.4	53.4	62.6	44.4	38.7	58.3	41.7	30.3	65.9	36.0	36.0
LOS by Move:	E	D-	D-	E	D	D+	E+	D	C	E	D+	D+
HCM2kAvgQ:	187	387	387	319	429	228	211	577	183	285	439	439

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	47	1792	28	62	1194	25	0	0	0	0	0	64
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	1792	28	62	1194	25	0	0	0	0	0	64
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	1792	28	62	1194	25	0	0	0	0	0	64
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	1792	28	62	1194	25	0	0	0	0	0	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	47	1792	28	62	1194	25	0	0	0	0	0	64
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	1219	xxxx	xxxxx	1820	xxxx	xxxxx	xxxx	xxxx	411	xxxx	xxxx	611
Potent Cap.:	579	xxxx	xxxxx	341	xxxx	xxxxx	xxxx	xxxx	596	xxxx	xxxx	442
Move Cap.:	579	xxxx	xxxxx	341	xxxx	xxxxx	xxxx	xxxx	596	xxxx	xxxx	442
Volume/Cap:	0.08	xxxx	xxxx	0.18	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.14

Level Of Service Module:												
2Way95thQ:	6.6	xxxx	xxxxx	16.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	12.6
Control Del:	11.8	xxxx	xxxxx	17.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.5
LOS by Move:	B	*	*	C	*	*	*	*	*	*	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.5		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	47 1792	28		62 1194	25		0 0	0		0 0	64	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.5		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3212]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	47 1792	28		62 1194	25		0 0	0		0 0	64	

Major Street Volume: 3148
Minor Approach Volume: 64
Minor Approach Volume Threshold: -110 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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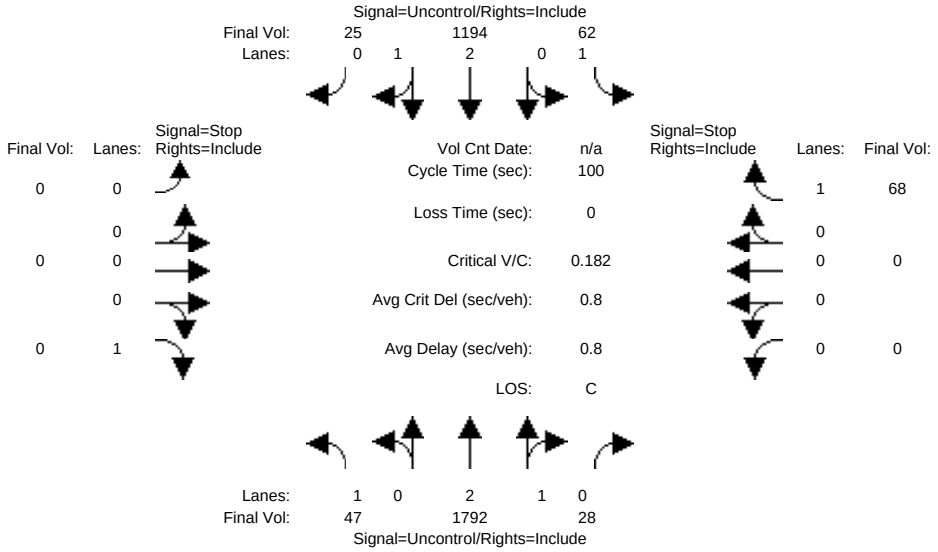
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing + Project AM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	47	1792	28	62	1194	25	0	0	0	0	0	64
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	1792	28	62	1194	25	0	0	0	0	0	64
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	1792	28	62	1194	25	0	0	0	0	0	68
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	1792	28	62	1194	25	0	0	0	0	0	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	47	1792	28	62	1194	25	0	0	0	0	0	68
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	1219	xxxx	xxxxx	1820	xxxx	xxxxx	xxxx	xxxx	411	xxxx	xxxx	611
Potent Cap.:	579	xxxx	xxxxx	341	xxxx	xxxxx	xxxx	xxxx	596	xxxx	xxxx	442
Move Cap.:	579	xxxx	xxxxx	341	xxxx	xxxxx	xxxx	xxxx	596	xxxx	xxxx	442
Volume/Cap:	0.08	xxxx	xxxx	0.18	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.15
Level Of Service Module:												
2Way95thQ:	6.6	xxxx	xxxxx	16.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	13.5
Control Del:	11.8	xxxx	xxxxx	17.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.6
LOS by Move:	B	*	*	C	*	*	*	*	*	*	*	B
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.6		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 0 0 1			0 0 0 0 1		
Initial Vol:	47	1792	28	62	1194	25	0	0	0	0	0	68
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.6		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=68]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3216]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 0 0 1			0 0 0 0 1		
Initial Vol:	47	1792	28	62	1194	25	0	0	0	0	0	68

Major Street Volume: 3148
Minor Approach Volume: 68
Minor Approach Volume Threshold: -110 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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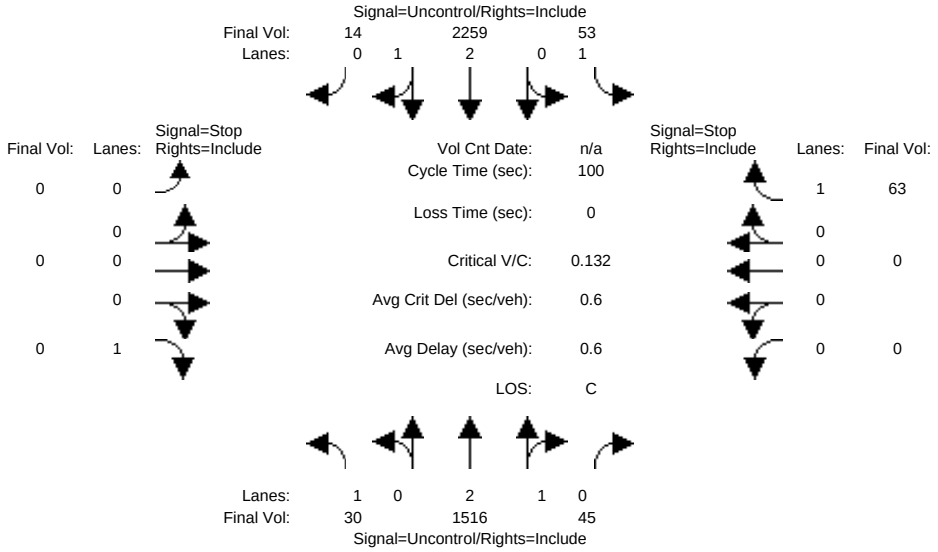
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	30	1516	45	53	2259	14	0	0	0	0	0	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:	30	1516	45	53	2259	14	0	0	0	0	0	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:	30	1516	45	53	2259	14	0	0	0	0	0	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:	30	1516	45	53	2259	14	0	0	0	0	0	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	30	1516	45	53	2259	14	0	0	0	0	0	63
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	2273	xxxx	xxxxx	1561	xxxx	xxxxx	xxxx	xxxx	760	xxxx	xxxx	528
Potent Cap.:	227	xxxx	xxxxx	429	xxxx	xxxxx	xxxx	xxxx	353	xxxx	xxxx	500
Move Cap.:	227	xxxx	xxxxx	429	xxxx	xxxxx	xxxx	xxxx	353	xxxx	xxxx	500
Volume/Cap:	0.13	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.13
Level Of Service Module:												
2Way95thQ:	11.2	xxxx	xxxxx	10.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	10.7
Control Del:	23.2	xxxx	xxxxx	14.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.2
LOS by Move:	C	*	*	B	*	*	*	*	*	*	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.2		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	30 1516	45		53 2259	14		0	0	0	0	0	63
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.2		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=63]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3980]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	30 1516	45		53 2259	14		0	0	0	0	0	63

Major Street Volume: 3917
Minor Approach Volume: 63
Minor Approach Volume Threshold: -186 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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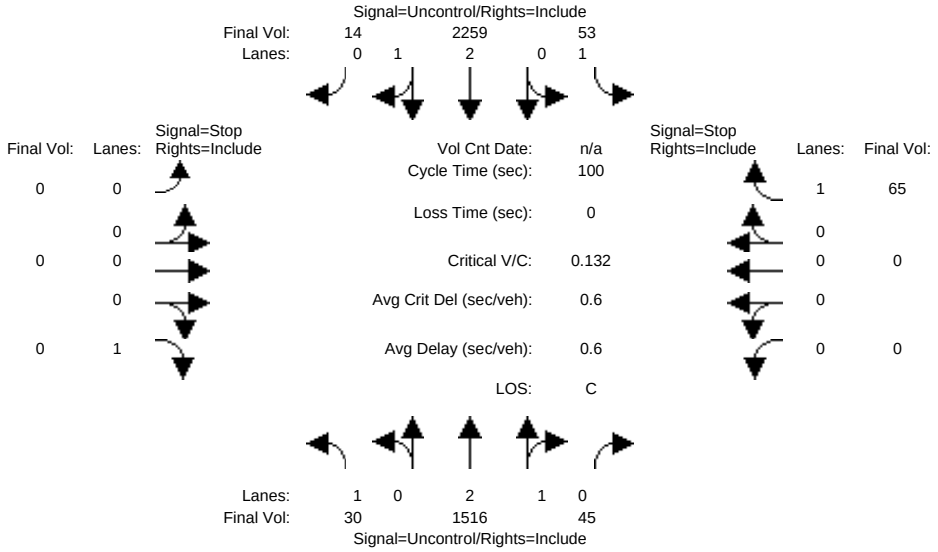
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing + Project PM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	30	1516	45	53	2259	14	0	0	0	0	0	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:	30	1516	45	53	2259	14	0	0	0	0	0	63
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:	30	1516	45	53	2259	14	0	0	0	0	0	65
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	1516	45	53	2259	14	0	0	0	0	0	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	30	1516	45	53	2259	14	0	0	0	0	0	65
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	2273	xxxx	xxxxx	1561	xxxx	xxxxx	xxxx	xxxx	760	xxxx	xxxx	528
Potent Cap.:	227	xxxx	xxxxx	429	xxxx	xxxxx	xxxx	xxxx	353	xxxx	xxxx	500
Move Cap.:	227	xxxx	xxxxx	429	xxxx	xxxxx	xxxx	xxxx	353	xxxx	xxxx	500
Volume/Cap:	0.13	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.13
Level Of Service Module:												
2Way95thQ:	11.2	xxxx	xxxxx	10.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	11.1
Control Del:	23.2	xxxx	xxxxx	14.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.3
LOS by Move:	C	*	*	B	*	*	*	*	*	*	*	B
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.3		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	30 1516	45		53 2259	14		0 0	0		0 0	65	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.3		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=65]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3982]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	30 1516	45		53 2259	14		0 0	0		0 0	65	

Major Street Volume: 3917
Minor Approach Volume: 65
Minor Approach Volume Threshold: -186 [less than minimum of 100]

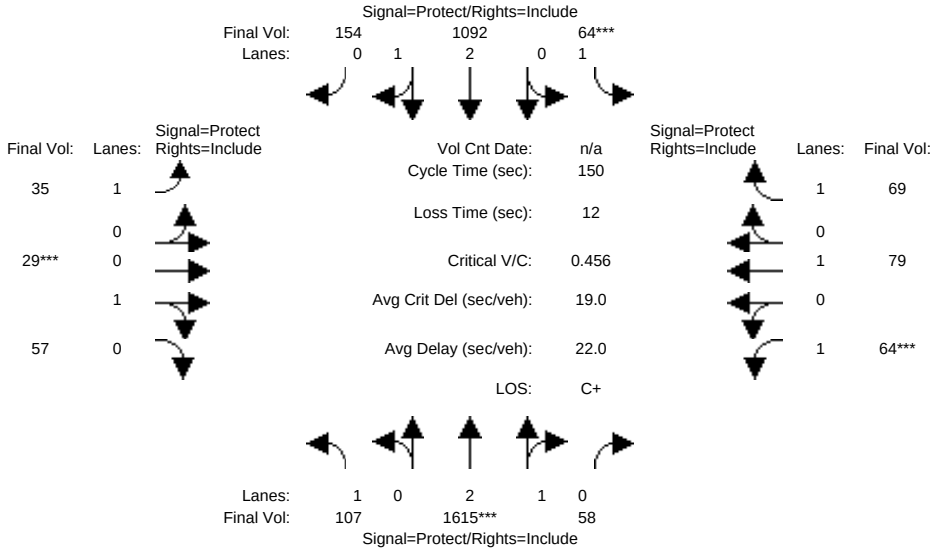
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #7: El Camino Real/ California Ave



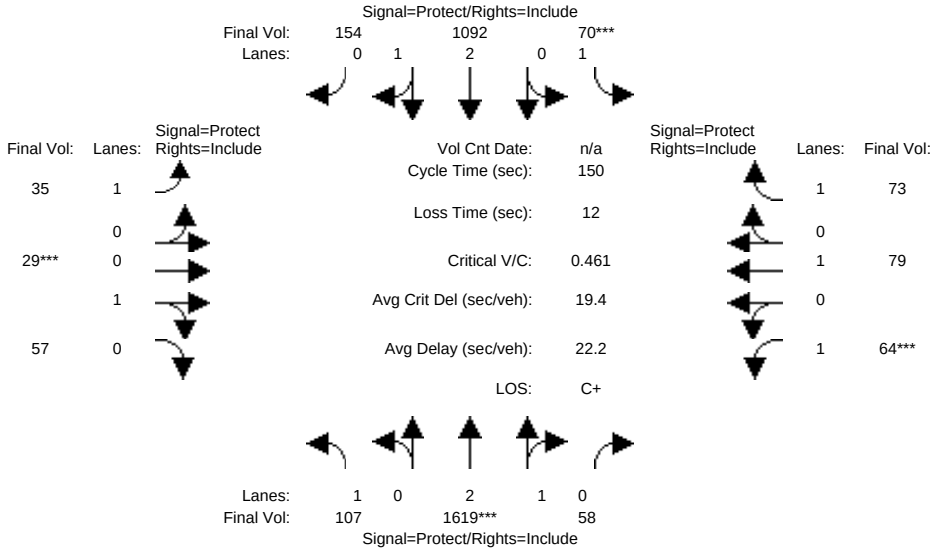
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	107	1615	58	64	1092	154	35	29	57	64	79	69
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:	107	1615	58	64	1092	154	35	29	57	64	79	69
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:	107	1615	58	64	1092	154	35	29	57	64	79	69
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:	107	1615	58	64	1092	154	35	29	57	64	79	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	1615	58	64	1092	154	35	29	57	64	79	69
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:	107	1615	58	64	1092	154	35	29	57	64	79	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.99	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.89	0.11	1.00	2.62	0.38	1.00	0.34	0.66	1.00	1.00	1.00
Final Sat.:	1750	5406	194	1750	4907	692	1750	607	1193	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.30	0.30	0.04	0.22	0.22	0.02	0.05	0.05	0.04	0.04	0.04
Crit Moves:		****		****				****		****		
Green Time:	23.8	98.2	98.2	12.0	86.5	86.5	11.4	15.7	15.7	12.0	16.3	16.3
Volume/Cap:	0.39	0.46	0.46	0.46	0.39	0.39	0.26	0.46	0.46	0.46	0.38	0.36
Delay/Veh:	57.5	12.8	12.8	68.2	17.4	17.4	66.4	64.9	64.9	68.2	63.3	63.2
User DelAdj:	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:	57.5	12.8	12.8	68.2	17.4	17.4	66.4	64.9	64.9	68.2	63.3	63.2
LOS by Move:	E+	B	B	E	B	B	E	E	E	E	E	E
HCM2kAvgQ:	124	312	312	89	255	255	46	109	109	89	91	86

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project AM

Intersection #7: El Camino Real/ California Ave



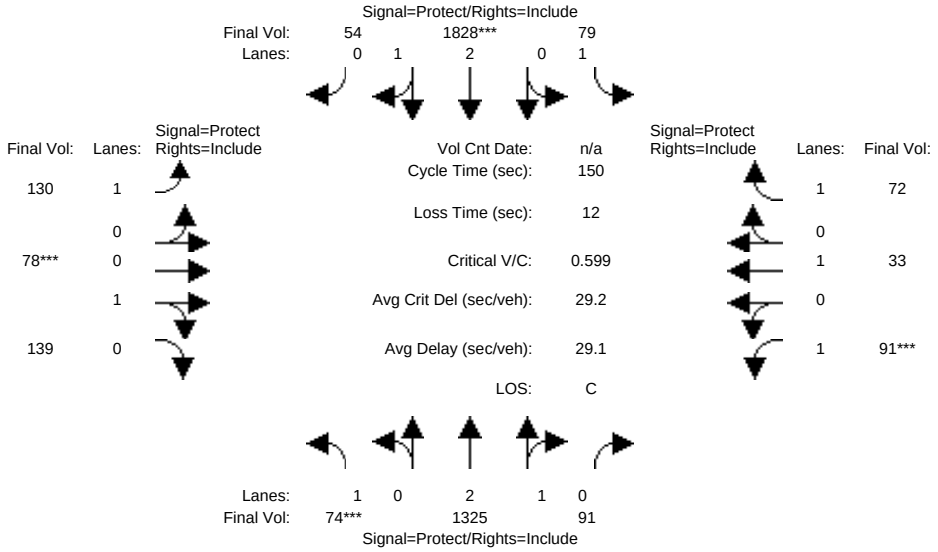
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	107	1615	58	64	1092	154	35	29	57	64	79	69
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:	107	1615	58	64	1092	154	35	29	57	64	79	69
Added Vol:	0	4	0	6	0	0	0	0	0	0	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	107	1619	58	70	1092	154	35	29	57	64	79	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:	107	1619	58	70	1092	154	35	29	57	64	79	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	1619	58	70	1092	154	35	29	57	64	79	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:	107	1619	58	70	1092	154	35	29	57	64	79	73
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.99	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.89	0.11	1.00	2.62	0.38	1.00	0.34	0.66	1.00	1.00	1.00
Final Sat.:	1750	5406	194	1750	4907	692	1750	607	1193	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.30	0.30	0.04	0.22	0.22	0.02	0.05	0.05	0.04	0.04	0.04
Crit Moves:		****		****				****		****		
Green Time:	23.8	97.5	97.5	13.0	86.7	86.7	11.3	15.6	15.6	11.9	16.2	16.2
Volume/Cap:	0.38	0.46	0.46	0.46	0.38	0.38	0.27	0.46	0.46	0.46	0.39	0.39
Delay/Veh:	57.4	13.2	13.2	67.4	17.2	17.2	66.5	65.1	65.1	68.4	63.5	63.6
User DelAdj:	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:	57.4	13.2	13.2	67.4	17.2	17.2	66.5	65.1	65.1	68.4	63.5	63.6
LOS by Move:	E+	B	B	E	B	B	E	E	E	E	E	E
HCM2kAvgQ:	124	317	317	95	255	255	46	109	109	89	92	92

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #7: El Camino Real/ California Ave



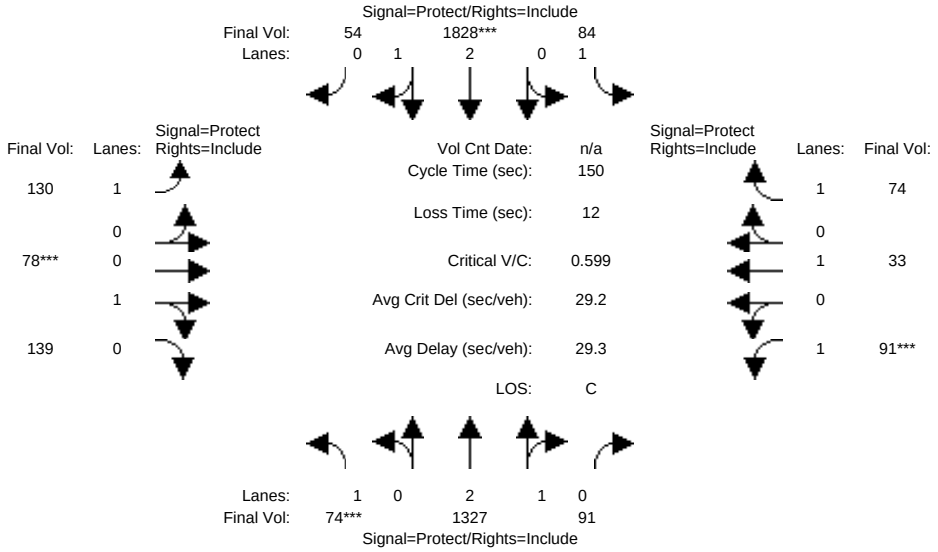
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	74	1325	91	79	1828	54	130	78	139	91	33	72
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:	74	1325	91	79	1828	54	130	78	139	91	33	72
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:	74	1325	91	79	1828	54	130	78	139	91	33	72
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:	74	1325	91	79	1828	54	130	78	139	91	33	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	1325	91	79	1828	54	130	78	139	91	33	72
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:	74	1325	91	79	1828	54	130	78	139	91	33	72
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.80	0.20	1.00	2.91	0.09	1.00	0.36	0.64	1.00	1.00	1.00
Final Sat.:	1750	5240	360	1750	5439	161	1750	647	1153	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.25	0.25	0.05	0.34	0.34	0.07	0.12	0.12	0.05	0.02	0.04
Crit Moves:	****				****			****			****	
Green Time:	10.6	80.0	80.0	14.8	84.2	84.2	22.8	30.2	30.2	13.0	20.4	20.4
Volume/Cap:	0.60	0.47	0.47	0.46	0.60	0.60	0.49	0.60	0.60	0.60	0.13	0.30
Delay/Veh:	75.5	22.0	22.0	65.8	22.1	22.1	59.7	57.2	57.2	72.4	57.2	59.1
User DelAdj:	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:	75.5	22.0	22.0	65.8	22.1	22.1	59.7	57.2	57.2	72.4	57.2	59.1
LOS by Move:	E-	C+	C+	E	C+	C+	E+	E+	E+	E	E+	E+
HCM2kAvgQ:	113	335	335	104	476	476	158	251	251	131	34	84

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project PM

Intersection #7: El Camino Real/ California Ave



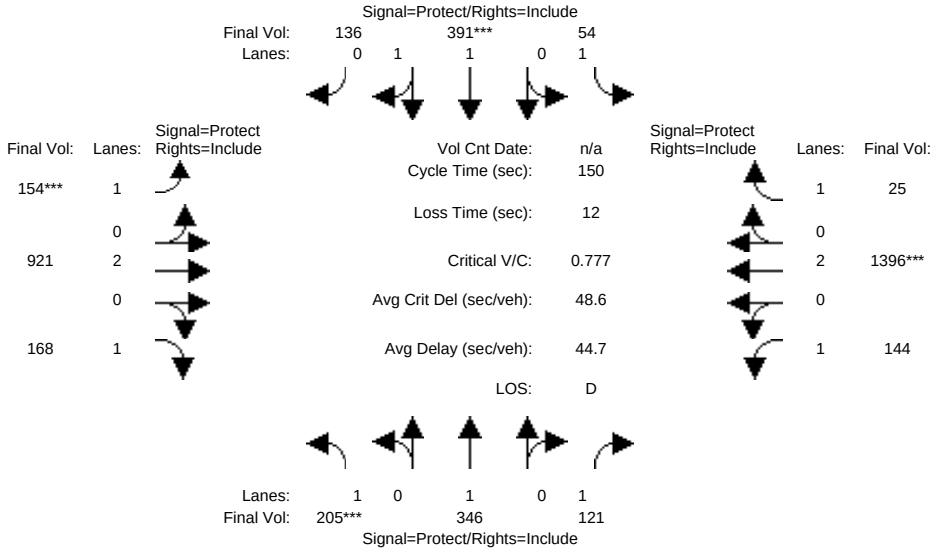
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	74	1325	91	79	1828	54	130	78	139	91	33	72
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:	74	1325	91	79	1828	54	130	78	139	91	33	72
Added Vol:	0	2	0	5	0	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	74	1327	91	84	1828	54	130	78	139	91	33	74
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:	74	1327	91	84	1828	54	130	78	139	91	33	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	1327	91	84	1828	54	130	78	139	91	33	74
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:	74	1327	91	84	1828	54	130	78	139	91	33	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.80	0.20	1.00	2.91	0.09	1.00	0.36	0.64	1.00	1.00	1.00
Final Sat.:	1750	5240	359	1750	5439	161	1750	647	1153	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.25	0.25	0.05	0.34	0.34	0.07	0.12	0.12	0.05	0.02	0.04
Crit Moves:	****				****			****			****	
Green Time:	10.6	79.7	79.7	15.1	84.2	84.2	22.8	30.2	30.2	13.0	20.4	20.4
Volume/Cap:	0.60	0.48	0.48	0.48	0.60	0.60	0.49	0.60	0.60	0.60	0.13	0.31
Delay/Veh:	75.5	22.2	22.2	65.7	22.1	22.1	59.7	57.2	57.2	72.4	57.2	59.2
User DelAdj:	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:	75.5	22.2	22.2	65.7	22.1	22.1	59.7	57.2	57.2	72.4	57.2	59.2
LOS by Move:	E-	C+	C+	E	C+	C+	E+	E+	E+	E	E+	E+
HCM2kAvgQ:	113	337	337	111	476	476	158	251	251	131	34	87

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #8: Middlefield Rd/ Oregon Expwy



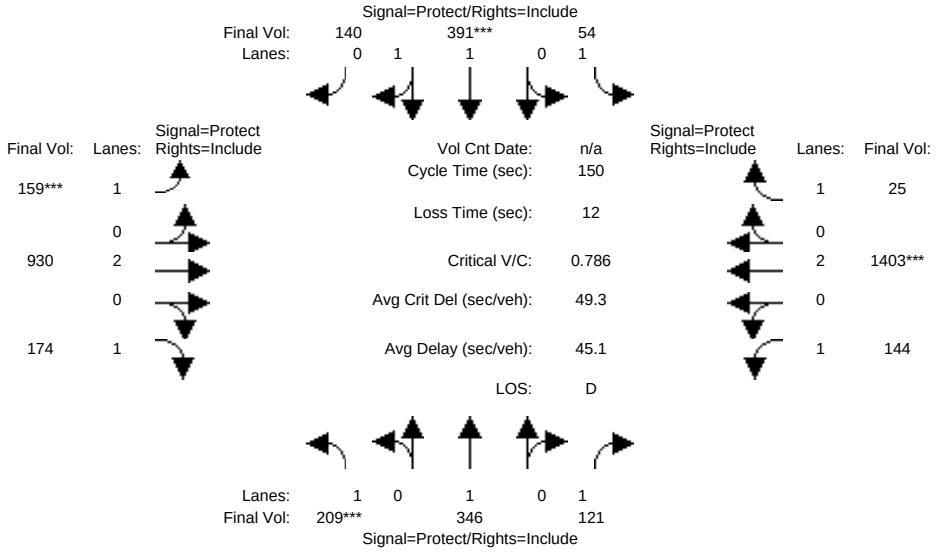
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	205	346	121	54	391	136	154	921	168	144	1396	25
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:	205	346	121	54	391	136	154	921	168	144	1396	25
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:	205	346	121	54	391	136	154	921	168	144	1396	25
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:	205	346	121	54	391	136	154	921	168	144	1396	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	346	121	54	391	136	154	921	168	144	1396	25
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:	205	346	121	54	391	136	154	921	168	144	1396	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.47	0.53	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	2744	955	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.18	0.07	0.03	0.14	0.14	0.09	0.24	0.10	0.08	0.37	0.01
Crit Moves:	****				****		****				****	
Green Time:	22.6	39.9	39.9	10.2	27.5	27.5	17.0	65.6	65.6	22.3	70.9	70.9
Volume/Cap:	0.78	0.68	0.26	0.45	0.78	0.78	0.78	0.55	0.22	0.55	0.78	0.03
Delay/Veh:	74.9	53.3	43.7	69.9	64.0	64.0	82.1	31.7	26.4	61.9	35.2	21.2
User DelAdj:	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:	74.9	53.3	43.7	69.9	64.0	64.0	82.1	31.7	26.4	61.9	35.2	21.2
LOS by Move:	E	D-	D	E	E	E	F	C	C	E	D+	C+
HCM2kAvgQ:	289	373	117	78	337	337	231	386	125	180	684	16

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project AM

Intersection #8: Middlefield Rd/ Oregon Expwy



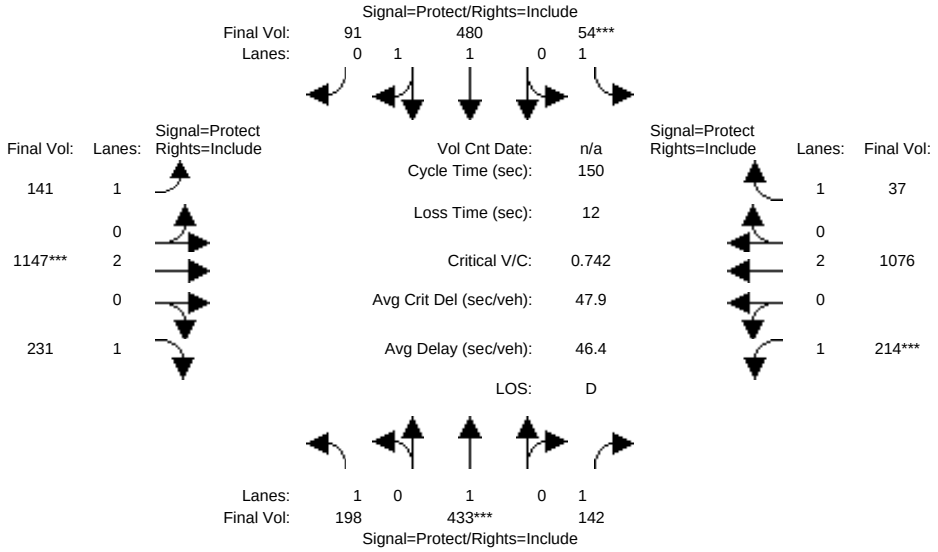
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	205	346	121	54	391	136	154	921	168	144	1396	25
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:	205	346	121	54	391	136	154	921	168	144	1396	25
Added Vol:	4	0	0	0	0	4	5	9	6	0	7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	209	346	121	54	391	140	159	930	174	144	1403	25
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:	209	346	121	54	391	140	159	930	174	144	1403	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	209	346	121	54	391	140	159	930	174	144	1403	25
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:	209	346	121	54	391	140	159	930	174	144	1403	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.46	0.54	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	2724	975	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.18	0.07	0.03	0.14	0.14	0.09	0.24	0.10	0.08	0.37	0.01
Crit Moves:	****				****		****				****	
Green Time:	22.8	40.0	40.0	10.2	27.4	27.4	17.3	65.7	65.7	22.1	70.5	70.5
Volume/Cap:	0.79	0.68	0.26	0.45	0.79	0.79	0.79	0.56	0.23	0.56	0.79	0.03
Delay/Veh:	75.5	53.2	43.7	69.9	64.6	64.6	82.7	31.8	26.4	62.2	35.8	21.4
User DelAdj:	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:	75.5	53.2	43.7	69.9	64.6	64.6	82.7	31.8	26.4	62.2	35.8	21.4
LOS by Move:	E-	D-	D	E	E	E	F	C	C	E	D+	C+
HCM2kAvgQ:	296	372	117	78	342	342	239	391	130	181	695	16

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #8: Middlefield Rd/ Oregon Expwy



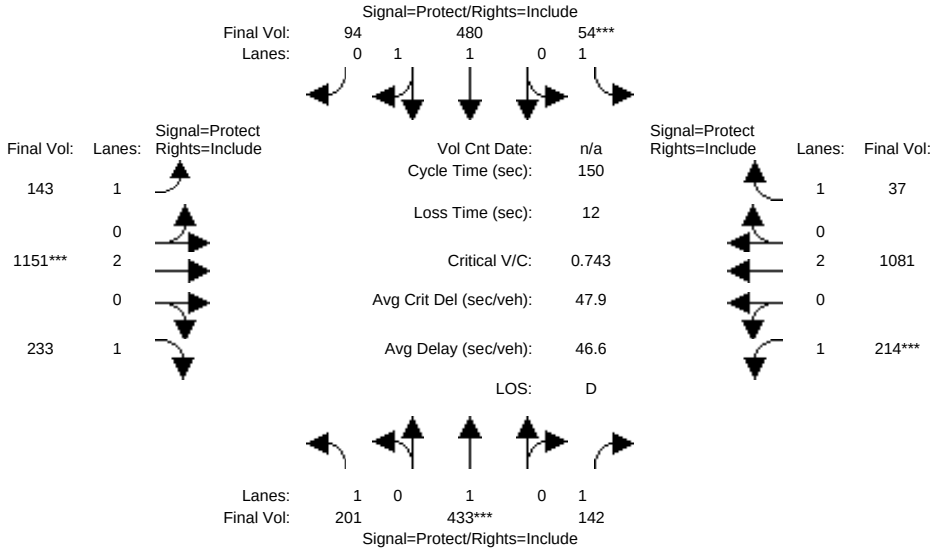
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	198	433	142	54	480	91	141	1147	231	214	1076	37
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:	198	433	142	54	480	91	141	1147	231	214	1076	37
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:	198	433	142	54	480	91	141	1147	231	214	1076	37
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:	198	433	142	54	480	91	141	1147	231	214	1076	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	198	433	142	54	480	91	141	1147	231	214	1076	37
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:	198	433	142	54	480	91	141	1147	231	214	1076	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.67	0.33	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	3110	590	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.23	0.08	0.03	0.15	0.15	0.08	0.30	0.13	0.12	0.28	0.02
Crit Moves:		****		****				****		****		
Green Time:	22.3	45.8	45.8	7.0	30.5	30.5	18.9	60.6	60.6	24.6	66.3	66.3
Volume/Cap:	0.76	0.75	0.27	0.66	0.76	0.76	0.64	0.75	0.33	0.75	0.64	0.05
Delay/Veh:	73.5	52.2	39.7	88.7	60.9	60.9	68.6	40.2	30.9	70.0	33.4	23.9
User DelAdj:	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:	73.5	52.2	39.7	88.7	60.9	60.9	68.6	40.2	30.9	70.0	33.4	23.9
LOS by Move:	E	D-	D	F	E	E	E	D	C	E	C-	C
HCM2kAvgQ:	276	470	130	96	353	353	190	576	191	290	479	25

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project PM

Intersection #8: Middlefield Rd/ Oregon Expwy



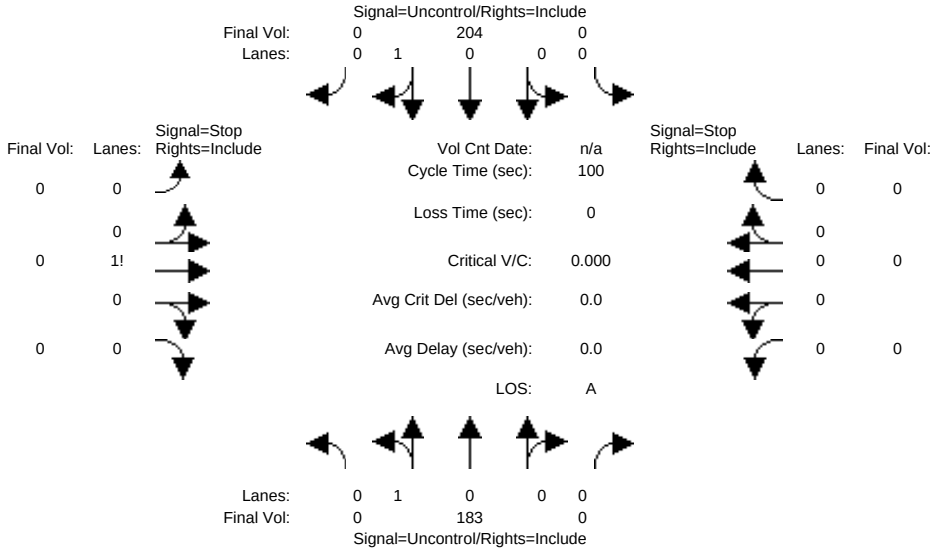
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	198	433	142	54	480	91	141	1147	231	214	1076	37
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:	198	433	142	54	480	91	141	1147	231	214	1076	37
Added Vol:	3	0	0	0	0	3	2	4	2	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	201	433	142	54	480	94	143	1151	233	214	1081	37
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:	201	433	142	54	480	94	143	1151	233	214	1081	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	201	433	142	54	480	94	143	1151	233	214	1081	37
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:	201	433	142	54	480	94	143	1151	233	214	1081	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.66	0.34	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	3094	606	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.23	0.08	0.03	0.16	0.16	0.08	0.30	0.13	0.12	0.28	0.02
Crit Moves:		****		****				****		****		
Green Time:	22.4	45.7	45.7	7.0	30.3	30.3	19.0	60.8	60.8	24.5	66.3	66.3
Volume/Cap:	0.77	0.75	0.27	0.66	0.77	0.77	0.64	0.75	0.33	0.75	0.64	0.05
Delay/Veh:	74.2	52.3	39.7	88.7	61.4	61.4	68.6	40.1	30.9	70.2	33.5	23.9
User DelAdj:	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:	74.2	52.3	39.7	88.7	61.4	61.4	68.6	40.1	30.9	70.2	33.5	23.9
LOS by Move:	E	D-	D	F	E	E	E	D	C	E	C-	C
HCM2kAvgQ:	282	471	131	96	357	357	193	578	193	290	483	25

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #9: Park Blvd/ Access#1




```
Street Name:            Park Blvd                        Access#1
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  183     0     0  204     0     0    0     0     0    0     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:    0  183     0     0  204     0     0    0     0     0    0     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:    0  183     0     0  204     0     0    0     0     0    0     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:     0  183     0     0  204     0     0    0     0     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  183     0     0  204     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2 xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx   387  387   204  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx   620  551   842  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   620  551   842  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.00 0.00  0.00  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx    0 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         *                *                *                *
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #9 Park Blvd/ Access#1
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	0 183		0	0 204		0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Park Blvd/ Access#1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	0 183		0	0 204		0	0	0	0	0	0	0

Major Street Volume: 387
Minor Approach Volume: 0
Minor Approach Volume Threshold: 473

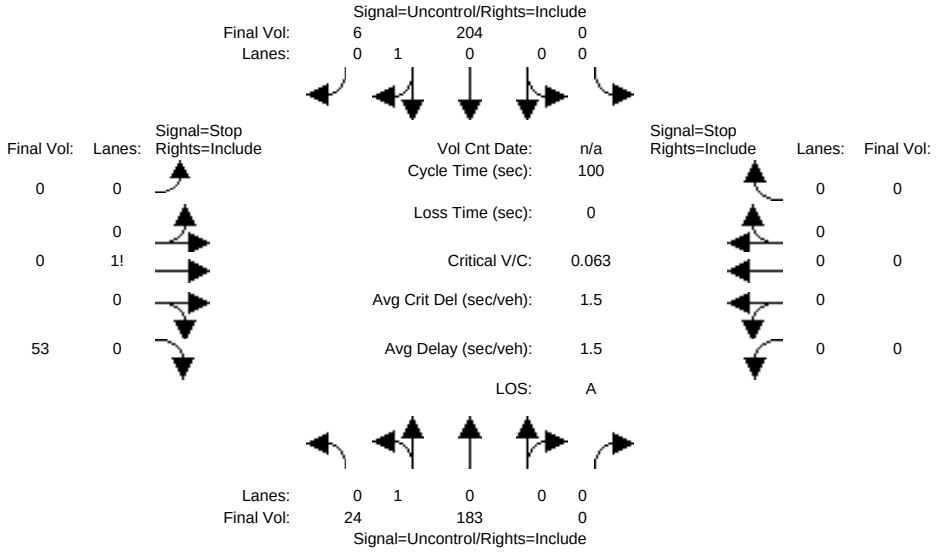
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing + Project AM

Intersection #9: Park Blvd/ Access#1




```
Street Name:            Park Blvd                        Access#1
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  183     0     0  204     0     0    0     0     0    0     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:    0  183     0     0  204     0     0    0     0     0    0     0
Added Vol:     24    0     0     0    0     6     0    0    53     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   24  183     0     0  204     6     0    0    53     0    0     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:    24  183     0     0  204     6     0    0    53     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   24  183     0     0  204     6     0    0    53     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   6.2 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  210 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   207  xxxx xxxx xxxxx
Potent Cap.: 1373 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   839  xxxx xxxx xxxxx
Move Cap.:   1373 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   839  xxxx xxxx xxxxx
Volume/Cap:  0.02 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  0.06  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    1.3 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   5.0  xxxx xxxx xxxxx
Control Del:  7.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   9.6 xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     A     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:  0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  7.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx              9.6           xxxxxx
ApproachLOS:         *                *                A                *
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #9 Park Blvd/ Access#1
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 0	0	1	0 0 0	0	0
Initial Vol:	24 183	0		0 204	6		0 0	53		0 0	0	
ApproachDel:	xxxxxx			xxxxxx			9.6			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=53]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=470]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 0	0	1	0 0 0	0	0
Initial Vol:	24 183	0		0 204	6		0 0	53		0 0	0	

Major Street Volume: 417
Minor Approach Volume: 53
Minor Approach Volume Threshold: 453

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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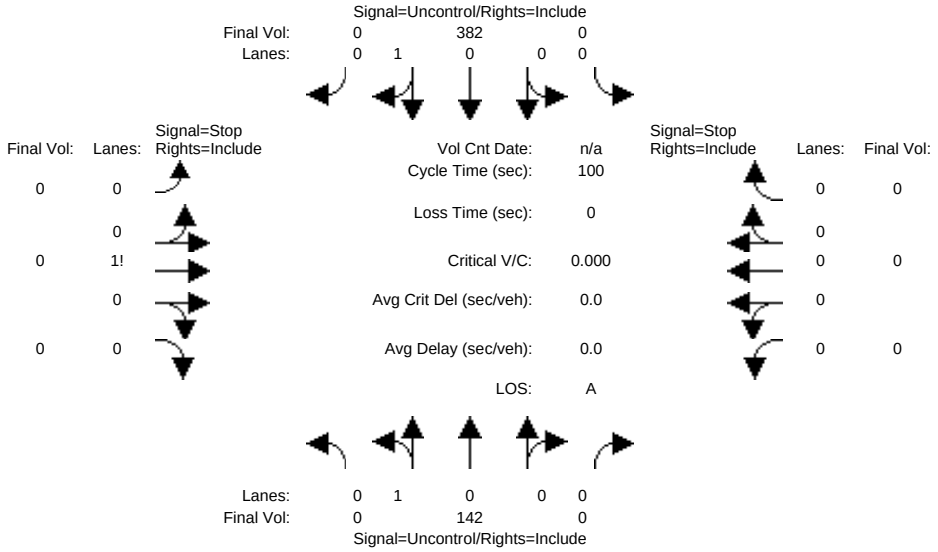
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #9: Park Blvd/ Access#1



Street Name: Park Blvd Access#1

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	142	0	0	382	0	0	0	0	0	0	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:	0	142	0	0	382	0	0	0	0	0	0	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:	0	142	0	0	382	0	0	0	0	0	0	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:	0	142	0	0	382	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	142	0	0	382	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	524	524	382	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	517	461	670	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	517	461	670	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	0 142		0	0 382		0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Park Blvd/ Access#1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	0 142		0	0 382		0	0	0	0	0	0	0

Major Street Volume: 524
Minor Approach Volume: 0
Minor Approach Volume Threshold: 392

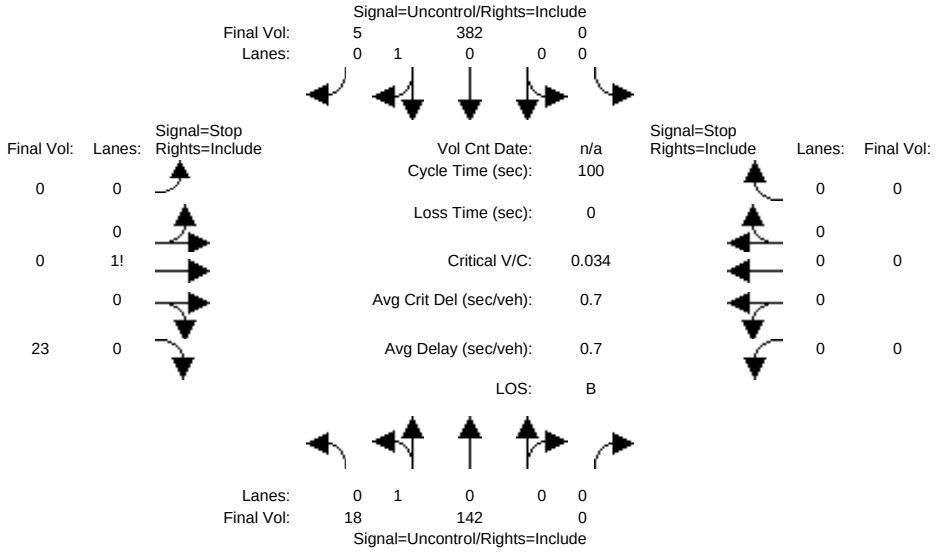
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing + Project PM

Intersection #9: Park Blvd/ Access#1



Street Name:	Park Blvd						Access#1					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	142	0	0	382	0	0	0	0	0	0	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:	0	142	0	0	382	0	0	0	0	0	0	0
Added Vol:	18	0	0	0	0	5	0	0	23	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	142	0	0	382	5	0	0	23	0	0	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:	18	142	0	0	382	5	0	0	23	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	18	142	0	0	382	5	0	0	23	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	387	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	385	xxxx	xxxx	xxxxx
Potent Cap.:	1183	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	668	xxxx	xxxx	xxxxx
Move Cap.:	1183	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	668	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	1.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	2.7	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.6	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.6			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 0	0	1	0 0 0	0	0
Initial Vol:	18 142	0		0 382	5		0 0	23		0 0	0	
ApproachDel:	xxxxxx			xxxxxx			10.6			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=570]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 0	0	1	0 0 0	0	0
Initial Vol:	18 142	0		0 382	5		0 0	23		0 0	0	

Major Street Volume: 547
Minor Approach Volume: 23
Minor Approach Volume Threshold: 380

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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APPENDIX C

Approved Projects Trips

Approved Project Trips

AM

Int #	Location	NB			SB			EB			WB		
		L	T	R	L	T	R	L	T	R	L	T	R
1	Park Boulevard / Page Mill Rd	0	0	0	0	0	14	2	0	0	0	0	0
2	Park Boulevard / Sherman Ave	12	0	0	0	0	11	5	0	17	0	0	0
3	Birch St / Sheridan Ave	0	20	0	0	11	0	0	7	0	0	0	0
4	Birch St / Grant Ave	0	20	0	2	11	0	0	0	0	0	0	0
5	El Camino Real / Oregon Expressway/Page Mill Rd (CMP)	0	8	0	8	1	1	3	2	0	8	9	2
6	El Camino Real / Grant Ave	2	7	0	0	2	0	0	0	0	0	0	0
7	El Camino Real / California Ave	0	0	0	6	0	0	0	0	0	6	0	6
8	Middlefield Rd / Oregon Expressway (CMP)	3	0	0	0	0	3	3	7	3	0	7	0
9	Park Boulevard / Project Driveway	0	12	0	0	14	0	0	0	0	0	0	0

PM

Int #	Location	NB			SB			EB			WB		
		L	T	R	L	T	R	L	T	R	L	T	R
1	Park Boulevard / Page Mill Rd	0	0	0	0	0	18	2	0	0	0	0	0
2	Park Boulevard / Sherman Ave	19	0	0	0	0	17	18	0	33	0	0	0
3	Birch St / Sheridan Ave	0	26	0	0	14	0	0	4	0	0	0	0
4	Birch St / Grant Ave	0	26	0	2	14	0	0	0	0	0	0	0
5	El Camino Real / Oregon Expressway/Page Mill Rd (CMP)	0	11	0	15	0	1	9	2	0	11	7	7
6	El Camino Real / Grant Ave	1	4	0	0	7	0	0	0	0	0	0	0
7	El Camino Real / California Ave	0	0	0	7	0	0	0	0	0	8	0	7
8	Middlefield Rd / Oregon Expressway (CMP)	4	0	0	0	0	3	3	10	4	0	9	0
9	Park Boulevard / Project Driveway	0	19	0	0	18	0	0	0	0	0	0	0

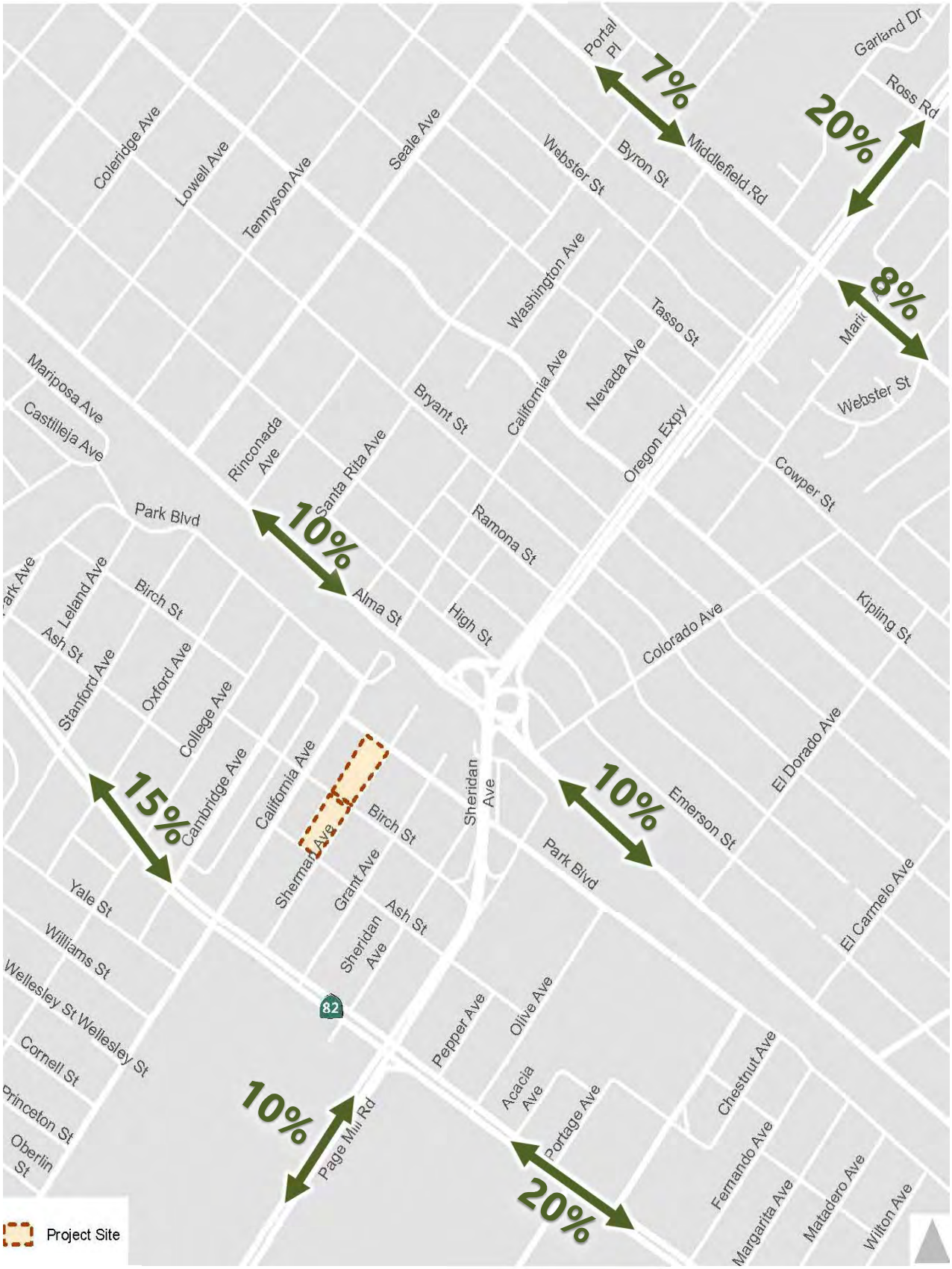
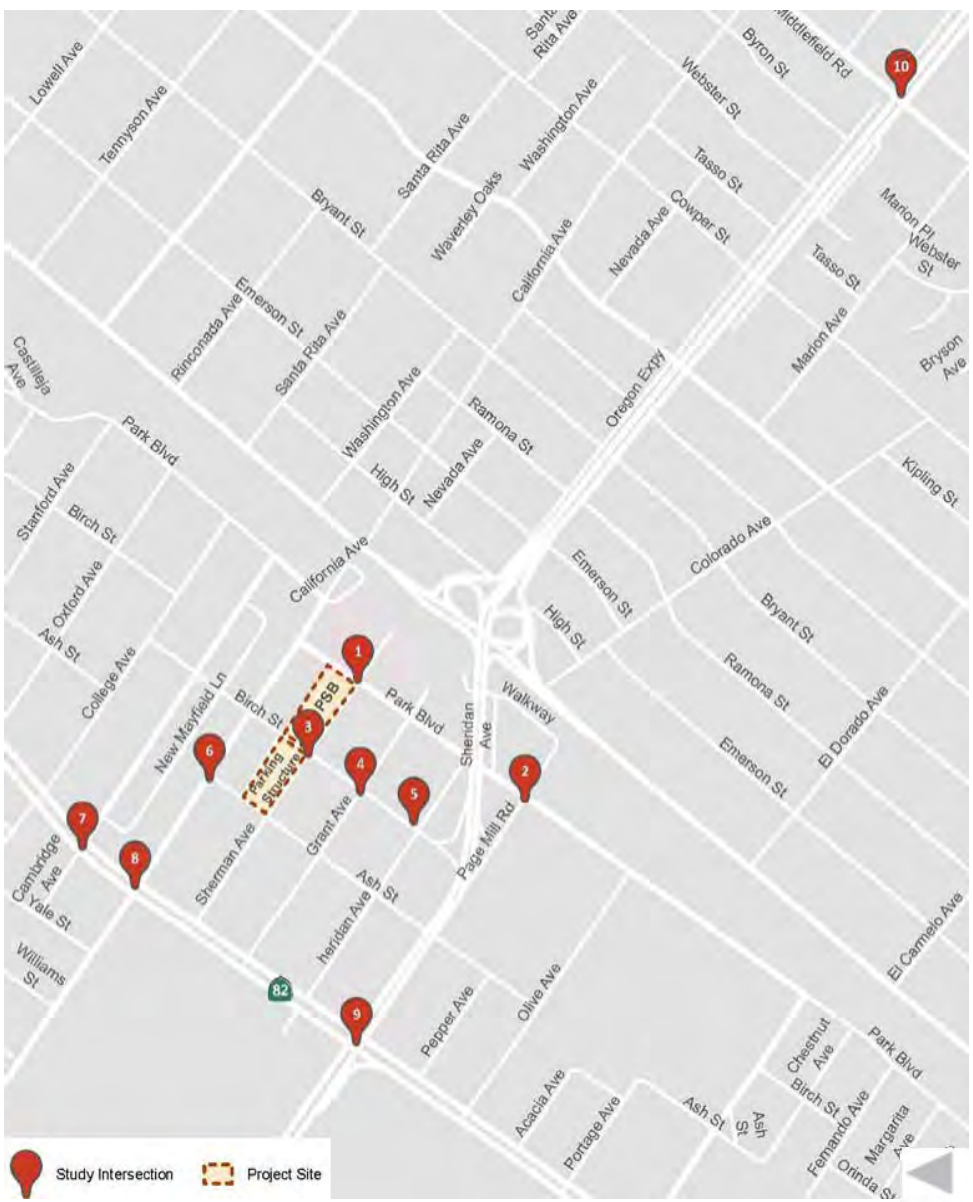


Figure 6

Project Trip Distribution



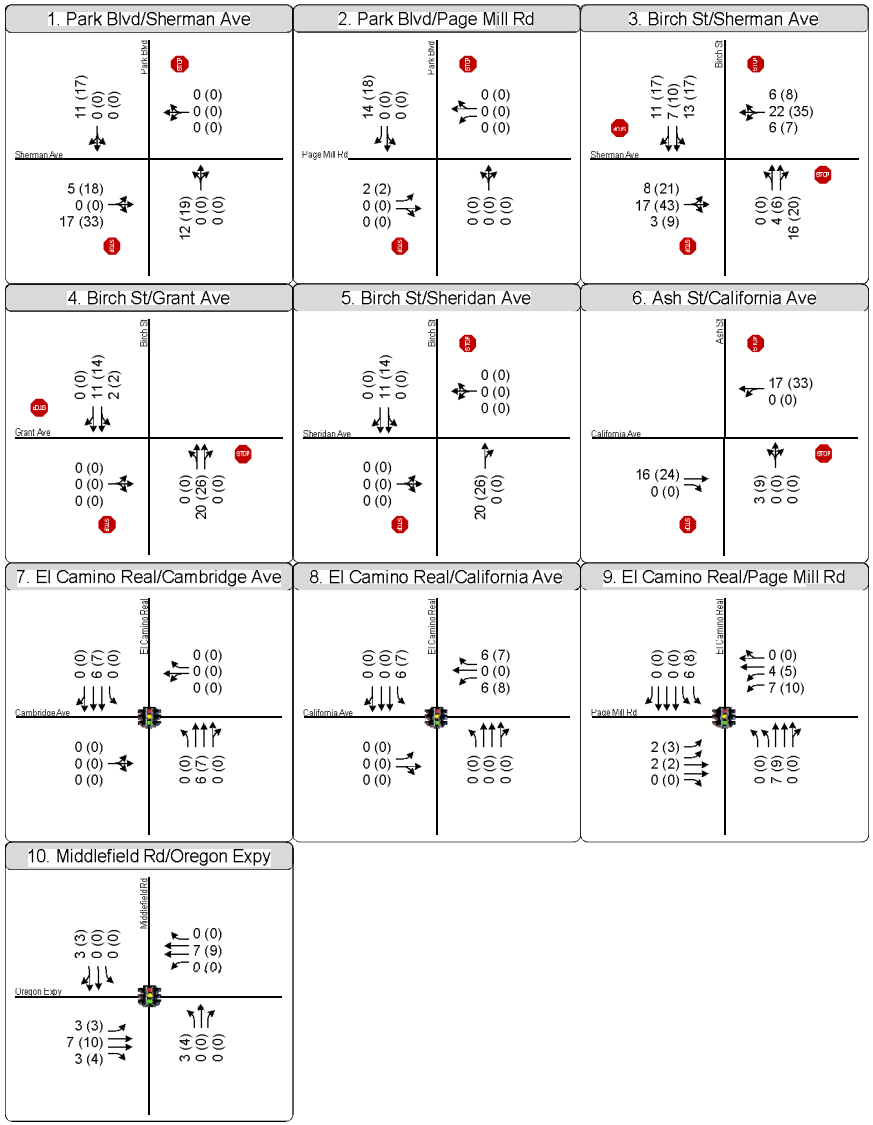
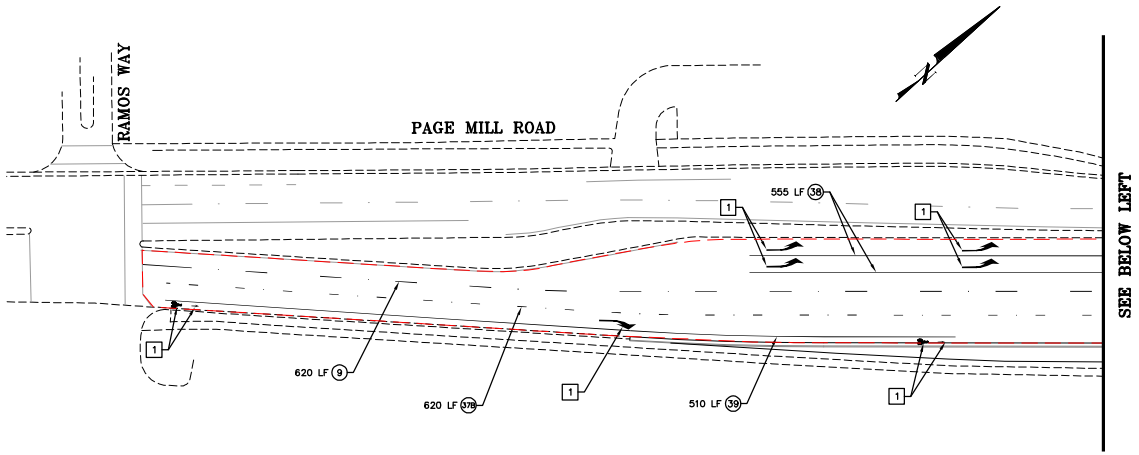


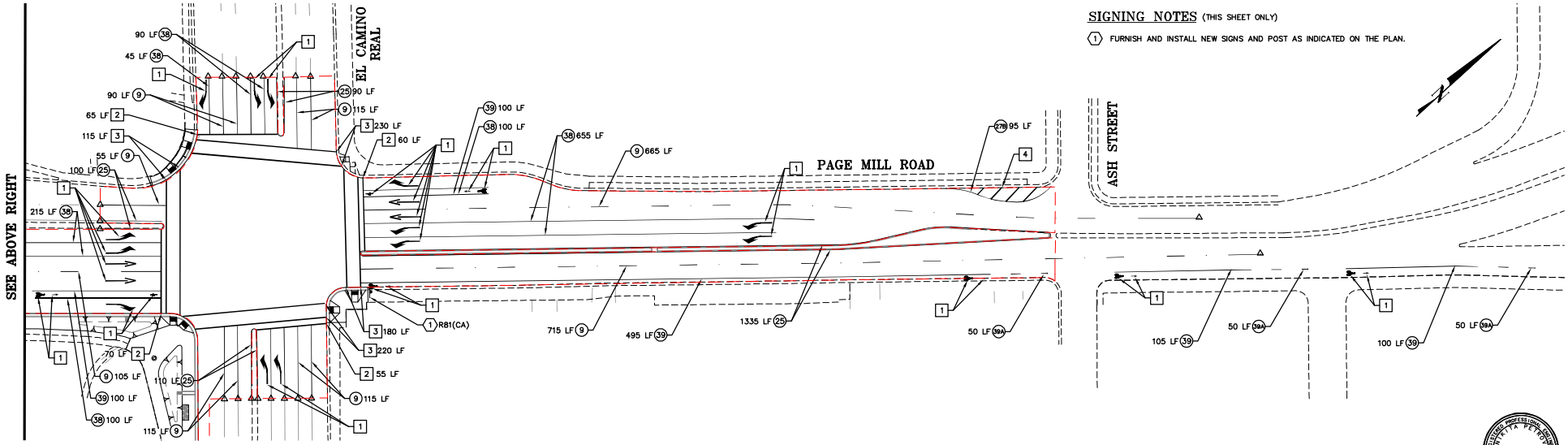
Figure 7
Traffic Volumes and Lane Configurations
Project Trip Assignment - AM & PM Peak Hours

Figure 8
Project Trip Assignment

APPENDIX D

New Striping Plan for El Camino Real/Page Mill Road Intersection





GENERAL NOTES (THIS SHEET ONLY)

1. ALL SIGN CODES REFER TO THE LATEST 2014 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD) UNLESS OTHERWISE NOTED.
2. ALL EXISTING STRIPING AND PAVEMENT MARKINGS CONFLICTING WITH THE NEW STRIPING SHALL BE REMOVED BY GRINDING.
3. ALL EXISTING SIGNS TO REMAIN UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND OTHER ITEMS AFFECTED BY THESE IMPROVEMENTS PRIOR TO CONSTRUCTION AND CONTACT THE CITY IF CONFLICT ARISES.
5. ALL EXISTING STRIPING WITHIN SLURRY SEAL LIMITS SHALL BE REMOVED BY GRINDING PRIOR TO SLURRY SEAL OPERATION.

STRIPING LEGEND

- PROPOSED MARKING PER CALTRANS STANDARD DETAILS
- EXISTING MARKING TO REMAIN
- EXISTING MARKING TO BE REMOVED BY GRINDING
- PROPOSED STRIPING
- EXISTING STRIPING TO REMAIN
- CONFORM TO EXISTING STRIPING
- SLURRY SEAL LIMITS

STRIPING NOTES (FOR SHEETS SS-01 TO SS-02)

(XX) INSTALL STRIPING DETAIL NUMBER "XX" PER CALTRANS STANDARD PLANS A20A, A20B, A20D, AND A24A.

[1] INSTALL CALTRANS STANDARD PAVEMENT LEGEND (SKID RESISTANT THERMOPLASTIC).

[2] INSTALL 12" WIDE WHITE LINE (THERMOPLASTIC) PER LENGTH AS INDICATED ON PLANS.

[3] INSTALL 12" WHITE CROSSWALK, 11' APART ON CENTER.

[4] INSTALL 8" WIDE MARKING AT 8' SPACING.

SIGNING NOTES (THIS SHEET ONLY)

(1) FURNISH AND INSTALL NEW SIGNS AND POST AS INDICATED ON THE PLAN.

65% DESIGN
FOR REVIEW ONLY
SEPTEMBER 2020

811 Know what's below. Call before you dig.

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

REGISTERED PROFESSIONAL ENGINEER — No. 80570 EXP. 03/31/21 — CIVIL — STATE OF CALIFORNIA

Kimley»Horn

NO.	REVISIONS	BY	DATE	APP'D
1				

THE COUNTY OF SANTA CLARA 1850

COUNTY OF SANTA CLARA ROADS AND AIRPORTS DEPARTMENT

AP	09-2020
DESIGNED	DATE
HW, CW	09-2020
DRAWN	DATE
NP	09-2020
CHECKED	DATE

SUBMITTED:
NORA CHUNG
ASSOCIATE CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — No 61173 Exp. 06-30-21 — CIVIL — STATE OF CALIFORNIA

APPROVED:
JAMIL SALAS
SENIOR CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — JAMIL S SALAS — No C74528 Exp. 12-31-21 — CIVIL — STATE OF CALIFORNIA

INTERSECTION IMPROVEMENTS AT PAGE MILL ROAD AND EL CAMINO REAL

STRIPING PLAN

WORK ORDER No.	ADVERTISEMENT DATE:	CONTRACT No.	FILE No.

DRAWING No. PR-01

SHT No. 12 of 24

Scale AS SHOWN

APPENDIX E

Background Conditions

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

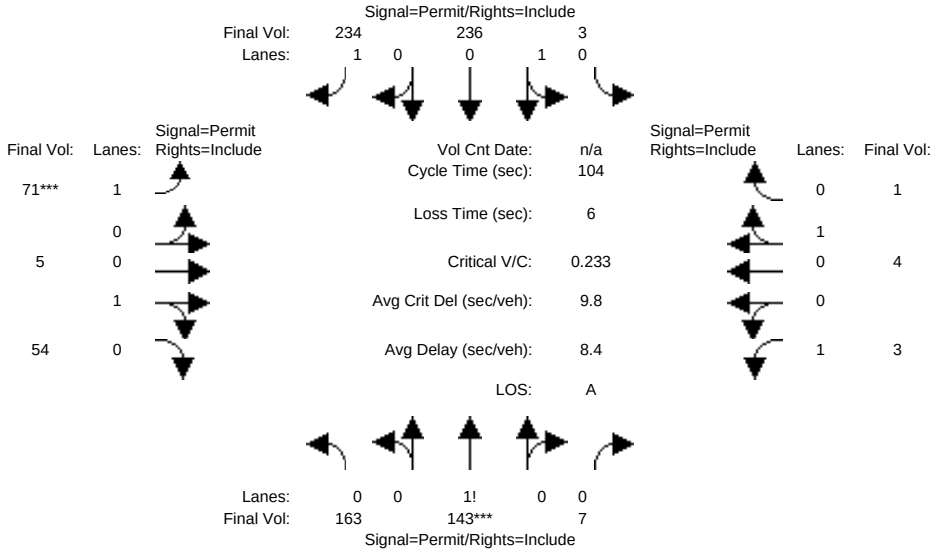
Summary Scenario Comparison Report (With Average Critical Delay)
Future Volume Alternative

Intersection		Background AM				Background + Project AM				Background PM						Background + Project PM			
		LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Crit V/C Change	Avg Crit Del (sec)	Avg Crit Del Change	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)
#1	Park Blvd/ Page Mill Rd	A	8.4	0.233	9.8	A	9.5	0.247	11.7	A	4.9	0.273	+ 0.026	5.1	- 6.6	A	5.7	0.294	6.6
#2	Park Blvd /Sherman Ave	B	2.7	0.060	2.7	B	2.7	0.061	2.7	B	4.1	0.183	+ 0.122	4.1	+ 1.4	B	4.1	0.184	4.1
#3	Birch St/ Sheridan Ave	D	3.8	0.239	3.8	D	4.9	0.248	4.9	C	4.3	0.225	- 0.023	4.3	- 0.6	C	4.6	0.260	4.6
#4	Birch St/ Grant Ave	B	12.7	0.632	12.7	B	13.6	0.666	13.6	A	9.4	0.418	- 0.249	9.4	- 4.2	A	9.5	0.432	9.5
#5	El Camino Real/ Page Mill Rd/ Oregon Expwy	D	46.8	0.836	51.2	D	47.2	0.846	51.8	D	47.3	0.836	- 0.010	52.4	+ 0.6	D	47.6	0.844	52.9
#6	El Camino Real/ Grant Ave	C	0.8	0.183	0.8	C	0.8	0.183	0.8	C	0.6	0.137	- 0.046	0.6	- 0.2	C	0.6	0.137	0.6
#7	El Camino Real/ California Ave	C+	22.7	0.464	19.9	C+	22.9	0.468	20.4	C	29.8	0.604	+ 0.136	29.8	+ 9.4	C	30.0	0.604	29.8
#8	Middlefield Rd/ Oregon Expwy	D	44.9	0.784	49.1	D	45.3	0.793	49.8	D	46.9	0.758	- 0.035	52.2	+ 2.4	D	47.1	0.762	52.4
#9	Park Blvd/ Access#1	A	0.0	0.000	0.0	A	1.4	0.064	1.4	A	0.0	0.000	- 0.064	0.0	- 1.4	B	0.6	0.035	0.6

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #1: Park Blvd/ Page Mill Rd



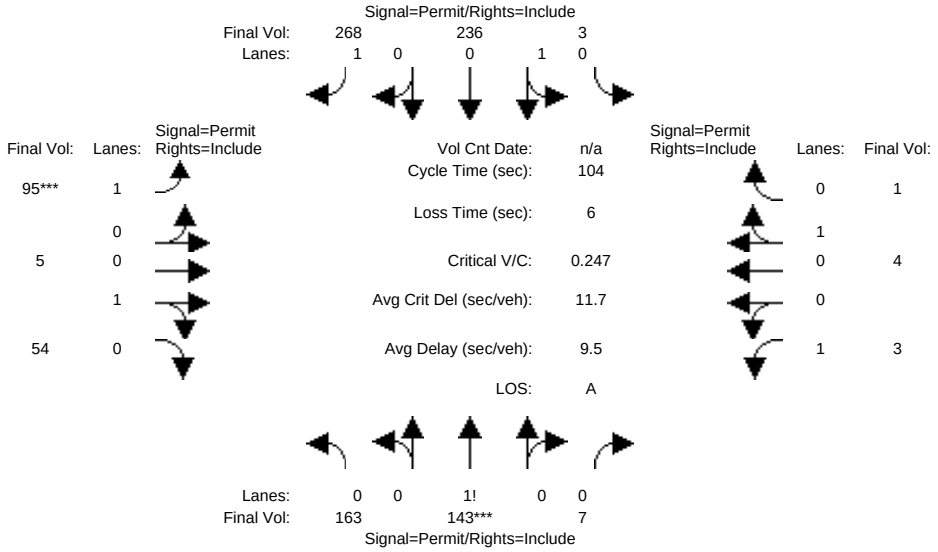
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	163	143	7	3	236	234	71	5	54	3	4	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:	163	143	7	3	236	234	71	5	54	3	4	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:	163	143	7	3	236	234	71	5	54	3	4	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:	163	143	7	3	236	234	71	5	54	3	4	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	143	7	3	236	234	71	5	54	3	4	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:	163	143	7	3	236	234	71	5	54	3	4	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.52	0.46	0.02	0.01	0.99	1.00	1.00	0.08	0.92	1.00	0.80	0.20
Final Sat.:	911	800	39	23	1777	1750	1750	153	1647	1750	1440	360
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.13	0.13	0.13	0.04	0.03	0.03	0.00	0.00	0.00
Crit Moves:		****					****					
Green Time:	79.9	79.9	79.9	79.9	79.9	79.9	18.1	18.1	18.1	18.1	18.1	18.1
Volume/Cap:	0.23	0.23	0.23	0.17	0.17	0.17	0.23	0.19	0.19	0.01	0.02	0.02
Delay/Veh:	3.5	3.5	3.5	3.3	3.3	3.3	37.4	37.0	37.0	35.5	35.6	35.6
User DelAdj:	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:	3.5	3.5	3.5	3.3	3.3	3.3	37.4	37.0	37.0	35.5	35.6	35.6
LOS by Move:	A	A	A	A	A	A	D+	D+	D+	D+	D+	D+
HCM2kAvgQ:	77	77	77	54	54	54	55	44	44	2	4	4

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #1: Park Blvd/ Page Mill Rd



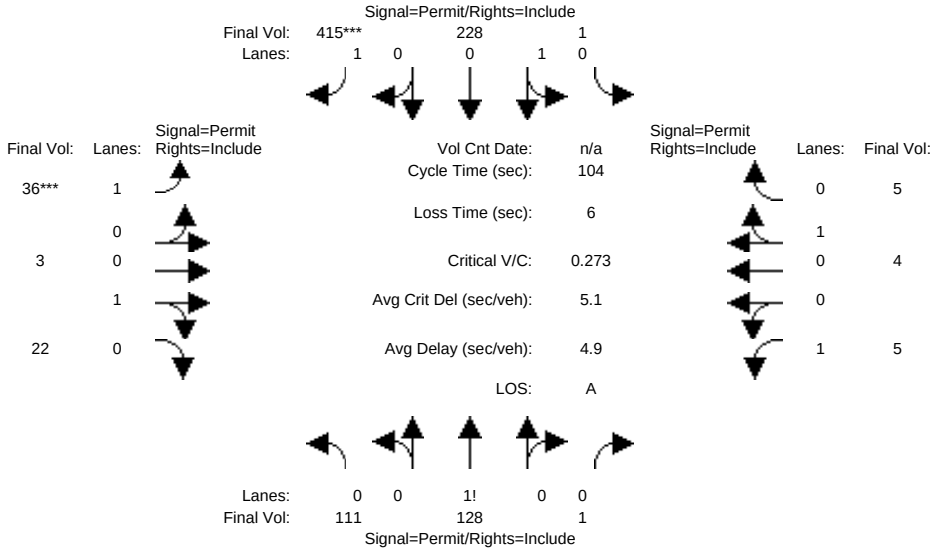
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	163	143	7	3	236	234	71	5	54	3	4	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:	163	143	7	3	236	234	71	5	54	3	4	1
Added Vol:	0	0	0	0	0	34	24	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	163	143	7	3	236	268	95	5	54	3	4	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:	163	143	7	3	236	268	95	5	54	3	4	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	143	7	3	236	268	95	5	54	3	4	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:	163	143	7	3	236	268	95	5	54	3	4	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.52	0.46	0.02	0.01	0.99	1.00	1.00	0.08	0.92	1.00	0.80	0.20
Final Sat.:	911	800	39	23	1777	1750	1750	153	1647	1750	1440	360
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.13	0.13	0.15	0.05	0.03	0.03	0.00	0.00	0.00
Crit Moves:		****					****					
Green Time:	75.2	75.2	75.2	75.2	75.2	75.2	22.8	22.8	22.8	22.8	22.8	22.8
Volume/Cap:	0.25	0.25	0.25	0.18	0.18	0.21	0.25	0.15	0.15	0.01	0.01	0.01
Delay/Veh:	5.0	5.0	5.0	4.7	4.7	4.8	33.8	32.9	32.9	31.7	31.8	31.8
User DelAdj:	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:	5.0	5.0	5.0	4.7	4.7	4.8	33.8	32.9	32.9	31.7	31.8	31.8
LOS by Move:	A	A	A	A	A	A	C-	C-	C-	C	C	C
HCM2kAvgQ:	91	91	91	64	64	75	70	41	41	2	3	3

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #1: Park Blvd/ Page Mill Rd



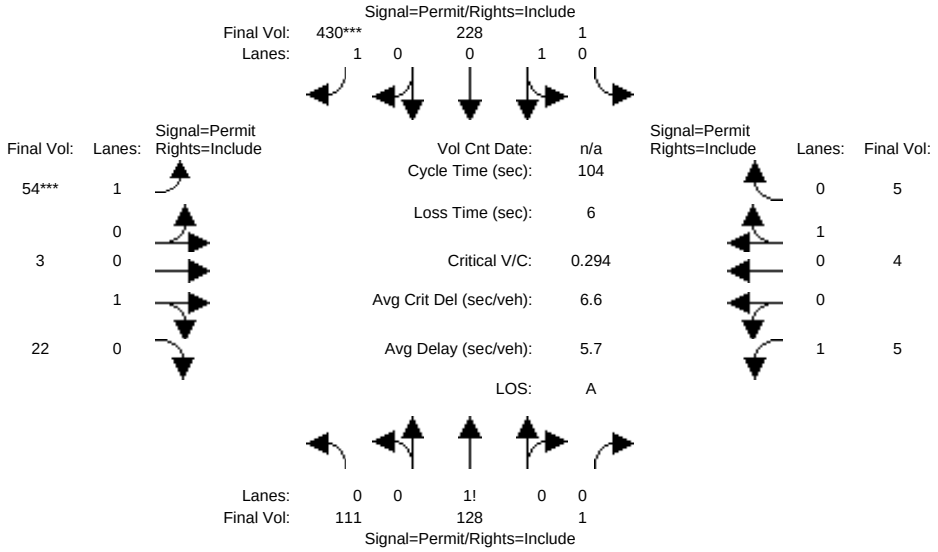
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	111	128	1	1	228	415	36	3	22	5	4	5
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:	111	128	1	1	228	415	36	3	22	5	4	5
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:	111	128	1	1	228	415	36	3	22	5	4	5
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:	111	128	1	1	228	415	36	3	22	5	4	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	128	1	1	228	415	36	3	22	5	4	5
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:	111	128	1	1	228	415	36	3	22	5	4	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.46	0.53	0.01	0.01	0.99	1.00	1.00	0.12	0.88	1.00	0.44	0.56
Final Sat.:	809	933	7	8	1792	1750	1750	216	1584	1750	800	1000
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.13	0.13	0.24	0.02	0.01	0.01	0.00	0.01	0.01
Crit Moves:						****	****					
Green Time:	88.0	88.0	88.0	88.0	88.0	88.0	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.16	0.16	0.16	0.15	0.15	0.28	0.21	0.14	0.14	0.03	0.05	0.05
Delay/Veh:	1.5	1.5	1.5	1.5	1.5	1.7	44.0	43.5	43.5	42.7	42.8	42.8
User DelAdj:	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:	1.5	1.5	1.5	1.5	1.5	1.7	44.0	43.5	43.5	42.7	42.8	42.8
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	38	38	38	35	35	75	33	22	22	4	8	8

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #1: Park Blvd/ Page Mill Rd



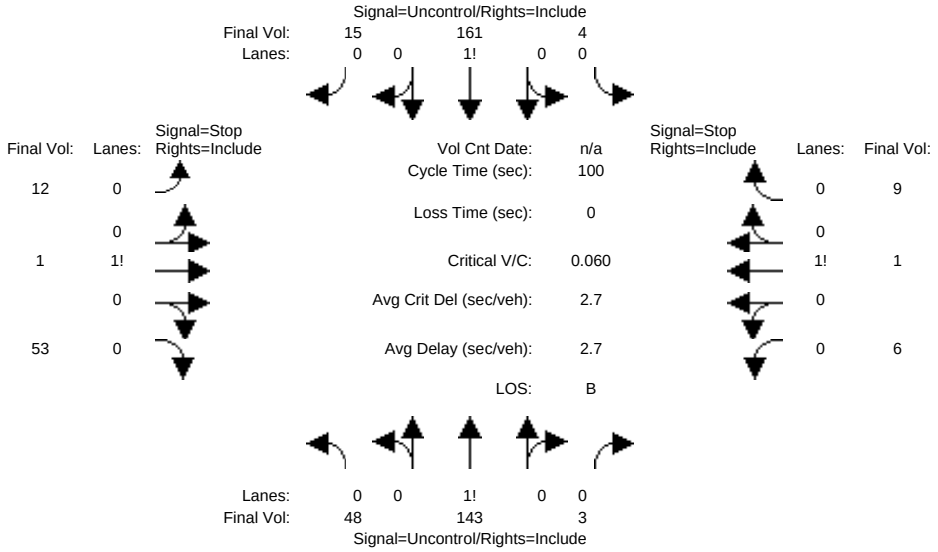
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	111	128	1	1	228	415	36	3	22	5	4	5
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:	111	128	1	1	228	415	36	3	22	5	4	5
Added Vol:	0	0	0	0	0	15	18	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	111	128	1	1	228	430	54	3	22	5	4	5
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:	111	128	1	1	228	430	54	3	22	5	4	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	128	1	1	228	430	54	3	22	5	4	5
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:	111	128	1	1	228	430	54	3	22	5	4	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.46	0.53	0.01	0.01	0.99	1.00	1.00	0.12	0.88	1.00	0.44	0.56
Final Sat.:	809	933	7	8	1792	1750	1750	216	1584	1750	800	1000
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.13	0.13	0.25	0.03	0.01	0.01	0.00	0.01	0.01
Crit Moves:						****	****					
Green Time:	87.1	87.1	87.1	87.1	87.1	87.1	10.9	10.9	10.9	10.9	10.9	10.9
Volume/Cap:	0.16	0.16	0.16	0.15	0.15	0.29	0.29	0.13	0.13	0.03	0.05	0.05
Delay/Veh:	1.7	1.7	1.7	1.6	1.6	1.9	43.9	42.5	42.5	41.8	42.0	42.0
User DelAdj:	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:	1.7	1.7	1.7	1.6	1.6	1.9	43.9	42.5	42.5	41.8	42.0	42.0
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	40	40	40	37	37	83	49	21	21	4	7	7

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background AM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	48	143	3	4	161	15	12	1	53	6	1	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:	48	143	3	4	161	15	12	1	53	6	1	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:	48	143	3	4	161	15	12	1	53	6	1	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:	48	143	3	4	161	15	12	1	53	6	1	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	48	143	3	4	161	15	12	1	53	6	1	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	176	xxxx	xxxxx	146	xxxx	xxxxx	422	419	169	444	425	145
Potent Cap.:	1412	xxxx	xxxxx	1448	xxxx	xxxxx	546	529	881	528	525	908
Move Cap.:	1412	xxxx	xxxxx	1448	xxxx	xxxxx	524	509	881	481	505	908
Volume/Cap:	0.03	xxxx	xxxx	0.00	xxxx	xxxx	0.02	0.00	0.06	0.01	0.00	0.01
Level Of Service Module:												
2Way95thQ:	2.6	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	776	xxxxx	xxxx	657	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	xxxxx	10.6	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			10.1			10.6		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	48	143	3	4	161	15	12	1	53	6	1	9
ApproachDel:	xxxxxx			xxxxxx			10.1			10.6		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=66]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=456]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=456]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	48	143	3	4	161	15	12	1	53	6	1	9

Major Street Volume: 374
Minor Approach Volume: 66
Minor Approach Volume Threshold: 482

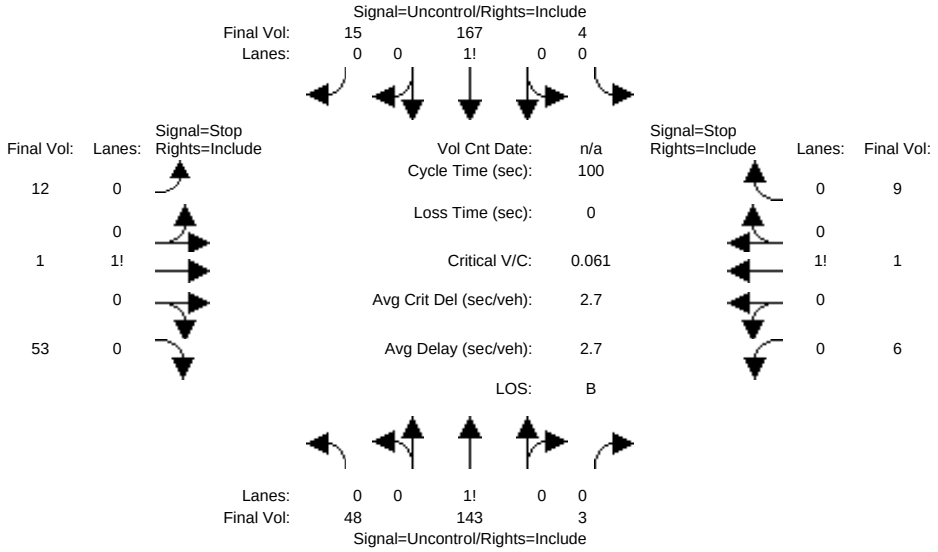
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	48	143	3	4	161	15	12	1	53	6	1	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:	48	143	3	4	161	15	12	1	53	6	1	9
Added Vol:	0	0	0	0	6	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	143	3	4	167	15	12	1	53	6	1	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:	48	143	3	4	167	15	12	1	53	6	1	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	48	143	3	4	167	15	12	1	53	6	1	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	182	xxxx	xxxxx	146	xxxx	xxxxx	428	425	175	450	431	145
Potent Cap.:	1405	xxxx	xxxxx	1448	xxxx	xxxxx	541	525	874	523	520	908
Move Cap.:	1405	xxxx	xxxxx	1448	xxxx	xxxxx	519	505	874	476	501	908
Volume/Cap:	0.03	xxxx	xxxx	0.00	xxxx	xxxx	0.02	0.00	0.06	0.01	0.00	0.01
Level Of Service Module:												
2Way95thQ:	2.7	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	770	xxxxx	xxxx	653	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	xxxxx	10.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			10.1			10.7		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	48	143	3	4	167	15	12	1	53	6	1	9
ApproachDel:	xxxxxx			xxxxxx			10.1			10.7		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=66]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=462]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=462]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	48	143	3	4	167	15	12	1	53	6	1	9

Major Street Volume: 380
Minor Approach Volume: 66
Minor Approach Volume Threshold: 477

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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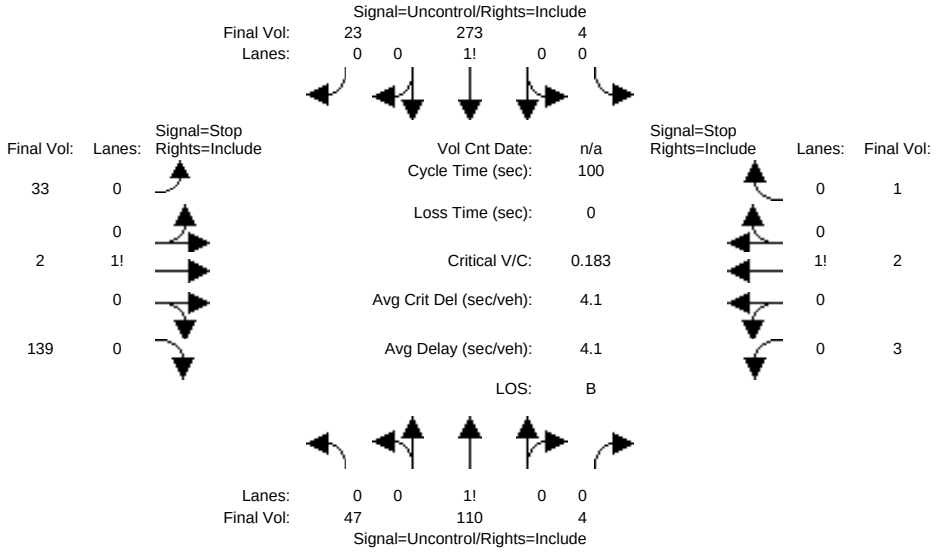
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background PM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	47	110	4	4	273	23	33	2	139	3	2	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:	47	110	4	4	273	23	33	2	139	3	2	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:	47	110	4	4	273	23	33	2	139	3	2	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:	47	110	4	4	273	23	33	2	139	3	2	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	47	110	4	4	273	23	33	2	139	3	2	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	296	xxxx	xxxxx	114	xxxx	xxxxx	500	501	285	569	510	112
Potent Cap.:	1277	xxxx	xxxxx	1488	xxxx	xxxxx	484	475	759	436	469	947
Move Cap.:	1277	xxxx	xxxxx	1488	xxxx	xxxxx	467	456	759	344	450	947
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.07	0.00	0.18	0.01	0.00	0.00
Level Of Service Module:												
2Way95thQ:	2.9	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.9	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	674	xxxxx	xxxx	422	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.0	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.2	xxxxx	xxxxx	13.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			12.2			13.7		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	47	110	4	4	273	23	33	2	139	3	2	1
ApproachDel:	xxxxxx			xxxxxx			12.2			13.7		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=174]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=641]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=641]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	47	110	4	4	273	23	33	2	139	3	2	1

Major Street Volume: 461
Minor Approach Volume: 174
Minor Approach Volume Threshold: 426

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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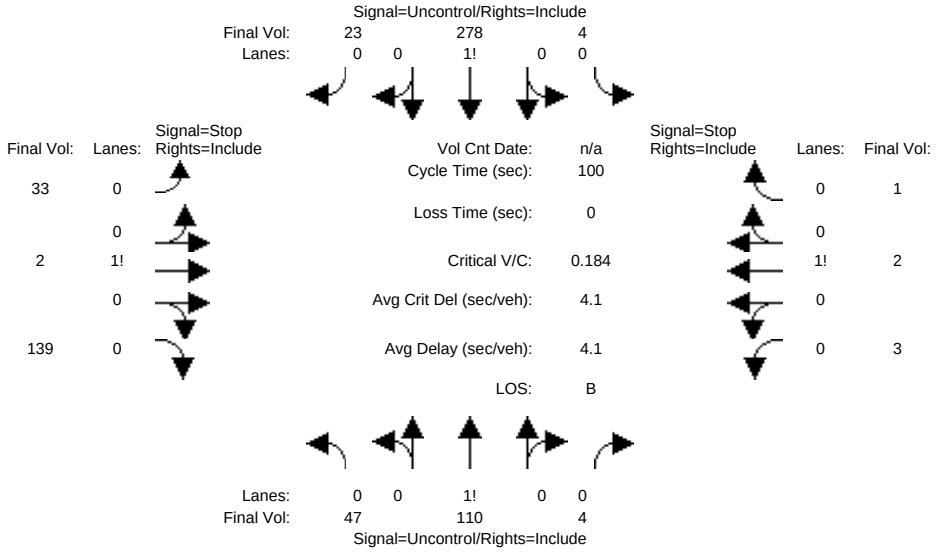
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	47	110	4	4	273	23	33	2	139	3	2	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:	47	110	4	4	273	23	33	2	139	3	2	1
Added Vol:	0	0	0	0	5	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	110	4	4	278	23	33	2	139	3	2	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:	47	110	4	4	278	23	33	2	139	3	2	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	47	110	4	4	278	23	33	2	139	3	2	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	301	xxxx	xxxxx	114	xxxx	xxxxx	505	506	290	574	515	112
Potent Cap.:	1272	xxxx	xxxxx	1488	xxxx	xxxxx	481	472	754	433	466	947
Move Cap.:	1272	xxxx	xxxxx	1488	xxxx	xxxxx	464	453	754	341	447	947
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.07	0.00	0.18	0.01	0.00	0.00
Level Of Service Module:												
2Way95thQ:	2.9	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.9	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	670	xxxxx	xxxx	419	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.0	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.3	xxxxx	xxxxx	13.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			12.3			13.7		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	47	110	4	4	278	23	33	2	139	3	2	1
ApproachDel:	xxxxxx			xxxxxx			12.3			13.7		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=174]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=646]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=646]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	47	110	4	4	278	23	33	2	139	3	2	1

Major Street Volume: 466
Minor Approach Volume: 174
Minor Approach Volume Threshold: 423

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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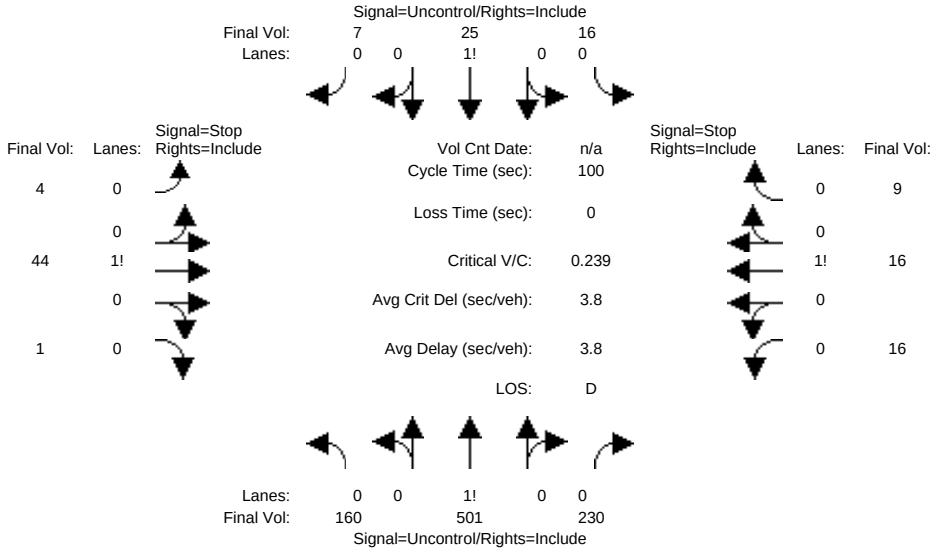
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background AM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	160	501	230	16	25	7	4	44	1	16	16	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:	160	501	230	16	25	7	4	44	1	16	16	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:	160	501	230	16	25	7	4	44	1	16	16	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:	160	501	230	16	25	7	4	44	1	16	16	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	160	501	230	16	25	7	4	44	1	16	16	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	32	xxxx	xxxxx	731	xxxx	xxxxx	1009	1112	29	1019	1000	616
Potent Cap.:	1593	xxxx	xxxxx	883	xxxx	xxxxx	221	211	1052	217	245	494
Move Cap.:	1593	xxxx	xxxxx	883	xxxx	xxxxx	185	184	1052	161	214	494
Volume/Cap:	0.10	xxxx	xxxx	0.02	xxxx	xxxx	0.02	0.24	0.00	0.10	0.07	0.02
Level Of Service Module:												
2Way95thQ:	8.4	xxxx	xxxxx	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	187	xxxxx	xxxx	213	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.0	xxxxx	xxxxx	0.7	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	30.9	xxxxx	xxxxx	25.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	D	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			30.9			25.9		
ApproachLOS:	*			*			D			D		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	160	501	230	16	25	7	4	44	1	16	16	9
ApproachDel:	xxxxxx			xxxxxx			30.9			25.9		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=49]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1029]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1029]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	160	501	230	16	25	7	4	44	1	16	16	9

Major Street Volume: 939
Minor Approach Volume: 49
Minor Approach Volume Threshold: 236

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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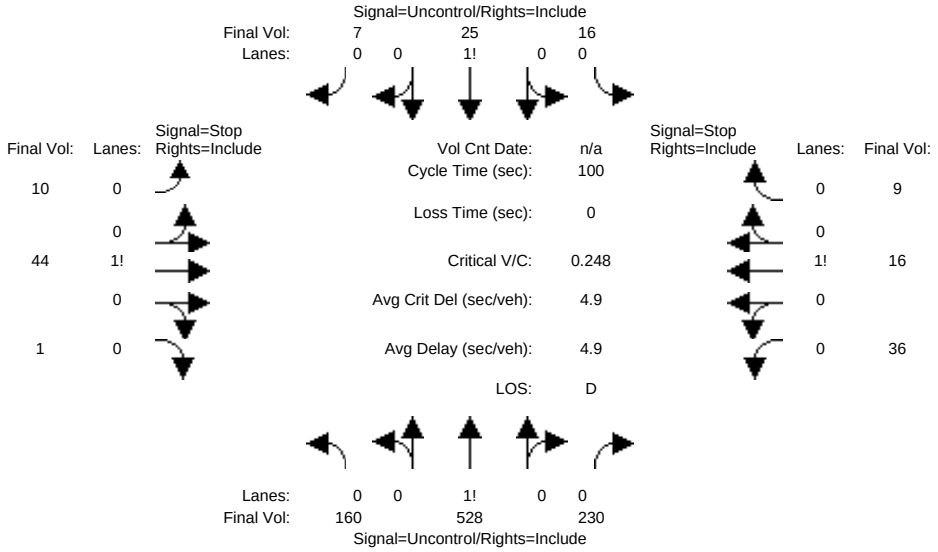
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	160	501	230	16	25	7	4	44	1	16	16	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:	160	501	230	16	25	7	4	44	1	16	16	9
Added Vol:	0	27	0	0	0	0	6	0	0	20	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	160	528	230	16	25	7	10	44	1	36	16	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:	160	528	230	16	25	7	10	44	1	36	16	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	160	528	230	16	25	7	10	44	1	36	16	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	32	xxxx	xxxxx	758	xxxx	xxxxx	1036	1139	29	1046	1027	643
Potent Cap.:	1593	xxxx	xxxxx	862	xxxx	xxxxx	212	203	1052	208	236	477
Move Cap.:	1593	xxxx	xxxxx	862	xxxx	xxxxx	176	177	1052	153	206	477
Volume/Cap:	0.10	xxxx	xxxx	0.02	xxxx	xxxx	0.06	0.25	0.00	0.24	0.08	0.02
Level Of Service Module:												
2Way95thQ:	8.4	xxxx	xxxxx	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	180	xxxxx	xxxx	184	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.2	xxxxx	xxxxx	1.4	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	33.6	xxxxx	xxxxx	34.1	xxxxx
Shared LOS:	*	*	*	*	*	*	*	D	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			33.6			34.1		
ApproachLOS:	*			*			D			D		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	160	528	230	16	25	7	10	44	1	36	16	9
ApproachDel:	xxxxxx			xxxxxx			33.6			34.1		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=55]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1082]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=61]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1082]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	160	528	230	16	25	7	10	44	1	36	16	9

Major Street Volume: 966
Minor Approach Volume: 61
Minor Approach Volume Threshold: 229

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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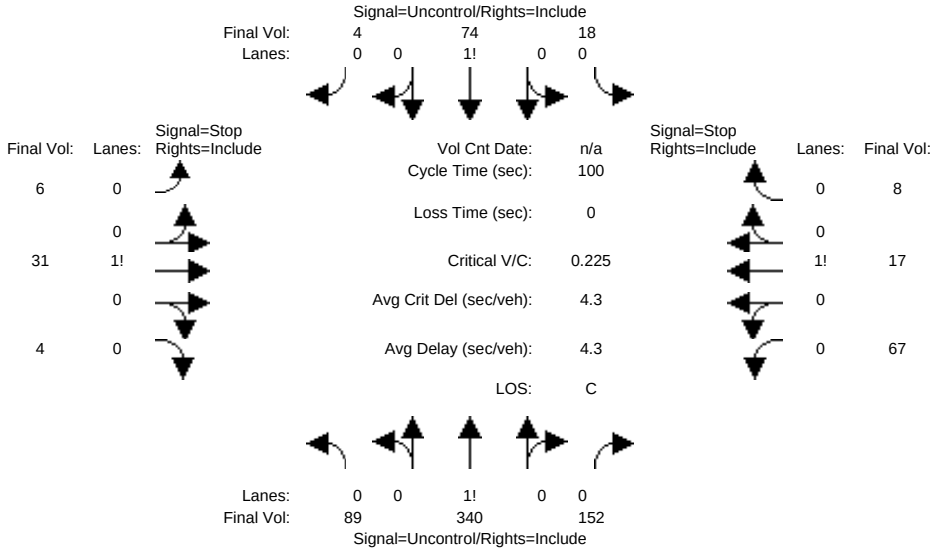
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background PM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	89	340	152	18	74	4	6	31	4	67	17	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:	89	340	152	18	74	4	6	31	4	67	17	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:	89	340	152	18	74	4	6	31	4	67	17	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:	89	340	152	18	74	4	6	31	4	67	17	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	89	340	152	18	74	4	6	31	4	67	17	8
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	78	xxxx	xxxxx	492	xxxx	xxxxx	719	782	76	724	708	416
Potent Cap.:	1533	xxxx	xxxxx	1082	xxxx	xxxxx	347	328	991	344	362	641
Move Cap.:	1533	xxxx	xxxxx	1082	xxxx	xxxxx	310	303	991	297	334	641
Volume/Cap:	0.06	xxxx	xxxx	0.02	xxxx	xxxx	0.02	0.10	0.00	0.23	0.05	0.01
Level Of Service Module:												
2Way95thQ:	4.6	xxxx	xxxxx	1.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	326	xxxxx	xxxx	319	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	1.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	17.6	xxxxx	xxxxx	20.8	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			17.6			20.8		
ApproachLOS:	*			*			C			C		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	89	340	152	18	74	4	6	31	4	67	17	8
ApproachDel:	xxxxxx			xxxxxx			17.6			20.8		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=810]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=92]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=810]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	89	340	152	18	74	4	6	31	4	67	17	8

Major Street Volume: 677
Minor Approach Volume: 92
Minor Approach Volume Threshold: 323

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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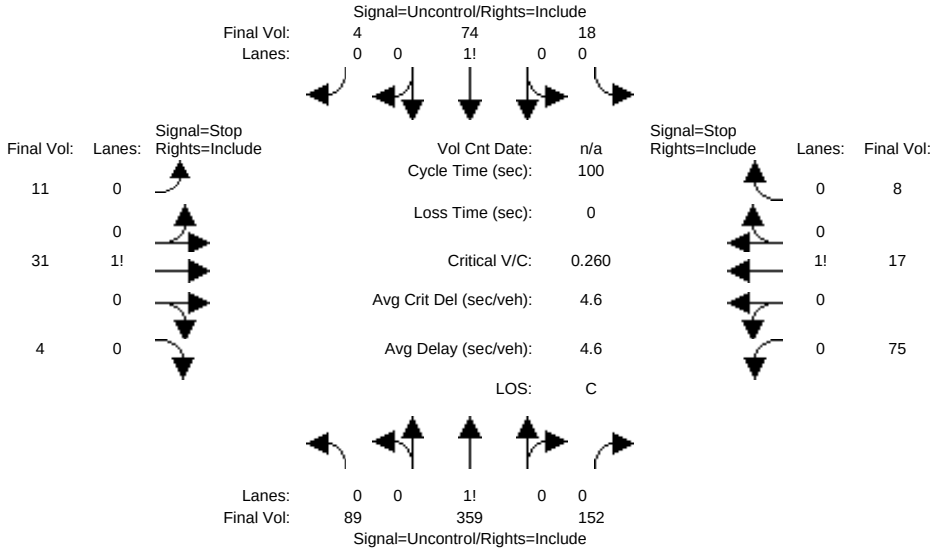
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #3: Birch St/ Sheridan Ave




```
Street Name:              Birch St                    Sheridan Ave
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      89  340   152    18   74     4     6   31     4    67   17     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:   89  340   152    18   74     4     6   31     4    67   17     8
Added Vol:      0   19     0     0    0     0     5    0     0     8    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   89  359   152    18   74     4    11   31     4    75   17     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:    89  359   152    18   74     4    11   31     4    75   17     8
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   89  359   152    18   74     4    11   31     4    75   17     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:   78 xxxx xxxxx   511 xxxx xxxxx   738  801    76   743  727   435
Potent Cap.: 1533 xxxx xxxxx  1065 xxxx xxxxx   336  320   991   334  353   625
Move Cap.:   1533 xxxx xxxxx  1065 xxxx xxxxx   300  295   991   288  326   625
Volume/Cap:  0.06 xxxx  xxxx  0.02 xxxx  xxxx  0.04 0.10  0.00  0.26 0.05  0.01
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    4.6 xxxx xxxxx   1.3 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.5 xxxx xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  316 xxxxx  xxxx  307 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.5 xxxxx xxxxx  1.4 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 18.3 xxxxx xxxxx 22.3 xxxxx
Shared LOS:     *    *     *     *    *     *     *    C     *     *    C     *
ApproachDel:    xxxxxx           xxxxxx              18.3             22.3
ApproachLOS:         *                *                 C                C
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #3 Birch St/ Sheridan Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	89	359	152	18	74	4	11	31	4	75	17	8
ApproachDel:	xxxxxx			xxxxxx			18.3			22.3		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=46]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=842]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=100]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=842]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	89	359	152	18	74	4	11	31	4	75	17	8

Major Street Volume: 696
Minor Approach Volume: 100
Minor Approach Volume Threshold: 316

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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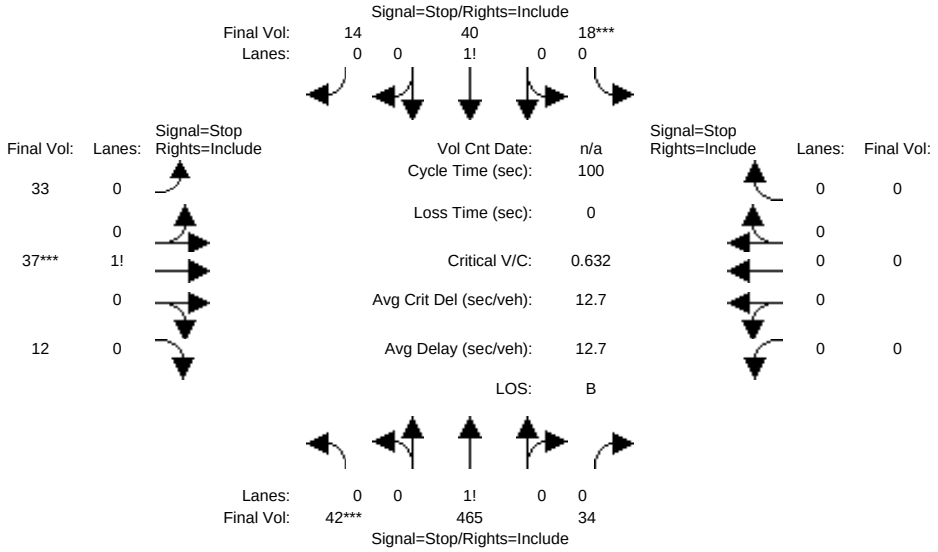
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background AM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	42	465	34	18	40	14	33	37	12	0	0	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:	42	465	34	18	40	14	33	37	12	0	0	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:	42	465	34	18	40	14	33	37	12	0	0	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:	42	465	34	18	40	14	33	37	12	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	465	34	18	40	14	33	37	12	0	0	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:	42	465	34	18	40	14	33	37	12	0	0	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:	0.08	0.86	0.06	0.25	0.56	0.19	0.40	0.45	0.15	0.00	0.00	0.00
Final Sat.:	66	736	54	190	422	148	257	288	93	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.63	0.63	0.63	0.09	0.09	0.09	0.13	0.13	0.13	xxxx	xxxx	xxxx
Crit Moves:	****			****				****				
Delay/Veh:	13.9	13.9	13.9	8.0	8.0	8.0	8.8	8.8	8.8	0.0	0.0	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:	13.9	13.9	13.9	8.0	8.0	8.0	8.8	8.8	8.8	0.0	0.0	0.0
LOS by Move:	B	B	B	A	A	A	A	A	A	*	*	*
ApproachDel:	13.9			8.0			8.8			xxxxxx		
Delay Adj:	1.00			1.00			1.00			xxxxx		
ApprAdjDel:	13.9			8.0			8.8			xxxxxx		
LOS by Appr:	B			A			A			*		
AllWayAvgQ:	40.0	40.0	40.0	2.4	2.4	2.4	3.0	3.0	3.0	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 0 0	0	
Initial Vol:	42	465	34	18	40	14	33	37	12	0	0	0

Major Street Volume: 613
Minor Approach Volume: 82
Minor Approach Volume Threshold: 350

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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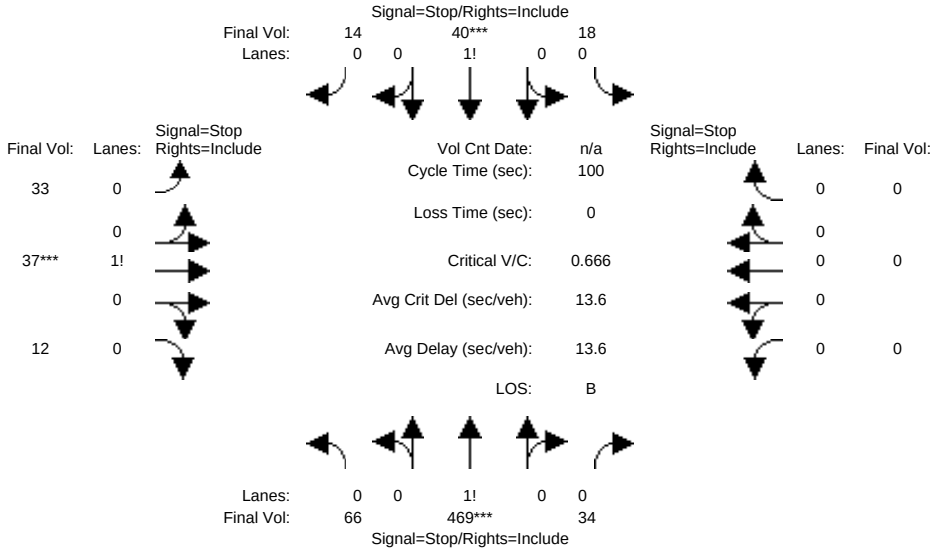
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background + Project AM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	42	465	34	18	40	14	33	37	12	0	0	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:	42	465	34	18	40	14	33	37	12	0	0	0
Added Vol:	24	4	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:	66	469	34	18	40	14	33	37	12	0	0	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:	66	469	34	18	40	14	33	37	12	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	469	34	18	40	14	33	37	12	0	0	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:	66	469	34	18	40	14	33	37	12	0	0	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:	0.12	0.82	0.06	0.25	0.56	0.19	0.40	0.45	0.15	0.00	0.00	0.00
Final Sat.:	99	704	51	189	419	147	253	284	92	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.67	0.67	0.67	0.10	0.10	0.10	0.13	0.13	0.13	xxxx	xxxx	xxxx
Crit Moves:		****			****			****				
Delay/Veh:	14.9	14.9	14.9	8.1	8.1	8.1	8.9	8.9	8.9	0.0	0.0	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:	14.9	14.9	14.9	8.1	8.1	8.1	8.9	8.9	8.9	0.0	0.0	0.0
LOS by Move:	B	B	B	A	A	A	A	A	A	*	*	*
ApproachDel:		14.9			8.1			8.9			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		14.9			8.1			8.9			xxxxxx	
LOS by Appr:		B			A			A			*	
AllWayAvgQ:	46.0	46.0	46.0	2.4	2.4	2.4	3.1	3.1	3.1	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 0 0	0	
Initial Vol:	66	469	34	18	40	14	33	37	12	0	0	0

Major Street Volume: 641
Minor Approach Volume: 82
Minor Approach Volume Threshold: 338

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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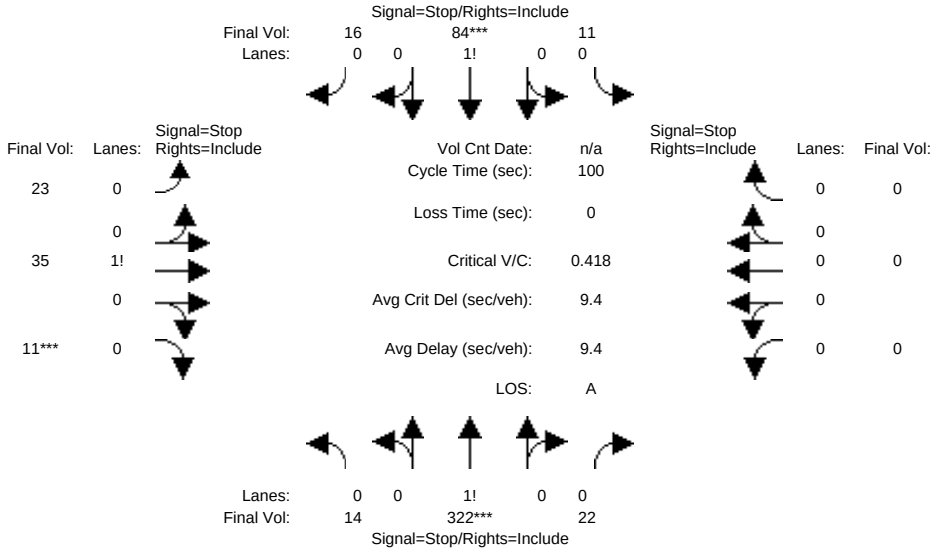
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background PM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	14	322	22	11	84	16	23	35	11	0	0	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:	14	322	22	11	84	16	23	35	11	0	0	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:	14	322	22	11	84	16	23	35	11	0	0	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:	14	322	22	11	84	16	23	35	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	322	22	11	84	16	23	35	11	0	0	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:	14	322	22	11	84	16	23	35	11	0	0	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:	0.04	0.90	0.06	0.10	0.76	0.14	0.33	0.51	0.16	0.00	0.00	0.00
Final Sat.:	34	771	53	80	611	116	231	351	110	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.42	0.42	0.42	0.14	0.14	0.14	0.10	0.10	0.10	xxxx	xxxx	xxxx
Crit Moves:		****			****				****			
Delay/Veh:	10.0	10.0	10.0	8.0	8.0	8.0	8.3	8.3	8.3	0.0	0.0	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:	10.0	10.0	10.0	8.0	8.0	8.0	8.3	8.3	8.3	0.0	0.0	0.0
LOS by Move:	B	B	B	A	A	A	A	A	A	*	*	*
ApproachDel:		10.0			8.0			8.3			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		10.0			8.0			8.3			xxxxxx	
LOS by Appr:		B			A			A			*	
AllWayAvgQ:	17.2	17.2	17.2	3.8	3.8	3.8	2.4	2.4	2.4	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	14	322	22	11	84	16	23	35	11	0	0	0

Major Street Volume: 469
Minor Approach Volume: 69
Minor Approach Volume Threshold: 421

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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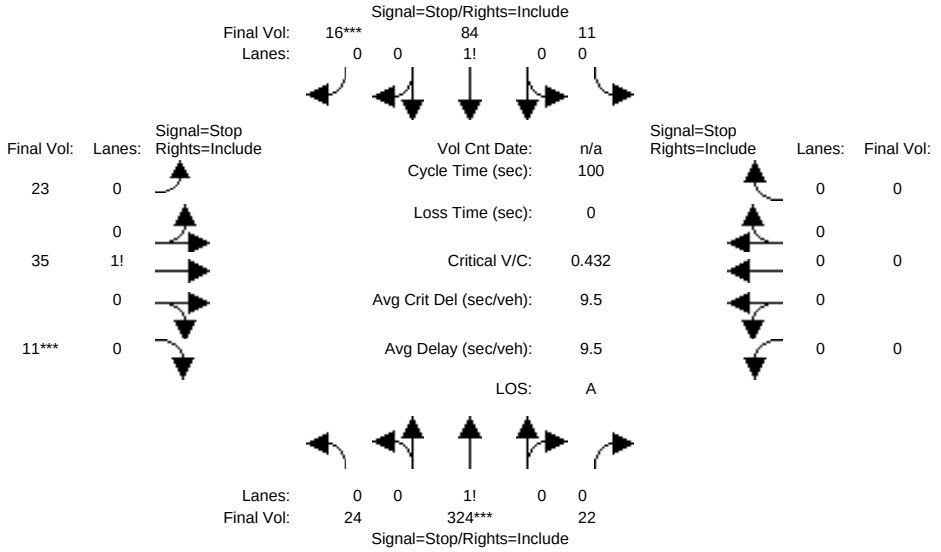
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background + Project PM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	14	322	22	11	84	16	23	35	11	0	0	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:	14	322	22	11	84	16	23	35	11	0	0	0
Added Vol:	10	2	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:	24	324	22	11	84	16	23	35	11	0	0	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:	24	324	22	11	84	16	23	35	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	324	22	11	84	16	23	35	11	0	0	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:	24	324	22	11	84	16	23	35	11	0	0	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:	0.06	0.88	0.06	0.10	0.76	0.14	0.33	0.51	0.16	0.00	0.00	0.00
Final Sat.:	56	749	51	80	609	116	229	349	110	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.43	0.43	0.43	0.14	0.14	0.14	0.10	0.10	0.10	xxxx	xxxx	xxxx
Crit Moves:		****				****			****			
Delay/Veh:	10.2	10.2	10.2	8.0	8.0	8.0	8.3	8.3	8.3	0.0	0.0	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:	10.2	10.2	10.2	8.0	8.0	8.0	8.3	8.3	8.3	0.0	0.0	0.0
LOS by Move:	B	B	B	A	A	A	A	A	A	*	*	*
ApproachDel:		10.2			8.0			8.3			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		10.2			8.0			8.3			xxxxxx	
LOS by Appr:		B			A			A			*	
AllWayAvgQ:	18.2	18.2	18.2	3.8	3.8	3.8	2.4	2.4	2.4	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	24	324	22	11	84	16	23	35	11	0	0	0

Major Street Volume: 481
Minor Approach Volume: 69
Minor Approach Volume Threshold: 415

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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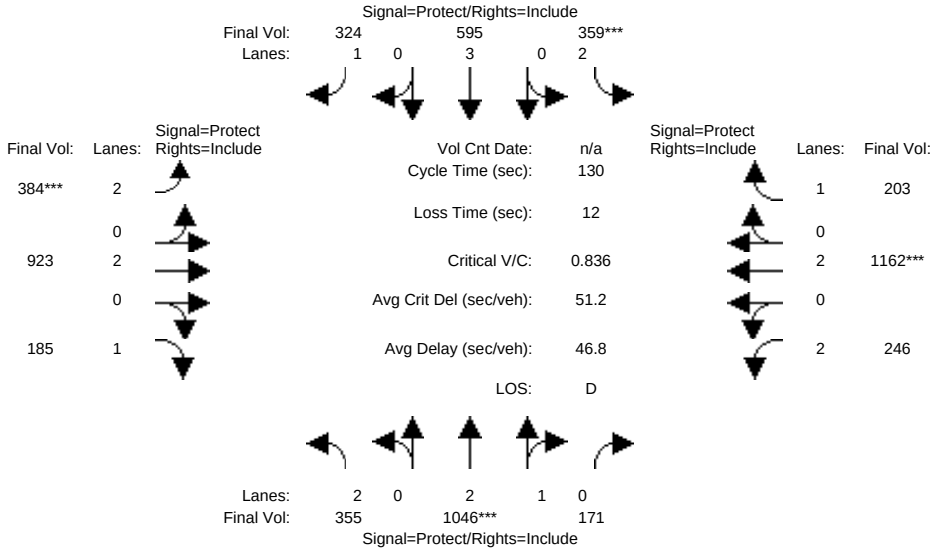
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



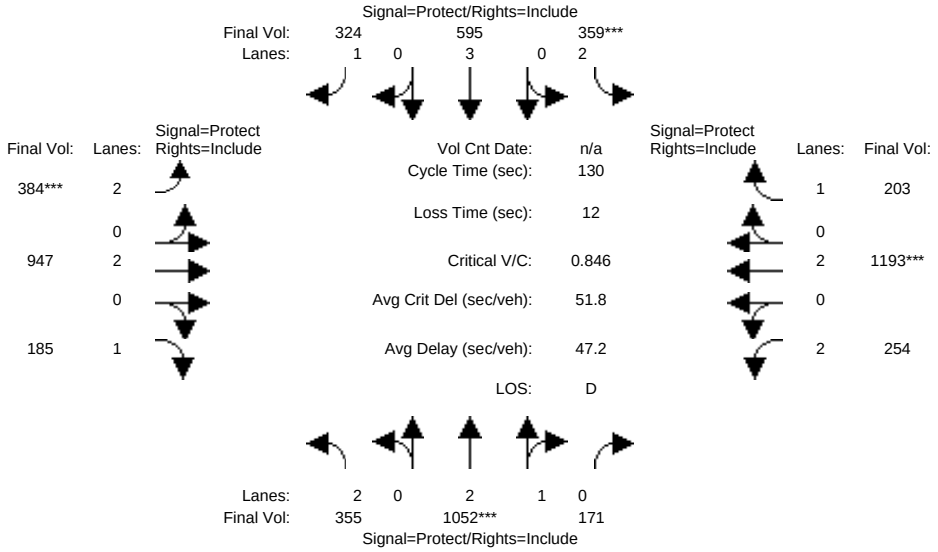
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	355	1046	171	359	595	324	384	923	185	246	1162	203
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:	355	1046	171	359	595	324	384	923	185	246	1162	203
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:	355	1046	171	359	595	324	384	923	185	246	1162	203
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:	355	1046	171	359	595	324	384	923	185	246	1162	203
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	355	1046	171	359	595	324	384	923	185	246	1162	203
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:	355	1046	171	359	595	324	384	923	185	246	1162	203
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.56	0.44	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4812	787	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.22	0.22	0.11	0.10	0.19	0.12	0.24	0.11	0.08	0.31	0.12
Crit Moves:		****		****			****				****	
Green Time:	19.5	33.8	33.8	17.7	32.0	32.0	19.0	50.3	50.3	16.2	47.5	47.5
Volume/Cap:	0.75	0.84	0.84	0.84	0.42	0.75	0.84	0.63	0.27	0.63	0.84	0.32
Delay/Veh:	59.6	49.9	49.9	68.1	41.4	52.6	66.6	33.1	27.5	57.3	42.3	29.9
User DelAdj:	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:	59.6	49.9	49.9	68.1	41.4	52.6	66.6	33.1	27.5	57.3	42.3	29.9
LOS by Move:	E+	D	D	E	D	D-	E	C-	C	E+	D	C
HCM2kAvgQ:	245	446	446	270	169	358	285	378	134	164	579	154

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



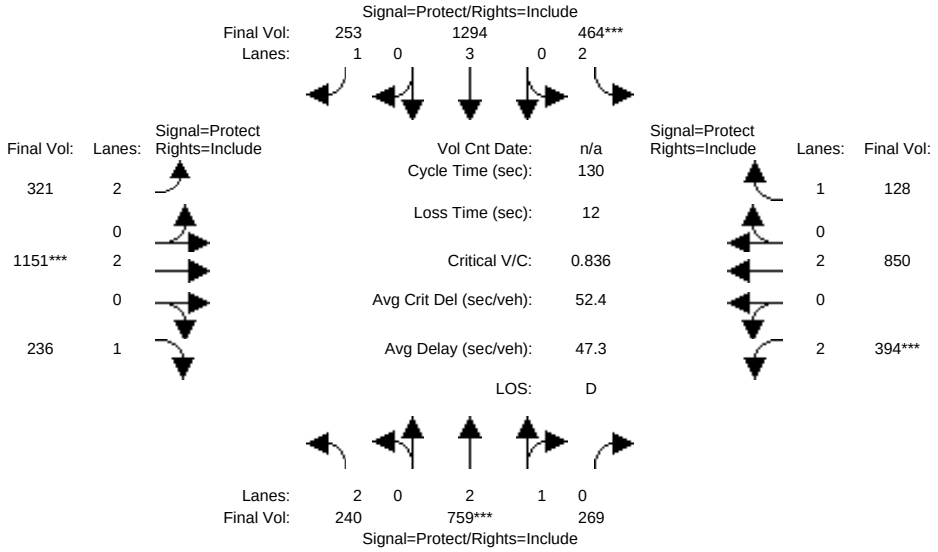
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	355	1046	171	359	595	324	384	923	185	246	1162	203
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:	355	1046	171	359	595	324	384	923	185	246	1162	203
Added Vol:	0	6	0	0	0	0	0	24	0	8	31	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	355	1052	171	359	595	324	384	947	185	254	1193	203
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:	355	1052	171	359	595	324	384	947	185	254	1193	203
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	355	1052	171	359	595	324	384	947	185	254	1193	203
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:	355	1052	171	359	595	324	384	947	185	254	1193	203
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.57	0.43	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4816	783	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.22	0.22	0.11	0.10	0.19	0.12	0.25	0.11	0.08	0.31	0.12
Crit Moves:		****		****			****				****	
Green Time:	19.3	33.6	33.6	17.5	31.7	31.7	18.7	50.6	50.6	16.4	48.2	48.2
Volume/Cap:	0.76	0.85	0.85	0.85	0.43	0.76	0.85	0.64	0.27	0.64	0.85	0.31
Delay/Veh:	60.1	50.6	50.6	69.5	41.7	53.3	68.0	33.3	27.3	57.5	42.4	29.4
User DelAdj:	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:	60.1	50.6	50.6	69.5	41.7	53.3	68.0	33.3	27.3	57.5	42.4	29.4
LOS by Move:	E	D	D	E	D	D-	E	C-	C	E+	D	C
HCM2kAvgQ:	246	453	453	273	169	361	288	390	133	170	599	153

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



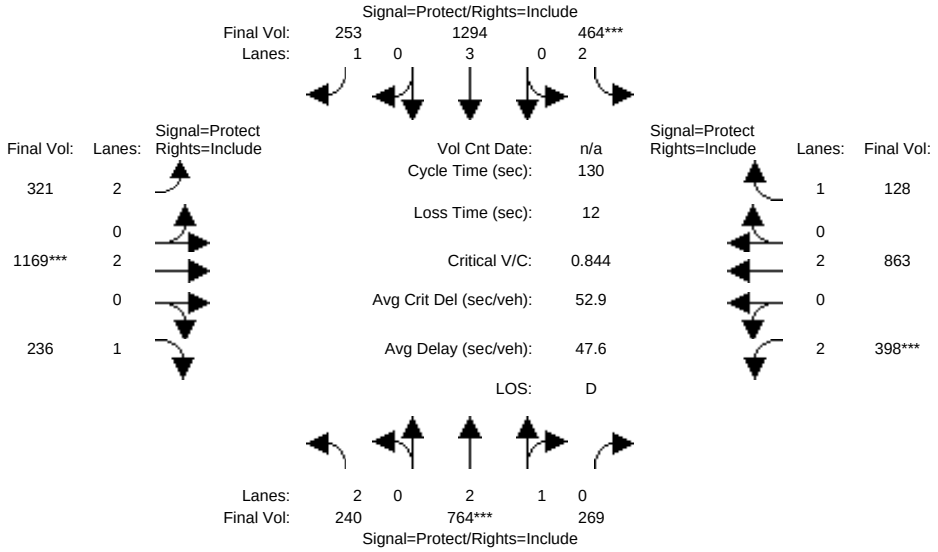
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	240	759	269	464	1294	253	321	1151	236	394	850	128
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:	240	759	269	464	1294	253	321	1151	236	394	850	128
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:	240	759	269	464	1294	253	321	1151	236	394	850	128
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:	240	759	269	464	1294	253	321	1151	236	394	850	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	240	759	269	464	1294	253	321	1151	236	394	850	128
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:	240	759	269	464	1294	253	321	1151	236	394	850	128
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.19	0.81	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4133	1465	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.18	0.15	0.23	0.14	0.10	0.30	0.13	0.13	0.22	0.07
Crit Moves:		****		****				****		****		
Green Time:	12.9	28.6	28.6	22.9	38.5	38.5	20.8	47.1	47.1	19.4	45.7	45.7
Volume/Cap:	0.77	0.84	0.84	0.84	0.77	0.49	0.64	0.84	0.37	0.84	0.64	0.21
Delay/Veh:	67.8	53.6	53.6	62.4	43.8	38.3	53.7	42.6	30.9	66.0	36.2	29.6
User DelAdj:	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:	67.8	53.6	53.6	62.4	43.8	38.3	53.7	42.6	30.9	66.0	36.2	29.6
LOS by Move:	E	D-	D-	E	D	D+	D-	D	C	E	D+	C
HCM2kAvgQ:	185	391	391	329	424	227	203	575	185	290	362	94

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



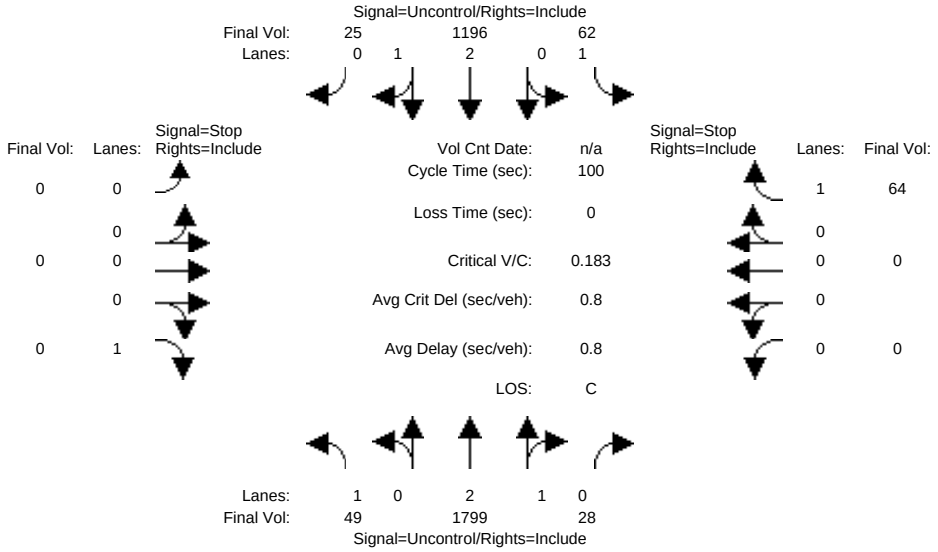
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	240	759	269	464	1294	253	321	1151	236	394	850	128
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:	240	759	269	464	1294	253	321	1151	236	394	850	128
Added Vol:	0	5	0	0	0	0	0	18	0	4	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	240	764	269	464	1294	253	321	1169	236	398	863	128
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:	240	764	269	464	1294	253	321	1169	236	398	863	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	240	764	269	464	1294	253	321	1169	236	398	863	128
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:	240	764	269	464	1294	253	321	1169	236	398	863	128
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.19	0.81	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4140	1458	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.18	0.15	0.23	0.14	0.10	0.31	0.13	0.13	0.23	0.07
Crit Moves:		****		****				****		****		
Green Time:	12.8	28.4	28.4	22.7	38.3	38.3	20.7	47.4	47.4	19.5	46.2	46.2
Volume/Cap:	0.77	0.84	0.84	0.84	0.77	0.49	0.64	0.84	0.37	0.84	0.64	0.21
Delay/Veh:	68.4	54.2	54.2	63.3	44.1	38.6	53.9	42.8	30.7	66.8	36.0	29.3
User DelAdj:	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:	68.4	54.2	54.2	63.3	44.1	38.6	53.9	42.8	30.7	66.8	36.0	29.3
LOS by Move:	E	D-	D-	E	D	D+	D-	D	C	E	D+	C
HCM2kAvgQ:	186	396	396	332	427	228	203	588	184	295	367	94

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background AM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	49	1799	28	62	1196	25	0	0	0	0	0	64
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:	49	1799	28	62	1196	25	0	0	0	0	0	64
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	1799	28	62	1196	25	0	0	0	0	0	64
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	1799	28	62	1196	25	0	0	0	0	0	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	49	1799	28	62	1196	25	0	0	0	0	0	64
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	1221	xxxx	xxxxx	1827	xxxx	xxxxx	xxxx	xxxx	411	xxxx	xxxx	614
Potent Cap.:	578	xxxx	xxxxx	339	xxxx	xxxxx	xxxx	xxxx	595	xxxx	xxxx	440
Move Cap.:	578	xxxx	xxxxx	339	xxxx	xxxxx	xxxx	xxxx	595	xxxx	xxxx	440
Volume/Cap:	0.08	xxxx	xxxx	0.18	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.15
Level Of Service Module:												
2Way95thQ:	6.9	xxxx	xxxxx	16.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	12.6
Control Del:	11.8	xxxx	xxxxx	18.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.6
LOS by Move:	B	*	*	C	*	*	*	*	*	*	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.6		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 0 0 1			0 0 0 0 1		
Initial Vol:	49	1799	28	62	1196	25	0	0	0	0	0	64
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.6		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3223]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 0 0 1			0 0 0 0 1		
Initial Vol:	49	1799	28	62	1196	25	0	0	0	0	0	64

Major Street Volume: 3159
Minor Approach Volume: 64
Minor Approach Volume Threshold: -111 [less than minimum of 100]

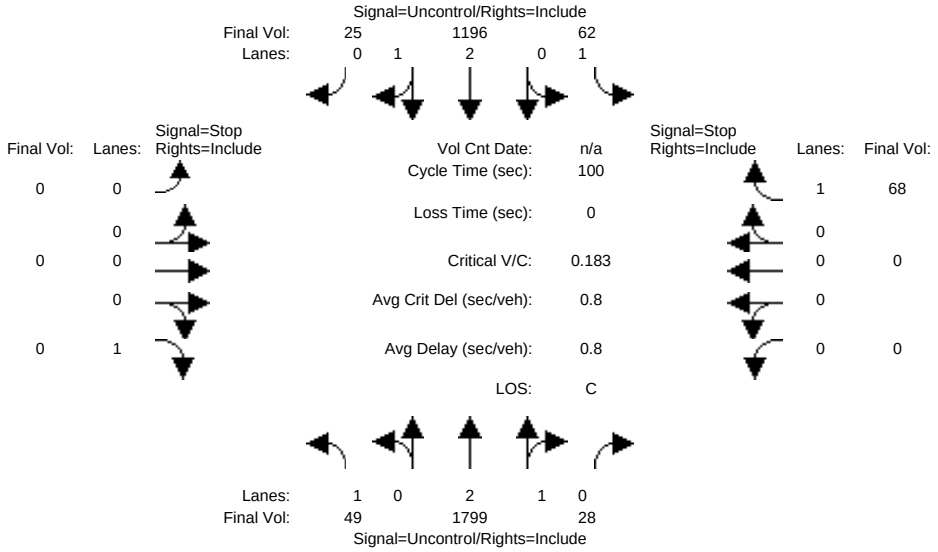
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	49	1799	28	62	1196	25	0	0	0	0	0	64
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:	49	1799	28	62	1196	25	0	0	0	0	0	64
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	49	1799	28	62	1196	25	0	0	0	0	0	68
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	1799	28	62	1196	25	0	0	0	0	0	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	49	1799	28	62	1196	25	0	0	0	0	0	68
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	1221	xxxx	xxxxx	1827	xxxx	xxxxx	xxxx	xxxx	411	xxxx	xxxx	614
Potent Cap.:	578	xxxx	xxxxx	339	xxxx	xxxxx	xxxx	xxxx	595	xxxx	xxxx	440
Move Cap.:	578	xxxx	xxxxx	339	xxxx	xxxxx	xxxx	xxxx	595	xxxx	xxxx	440
Volume/Cap:	0.08	xxxx	xxxx	0.18	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.15
Level Of Service Module:												
2Way95thQ:	6.9	xxxx	xxxxx	16.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	13.6
Control Del:	11.8	xxxx	xxxxx	18.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.7
LOS by Move:	B	*	*	C	*	*	*	*	*	*	*	B
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.7		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 0 0 1			0 0 0 0 1		
Initial Vol:	49	1799	28	62	1196	25	0	0	0	0	0	68
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.7		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=68]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3227]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 0 0 1			0 0 0 0 1		
Initial Vol:	49	1799	28	62	1196	25	0	0	0	0	0	68

Major Street Volume: 3159
Minor Approach Volume: 68
Minor Approach Volume Threshold: -111 [less than minimum of 100]

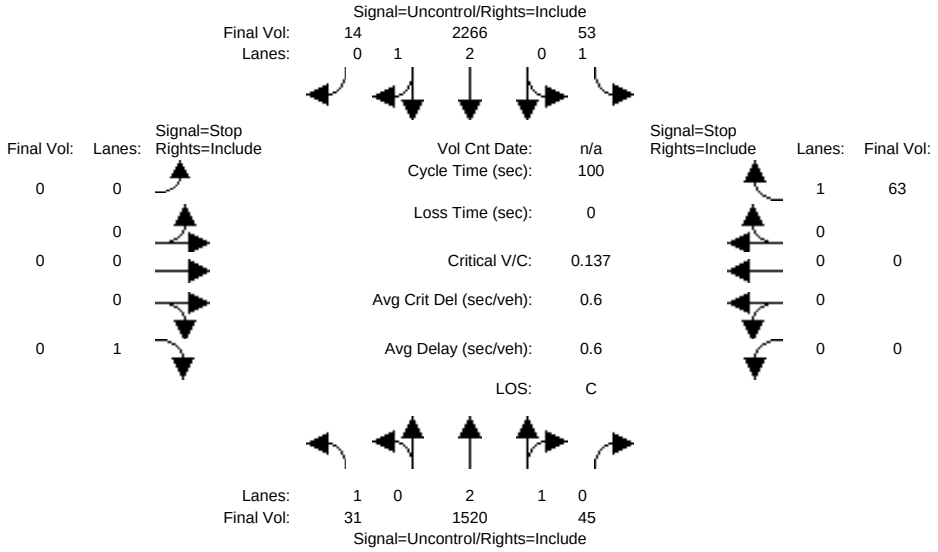
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background PM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	31	1520	45	53	2266	14	0	0	0	0	0	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:	31	1520	45	53	2266	14	0	0	0	0	0	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:	31	1520	45	53	2266	14	0	0	0	0	0	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:	31	1520	45	53	2266	14	0	0	0	0	0	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	31	1520	45	53	2266	14	0	0	0	0	0	63
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	2280	xxxx	xxxxx	1565	xxxx	xxxxx	xxxx	xxxx	762	xxxx	xxxx	529
Potent Cap.:	226	xxxx	xxxxx	428	xxxx	xxxxx	xxxx	xxxx	352	xxxx	xxxx	499
Move Cap.:	226	xxxx	xxxxx	428	xxxx	xxxxx	xxxx	xxxx	352	xxxx	xxxx	499
Volume/Cap:	0.14	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.13
Level Of Service Module:												
2Way95thQ:	11.7	xxxx	xxxxx	10.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	10.7
Control Del:	23.4	xxxx	xxxxx	14.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.2
LOS by Move:	C	*	*	B	*	*	*	*	*	*	*	B
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.2		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	31 1520	45		53 2266	14		0	0	0	0	0	63
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.2		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=63]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3992]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	31 1520	45		53 2266	14		0	0	0	0	0	63

Major Street Volume: 3929
Minor Approach Volume: 63
Minor Approach Volume Threshold: -187 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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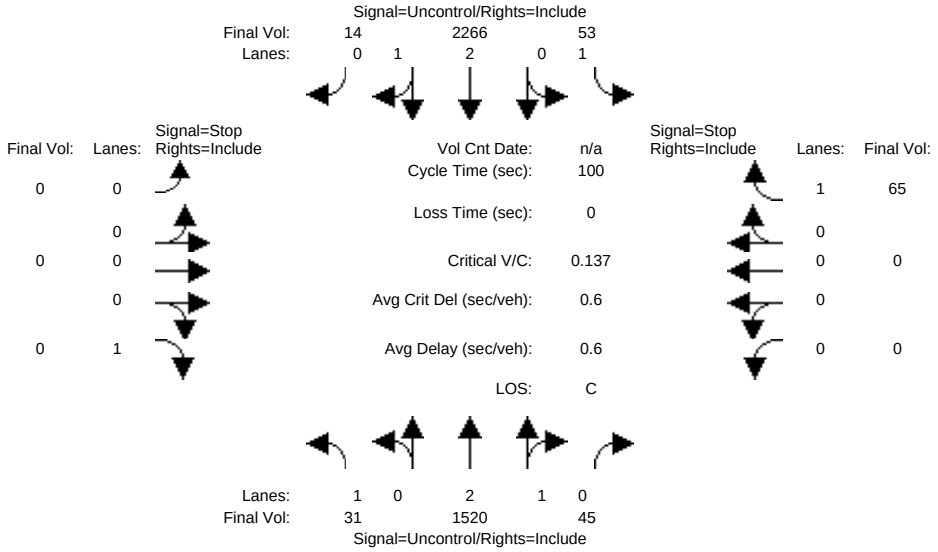
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	31	1520	45	53	2266	14	0	0	0	0	0	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:	31	1520	45	53	2266	14	0	0	0	0	0	63
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:	31	1520	45	53	2266	14	0	0	0	0	0	65
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	1520	45	53	2266	14	0	0	0	0	0	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	31	1520	45	53	2266	14	0	0	0	0	0	65
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	2280	xxxx	xxxxx	1565	xxxx	xxxxx	xxxx	xxxx	762	xxxx	xxxx	529
Potent Cap.:	226	xxxx	xxxxx	428	xxxx	xxxxx	xxxx	xxxx	352	xxxx	xxxx	499
Move Cap.:	226	xxxx	xxxxx	428	xxxx	xxxxx	xxxx	xxxx	352	xxxx	xxxx	499
Volume/Cap:	0.14	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.13
Level Of Service Module:												
2Way95thQ:	11.7	xxxx	xxxxx	10.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	11.1
Control Del:	23.4	xxxx	xxxxx	14.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.3
LOS by Move:	C	*	*	B	*	*	*	*	*	*	*	B
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.3		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	31 1520	45		53 2266	14		0	0	0	0	0	65
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.3		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=65]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3994]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	31 1520	45		53 2266	14		0	0	0	0	0	65

Major Street Volume: 3929
Minor Approach Volume: 65
Minor Approach Volume Threshold: -187 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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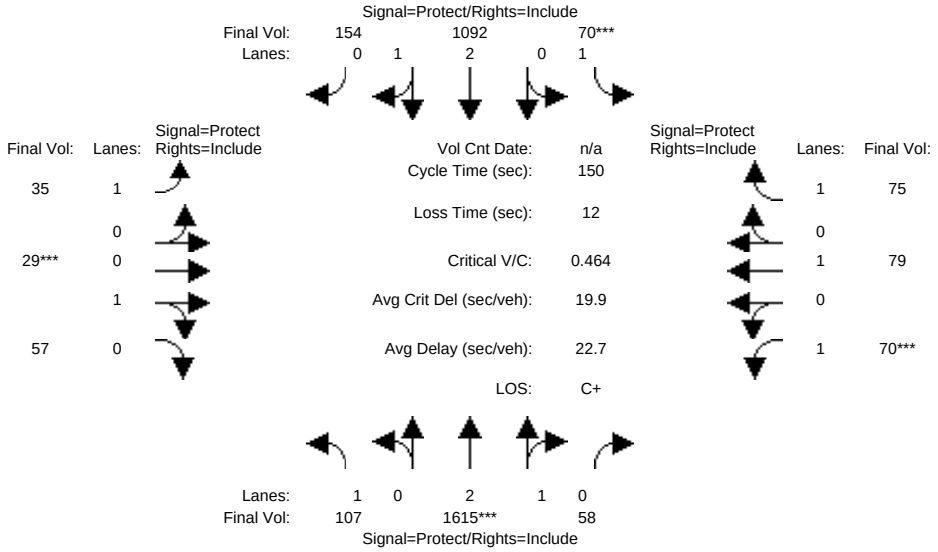
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #7: El Camino Real/ California Ave



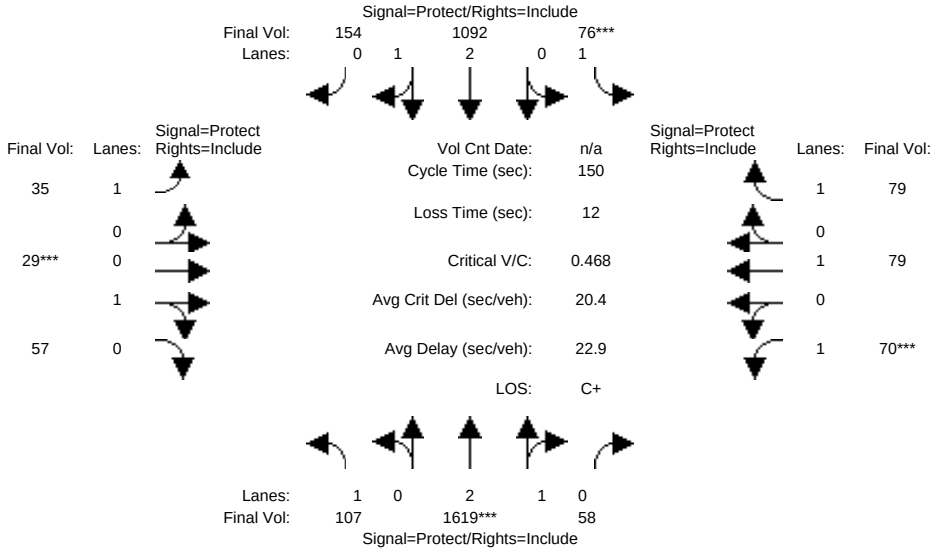
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	107	1615	58	70	1092	154	35	29	57	70	79	75
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:	107	1615	58	70	1092	154	35	29	57	70	79	75
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:	107	1615	58	70	1092	154	35	29	57	70	79	75
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:	107	1615	58	70	1092	154	35	29	57	70	79	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	1615	58	70	1092	154	35	29	57	70	79	75
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:	107	1615	58	70	1092	154	35	29	57	70	79	75
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.99	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.89	0.11	1.00	2.62	0.38	1.00	0.34	0.66	1.00	1.00	1.00
Final Sat.:	1750	5406	194	1750	4907	692	1750	607	1193	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.30	0.30	0.04	0.22	0.22	0.02	0.05	0.05	0.04	0.04	0.04
Crit Moves:		****		****				****		****		
Green Time:	23.6	96.7	96.7	12.9	86.0	86.0	11.7	15.5	15.5	12.9	16.7	16.7
Volume/Cap:	0.39	0.46	0.46	0.46	0.39	0.39	0.26	0.46	0.46	0.46	0.37	0.38
Delay/Veh:	57.6	13.6	13.6	67.5	17.7	17.7	66.1	65.2	65.2	67.5	62.9	63.1
User DelAdj:	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:	57.6	13.6	13.6	67.5	17.7	17.7	66.1	65.2	65.2	67.5	62.9	63.1
LOS by Move:	E+	B	B	E	B	B	E	E	E	E	E	E
HCM2kAvgQ:	124	321	321	95	258	258	46	109	109	95	91	94

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #7: El Camino Real/ California Ave



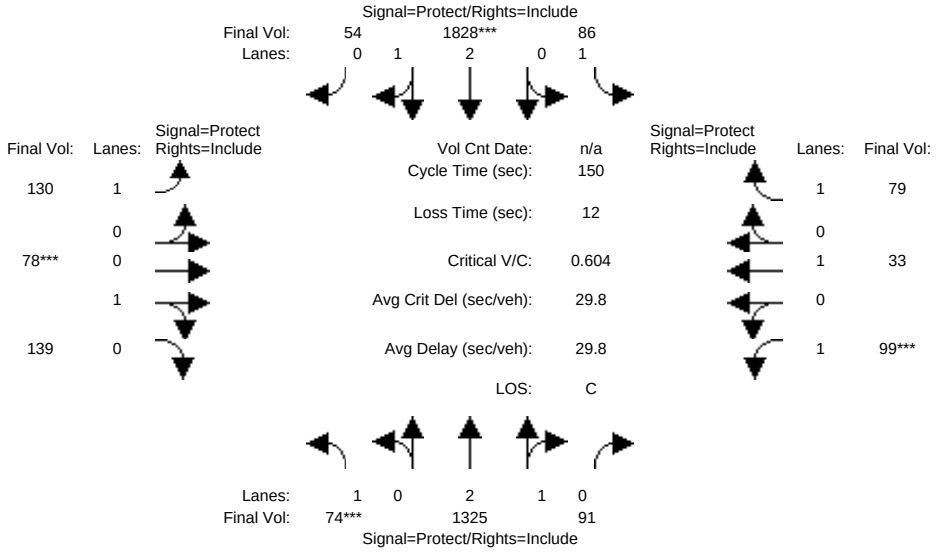
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	107	1615	58	70	1092	154	35	29	57	70	79	75
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:	107	1615	58	70	1092	154	35	29	57	70	79	75
Added Vol:	0	4	0	6	0	0	0	0	0	0	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	107	1619	58	76	1092	154	35	29	57	70	79	79
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:	107	1619	58	76	1092	154	35	29	57	70	79	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	1619	58	76	1092	154	35	29	57	70	79	79
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:	107	1619	58	76	1092	154	35	29	57	70	79	79
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.99	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.89	0.11	1.00	2.62	0.38	1.00	0.34	0.66	1.00	1.00	1.00
Final Sat.:	1750	5406	194	1750	4907	692	1750	607	1193	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.30	0.30	0.04	0.22	0.22	0.02	0.05	0.05	0.04	0.04	0.05
Crit Moves:		****		****				****		****		
Green Time:	23.7	96.0	96.0	13.9	86.2	86.2	11.6	15.3	15.3	12.8	16.5	16.5
Volume/Cap:	0.39	0.47	0.47	0.47	0.39	0.39	0.26	0.47	0.47	0.47	0.38	0.41
Delay/Veh:	57.6	14.0	14.0	66.7	17.5	17.5	66.2	65.4	65.4	67.7	63.1	63.6
User DelAdj:	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:	57.6	14.0	14.0	66.7	17.5	17.5	66.2	65.4	65.4	67.7	63.1	63.6
LOS by Move:	E+	B	B	E	B	B	E	E	E	E	E	E
HCM2kAvgQ:	124	327	327	102	257	257	46	110	110	96	91	100

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #7: El Camino Real/ California Ave



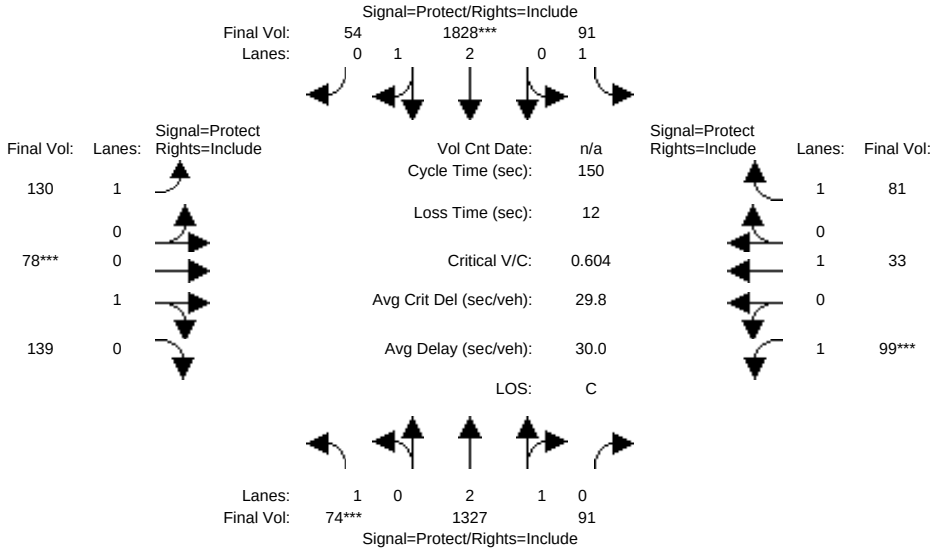
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	74	1325	91	86	1828	54	130	78	139	99	33	79
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:	74	1325	91	86	1828	54	130	78	139	99	33	79
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:	74	1325	91	86	1828	54	130	78	139	99	33	79
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:	74	1325	91	86	1828	54	130	78	139	99	33	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	1325	91	86	1828	54	130	78	139	99	33	79
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:	74	1325	91	86	1828	54	130	78	139	99	33	79
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.80	0.20	1.00	2.91	0.09	1.00	0.36	0.64	1.00	1.00	1.00
Final Sat.:	1750	5240	360	1750	5439	161	1750	647	1153	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.25	0.25	0.05	0.34	0.34	0.07	0.12	0.12	0.06	0.02	0.05
Crit Moves:	****				****			****			****	
Green Time:	10.5	78.7	78.7	15.3	83.5	83.5	23.2	29.9	29.9	14.1	20.8	20.8
Volume/Cap:	0.60	0.48	0.48	0.48	0.60	0.60	0.48	0.60	0.60	0.60	0.13	0.33
Delay/Veh:	76.0	22.8	22.8	65.7	22.5	22.5	59.2	57.5	57.5	71.5	56.8	59.0
User DelAdj:	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:	76.0	22.8	22.8	65.7	22.5	22.5	59.2	57.5	57.5	71.5	56.8	59.0
LOS by Move:	E-	C+	C+	E	C+	C+	E+	E+	E+	E	E+	E+
HCM2kAvgQ:	113	341	341	114	481	481	156	253	253	141	34	92

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #7: El Camino Real/ California Ave



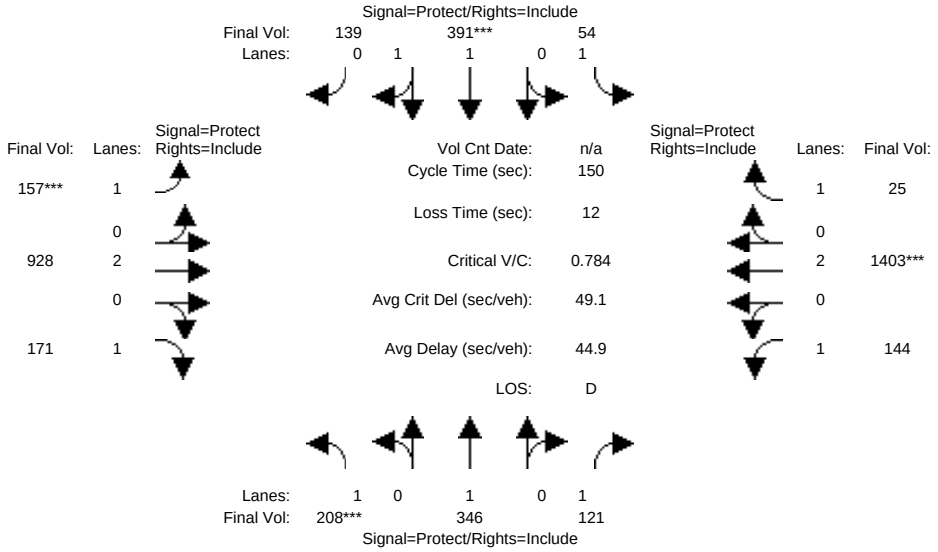
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	74	1325	91	86	1828	54	130	78	139	99	33	79
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:	74	1325	91	86	1828	54	130	78	139	99	33	79
Added Vol:	0	2	0	5	0	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	74	1327	91	91	1828	54	130	78	139	99	33	81
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:	74	1327	91	91	1828	54	130	78	139	99	33	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	1327	91	91	1828	54	130	78	139	99	33	81
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:	74	1327	91	91	1828	54	130	78	139	99	33	81
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.80	0.20	1.00	2.91	0.09	1.00	0.36	0.64	1.00	1.00	1.00
Final Sat.:	1750	5240	359	1750	5439	161	1750	647	1153	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.25	0.25	0.05	0.34	0.34	0.07	0.12	0.12	0.06	0.02	0.05
Crit Moves:	****				****			****			****	
Green Time:	10.5	78.0	78.0	16.0	83.5	83.5	23.2	29.9	29.9	14.1	20.8	20.8
Volume/Cap:	0.60	0.49	0.49	0.49	0.60	0.60	0.48	0.60	0.60	0.60	0.13	0.33
Delay/Veh:	76.0	23.3	23.3	65.1	22.5	22.5	59.2	57.5	57.5	71.5	56.8	59.1
User DelAdj:	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:	76.0	23.3	23.3	65.1	22.5	22.5	59.2	57.5	57.5	71.5	56.8	59.1
LOS by Move:	E-	C	C	E	C+	C+	E+	E+	E+	E	E+	E+
HCM2kAvgQ:	113	346	346	119	481	481	156	253	253	141	34	95

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #8: Middlefield Rd/ Oregon Expwy



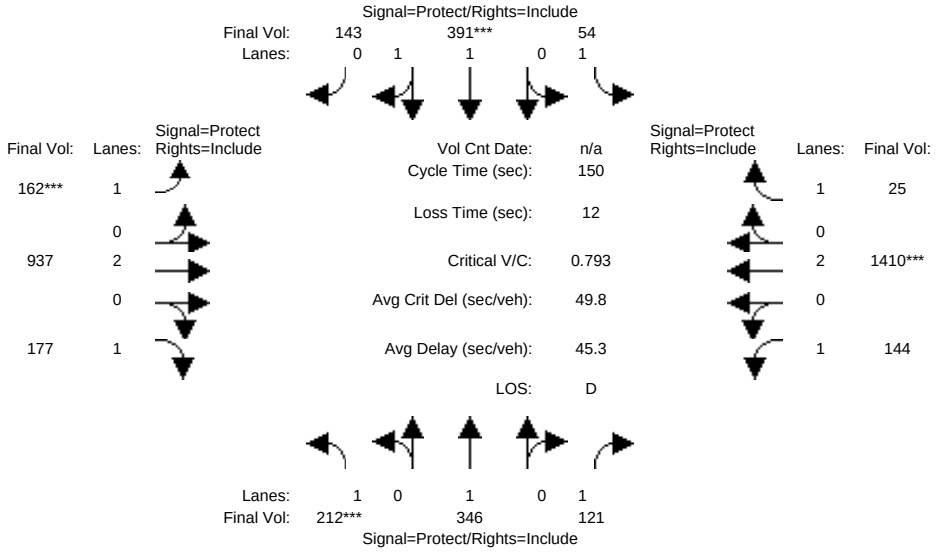
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	208	346	121	54	391	139	157	928	171	144	1403	25
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:	208	346	121	54	391	139	157	928	171	144	1403	25
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:	208	346	121	54	391	139	157	928	171	144	1403	25
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:	208	346	121	54	391	139	157	928	171	144	1403	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	346	121	54	391	139	157	928	171	144	1403	25
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:	208	346	121	54	391	139	157	928	171	144	1403	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.46	0.54	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	2729	970	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.18	0.07	0.03	0.14	0.14	0.09	0.24	0.10	0.08	0.37	0.01
Crit Moves:	****				****		****				****	
Green Time:	22.7	39.9	39.9	10.2	27.4	27.4	17.2	65.7	65.7	22.1	70.7	70.7
Volume/Cap:	0.78	0.68	0.26	0.45	0.78	0.78	0.78	0.56	0.22	0.56	0.78	0.03
Delay/Veh:	75.4	53.2	43.7	69.9	64.4	64.4	82.7	31.8	26.4	62.1	35.6	21.3
User DelAdj:	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:	75.4	53.2	43.7	69.9	64.4	64.4	82.7	31.8	26.4	62.1	35.6	21.3
LOS by Move:	E-	D-	D	E	E	E	F	C	C	E	D+	C+
HCM2kAvgQ:	294	373	117	78	340	340	236	390	128	181	693	16

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #8: Middlefield Rd/ Oregon Expwy



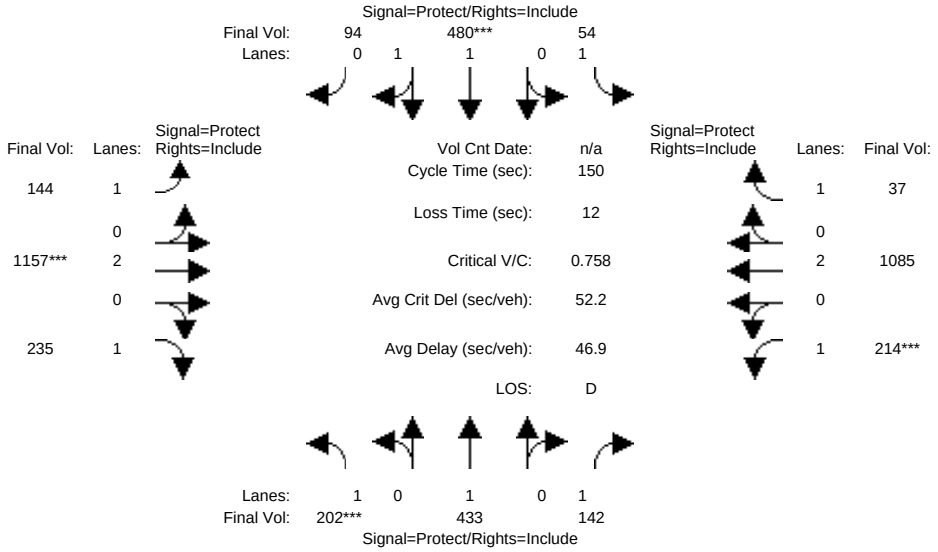
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	208	346	121	54	391	139	157	928	171	144	1403	25
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:	208	346	121	54	391	139	157	928	171	144	1403	25
Added Vol:	4	0	0	0	0	4	5	9	6	0	7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	212	346	121	54	391	143	162	937	177	144	1410	25
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:	212	346	121	54	391	143	162	937	177	144	1410	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	346	121	54	391	143	162	937	177	144	1410	25
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:	212	346	121	54	391	143	162	937	177	144	1410	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.45	0.55	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	2708	991	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.18	0.07	0.03	0.14	0.14	0.09	0.25	0.10	0.08	0.37	0.01
Crit Moves:	****				****		****				****	
Green Time:	22.9	40.0	40.0	10.3	27.3	27.3	17.5	65.8	65.8	22.0	70.2	70.2
Volume/Cap:	0.79	0.68	0.26	0.45	0.79	0.79	0.79	0.56	0.23	0.56	0.79	0.03
Delay/Veh:	76.1	53.1	43.6	69.9	65.0	65.0	83.2	31.8	26.5	62.4	36.2	21.5
User DelAdj:	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:	76.1	53.1	43.6	69.9	65.0	65.0	83.2	31.8	26.5	62.4	36.2	21.5
LOS by Move:	E-	D-	D	E	E	E	F	C	C	E	D+	C+
HCM2kAvgQ:	301	372	116	78	345	345	244	395	132	181	704	16

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #8: Middlefield Rd/ Oregon Expwy



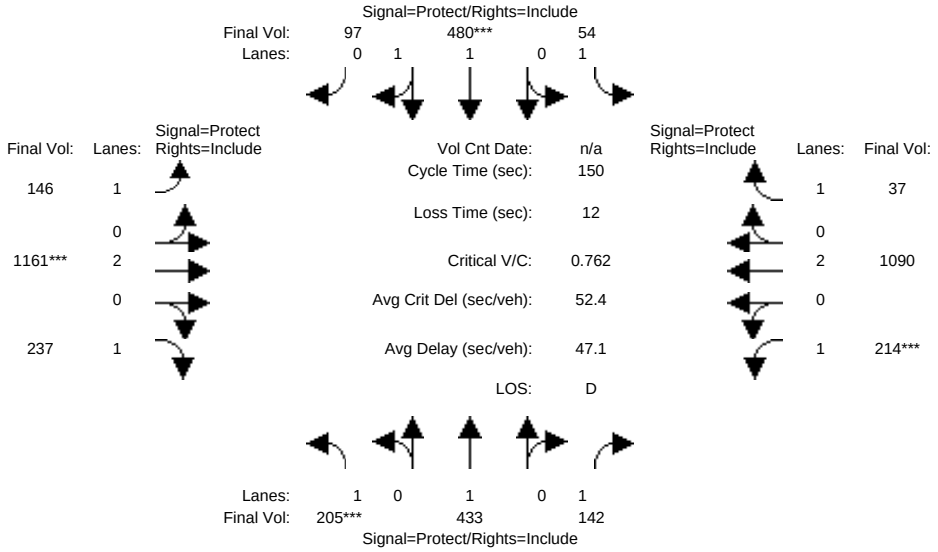
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	202	433	142	54	480	94	144	1157	235	214	1085	37
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:	202	433	142	54	480	94	144	1157	235	214	1085	37
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:	202	433	142	54	480	94	144	1157	235	214	1085	37
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:	202	433	142	54	480	94	144	1157	235	214	1085	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	202	433	142	54	480	94	144	1157	235	214	1085	37
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:	202	433	142	54	480	94	144	1157	235	214	1085	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.66	0.34	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	3094	606	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.23	0.08	0.03	0.16	0.16	0.08	0.30	0.13	0.12	0.29	0.02
Crit Moves:	****				****			****			****	
Green Time:	22.8	44.4	44.4	9.1	30.7	30.7	18.9	60.3	60.3	24.2	65.6	65.6
Volume/Cap:	0.76	0.77	0.27	0.51	0.76	0.76	0.65	0.76	0.33	0.76	0.65	0.05
Delay/Veh:	72.8	54.5	40.7	72.3	60.6	60.6	69.3	40.8	31.3	71.3	34.2	24.3
User DelAdj:	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:	72.8	54.5	40.7	72.3	60.6	60.6	69.3	40.8	31.3	71.3	34.2	24.3
LOS by Move:	E	D-	D	E	E	E	E	D	C	E	C-	C
HCM2kAvgQ:	280	482	132	82	353	353	196	588	196	293	490	25

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #8: Middlefield Rd/ Oregon Expwy



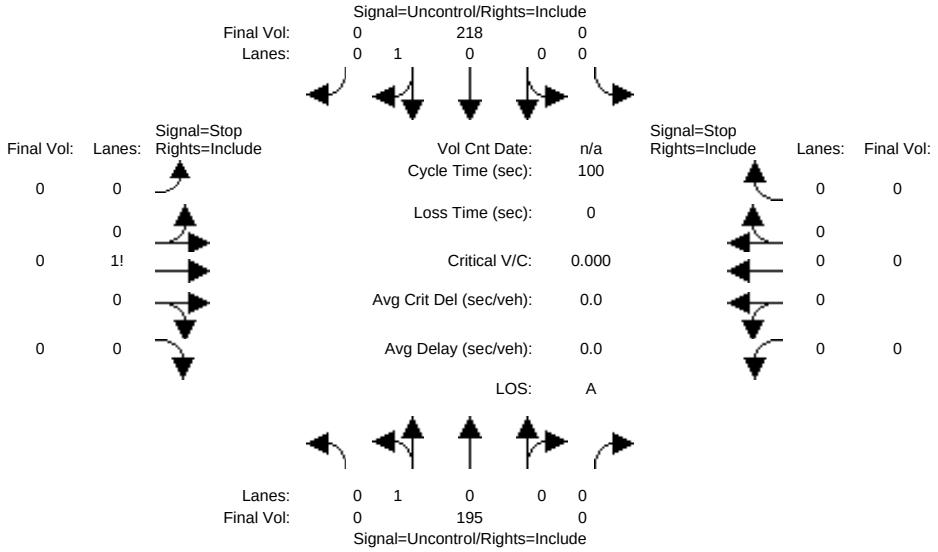
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	202	433	142	54	480	94	144	1157	235	214	1085	37
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:	202	433	142	54	480	94	144	1157	235	214	1085	37
Added Vol:	3	0	0	0	0	3	2	4	2	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	205	433	142	54	480	97	146	1161	237	214	1090	37
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:	205	433	142	54	480	97	146	1161	237	214	1090	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	433	142	54	480	97	146	1161	237	214	1090	37
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:	205	433	142	54	480	97	146	1161	237	214	1090	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.65	0.35	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	3078	622	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.23	0.08	0.03	0.16	0.16	0.08	0.31	0.14	0.12	0.29	0.02
Crit Moves:	****				****			****		****		
Green Time:	23.1	44.6	44.6	9.1	30.7	30.7	19.0	60.2	60.2	24.1	65.3	65.3
Volume/Cap:	0.76	0.77	0.27	0.51	0.76	0.76	0.66	0.76	0.34	0.76	0.66	0.05
Delay/Veh:	72.9	54.2	40.6	72.2	60.8	60.8	69.6	41.1	31.4	71.8	34.6	24.5
User DelAdj:	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:	72.9	54.2	40.6	72.2	60.8	60.8	69.6	41.1	31.4	71.8	34.6	24.5
LOS by Move:	E	D-	D	E	E	E	E	D	C	E	C-	C
HCM2kAvgQ:	284	480	132	82	356	356	199	593	198	294	496	25

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background AM

Intersection #9: Park Blvd/ Access#1



Street Name: Park Blvd Access#1

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	195	0	0	218	0	0	0	0	0	0	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:	0	195	0	0	218	0	0	0	0	0	0	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:	0	195	0	0	218	0	0	0	0	0	0	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:	0	195	0	0	218	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	195	0	0	218	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	413	413	218	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	599	532	827	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	599	532	827	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	0 195	0		0 218	0		0 0	0		0 0	0	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Park Blvd/ Access#1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	0 195	0		0 218	0		0 0	0		0 0	0	

Major Street Volume: 413
Minor Approach Volume: 0
Minor Approach Volume Threshold: 455

SIGNAL WARRANT DISCLAIMER
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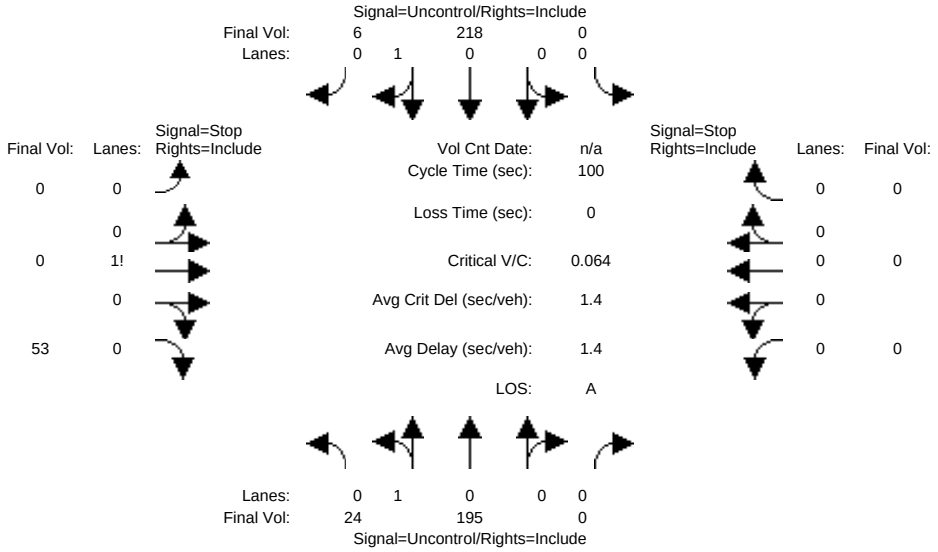
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #9: Park Blvd/ Access#1




```
Street Name:            Park Blvd                        Access#1
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  195     0     0  218     0     0    0     0     0    0     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:    0  195     0     0  218     0     0    0     0     0    0     0
Added Vol:     24    0     0     0    0     6     0    0    53     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   24  195     0     0  218     6     0    0    53     0    0     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:    24  195     0     0  218     6     0    0    53     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   24  195     0     0  218     6     0    0    53     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   6.2 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  224 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   221  xxxx xxxx xxxxx
Potent Cap.: 1357 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   824  xxxx xxxx xxxxx
Move Cap.:   1357 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   824  xxxx xxxx xxxxx
Volume/Cap:  0.02 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  0.06  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    1.4 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   5.1  xxxx xxxx xxxxx
Control Del:  7.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   9.7 xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     A     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:  0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  7.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx              9.7           xxxxxx
ApproachLOS:         *                *               A                *
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #9 Park Blvd/ Access#1
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	0 0	1	0 0	0 0	0
Initial Vol:	24	195	0	0	218	6	0	0	53	0	0	0
ApproachDel:	xxxxxx			xxxxxx			9.7			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=53]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=496]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	0 0	1	0 0	0 0	0
Initial Vol:	24	195	0	0	218	6	0	0	53	0	0	0

Major Street Volume: 443
Minor Approach Volume: 53
Minor Approach Volume Threshold: 437

SIGNAL WARRANT DISCLAIMER
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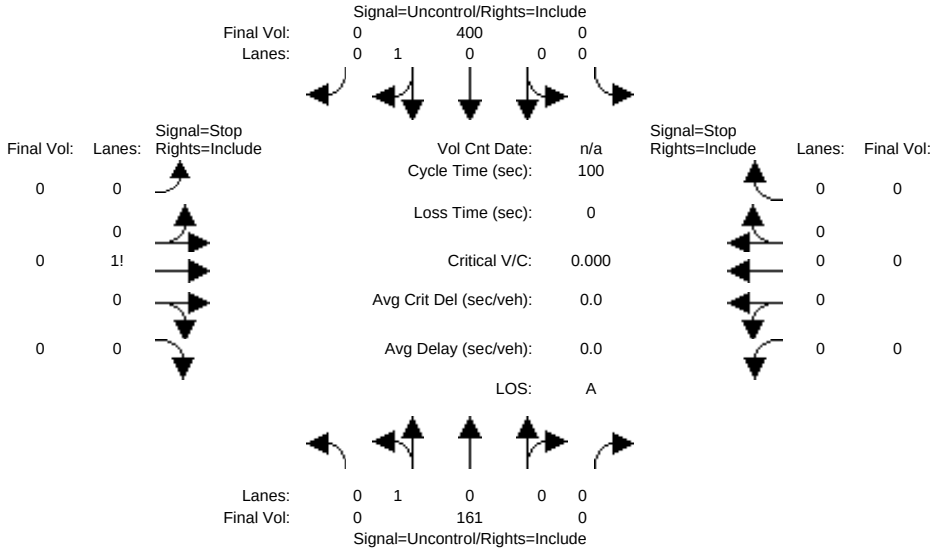
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background PM

Intersection #9: Park Blvd/ Access#1



Street Name:	Park Blvd						Access#1					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Volume Module:												
Base Vol:	0	161	0	0	400	0	0	0	0	0	0	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:	0	161	0	0	400	0	0	0	0	0	0	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:	0	161	0	0	400	0	0	0	0	0	0	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:	0	161	0	0	400	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	161	0	0	400	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	561	561	400	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	492	439	654	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	492	439	654	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	0 161		0	0 400		0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 0 1	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	0 161		0	0 400		0	0	0	0	0	0	0

Major Street Volume: 561
Minor Approach Volume: 0
Minor Approach Volume Threshold: 374

SIGNAL WARRANT DISCLAIMER
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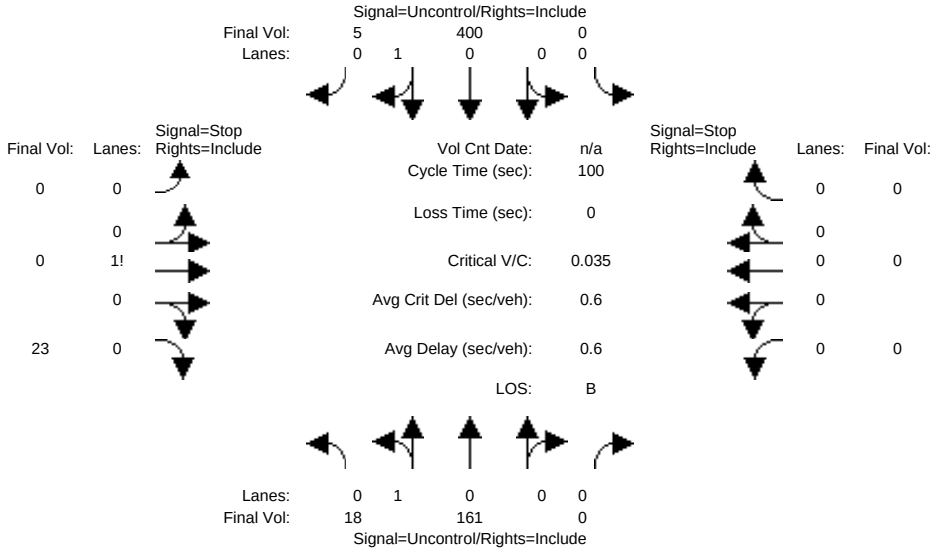
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #9: Park Blvd/ Access#1



Street Name:	Park Blvd						Access#1					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	161	0	0	400	0	0	0	0	0	0	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:	0	161	0	0	400	0	0	0	0	0	0	0
Added Vol:	18	0	0	0	0	5	0	0	23	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	161	0	0	400	5	0	0	23	0	0	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:	18	161	0	0	400	5	0	0	23	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	18	161	0	0	400	5	0	0	23	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	405	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	403	xxxx	xxxx	xxxxx
Potent Cap.:	1165	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	652	xxxx	xxxx	xxxxx
Move Cap.:	1165	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	652	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	1.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	2.7	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.7			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 0	0	1	0 0 0	0	0
Initial Vol:	18 161	0		0 400	5		0 0	23		0 0	0	
ApproachDel:	xxxxxx			xxxxxx			10.7			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=607]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 0	0	1	0 0 0	0	0
Initial Vol:	18 161	0		0 400	5		0 0	23		0 0	0	

Major Street Volume: 584
Minor Approach Volume: 23
Minor Approach Volume Threshold: 363

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

APPENDIX F

City of Palo Alto Comprehensive Plan 2030

Study Scenarios Summary

Comp Plan Key Characteristics

	Existing (2014)	Scenario 1 (2030)	Scenario 2 (2030)	Scenario 3 (2030)	Scenario 4 (2030)	Scenario 5 (2030)	Scenario 6 (2030)	Preferred Scenario - Low (2030)	Preferred Scenario - High (2030)	Preferred Scenario - Mid-Point (2030)	Preferred Scenario - Council Reduced (2030)	No Growth (2030)	
POPULATION													
Additional residents in City	--	6,599	6,599	8,436	10,455	8,436	14,078	8,432	10,455	9,444	9,444	1,233	
Additional residents in City + SOI	--	9,405	9,405	11,242	13,261	11,242	16,884	11,238	13,261	12,250	12,250	1,233	
Total in City	65,686	72,284	72,284	74,121	76,141	74,121	79,764	74,118	76,141	75,130	75,130	66,919	
Total in City + SOI	80,806	90,210	90,210	92,047	94,067	92,047	97,690	92,044	94,067	93,056	93,056	82,039	
Average household size in City	2.40	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.40	
Average household size in SOI	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
HOUSING													
Additional housing units in City	--	2,720	2,720	3,546	4,418	3,546	6,000	3,547	4,418	3,983	3,983	540	
Additional housing units in City + SOI	--	3,881	3,881	4,707	5,579	4,707	7,161	4,707	5,579	5,143	5,143	540	
Total in City	28,546	31,266	31,266	32,092	32,964	32,092	34,547	32,093	32,964	32,529	32,529	29,086	
Total in City and SOI	33,071	36,952	36,952	37,778	38,650	37,778	40,233	37,778	38,650	38,214	38,214	33,611	
JOBS													
Gain in City	--	15,482	9,853	12,758	15,482	8,869	8,869	9,853	11,500	10,677	7,321	3,882	
Total in City	95,458	110,940	105,311	108,216	110,940	104,327	104,327	105,311	106,958	106,135	102,779	99,340	*Note: assumes same SOI*
Total in City + SOI	100,829	116,700	111,071	113,977	116,700	110,087	110,087	111,072	112,719	111,895	108,539	104,711	*buildout as Scenarios 1-4*
EMPLOYED RESIDENTS													
City	31,165	34,696	34,696	35,578	36,548	35,578	38,287	35,577	36,548	36,062	36,062	32,121	
City + SOI	36,004	40,595	40,595	41,421	42,330	41,421	43,960	41,420	42,330	41,875	41,875	36,918	
JOBS/EMPLOYED RESIDENTS RATIO													
City	3.06	3.20	3.04	3.04	3.04	2.93	2.72	2.96	2.93	2.94	2.85	3.09	
City + SOI	2.80	2.87	2.74	2.75	2.76	2.66	2.50	2.68	2.66	2.67	2.59	2.84	

Date Modified: 5/26/2017

APPENDIX G

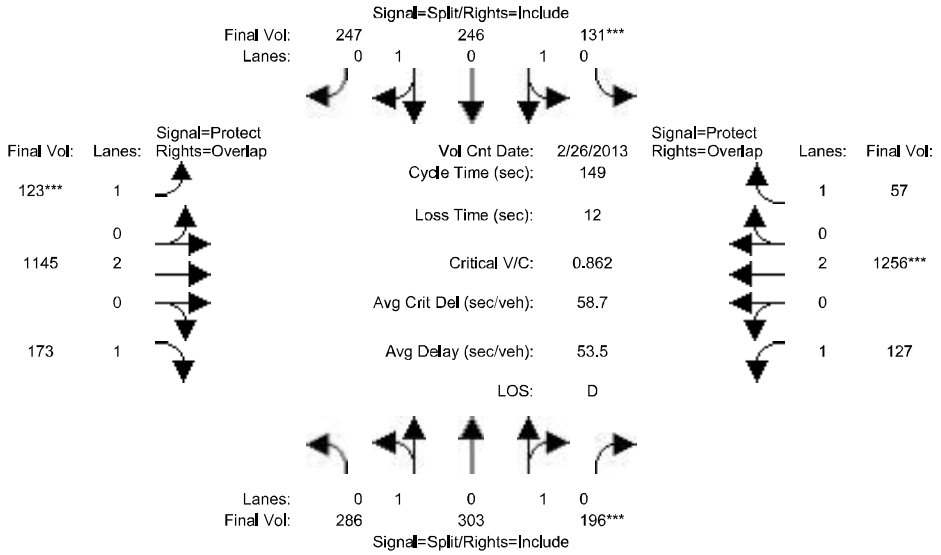
City of Palo Alto Comprehensive Plan 2030

Intersection Volumes

Comprehensive Plan Update TIA - November 2016
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Scenario 5 AM

Intersection #17: Middlefield Road & Oregon Expressway (CMP #5108)



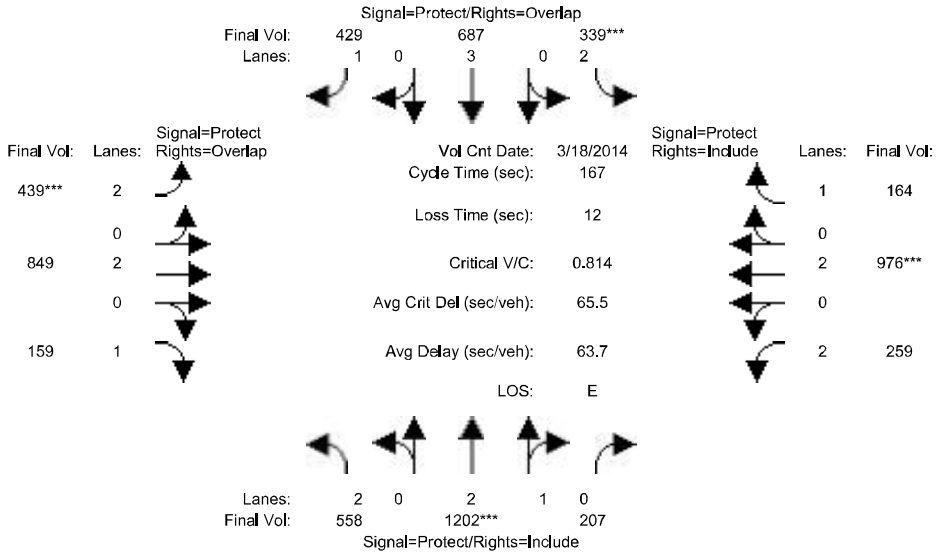
Street Name:	Middlefield Road						Oregon Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 26 Feb 2013 << AM												
Base Vol:	286	303	196	131	246	247	123	1145	173	127	1256	57
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:	286	303	196	131	246	247	123	1145	173	127	1256	57
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:	286	303	196	131	246	247	123	1145	173	127	1256	57
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:	286	303	196	131	246	247	123	1145	173	127	1256	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	286	303	196	131	246	247	123	1145	173	127	1256	57
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:	286	303	196	131	246	247	123	1145	173	127	1256	57
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.73	0.77	0.50	0.42	0.79	0.79	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1312	1390	899	756	1419	1425	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.22	0.17	0.17	0.17	0.07	0.30	0.10	0.07	0.33	0.03
Crit Moves:			****	****			****				****	
Green Time:	37.7	37.7	37.7	30.0	30.0	30.0	12.2	55.9	93.6	13.5	57.2	87.1
Volume/Cap:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.80	0.16	0.80	0.86	0.06
Delay/Veh:	61.6	61.6	61.6	67.8	67.8	67.8	105.6	45.1	11.5	91.4	47.8	13.3
User DelAdj:	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:	61.6	61.6	61.6	67.8	67.8	67.8	105.6	45.1	11.5	91.4	47.8	13.3
LOS by Move:	E	E	E	E	E	E	F	D	B	F	D	B
HCM2kAvgQ:	21	21	21	17	17	17	8	25	3	8	29	1

Note: Queue reported is the number of cars per lane.

Comprehensive Plan Update TIA - November 2016
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Scenario 5 AM

Intersection #6: El Camino Real & Page Mill Rd/Oregon Expwy (CMP #1104)



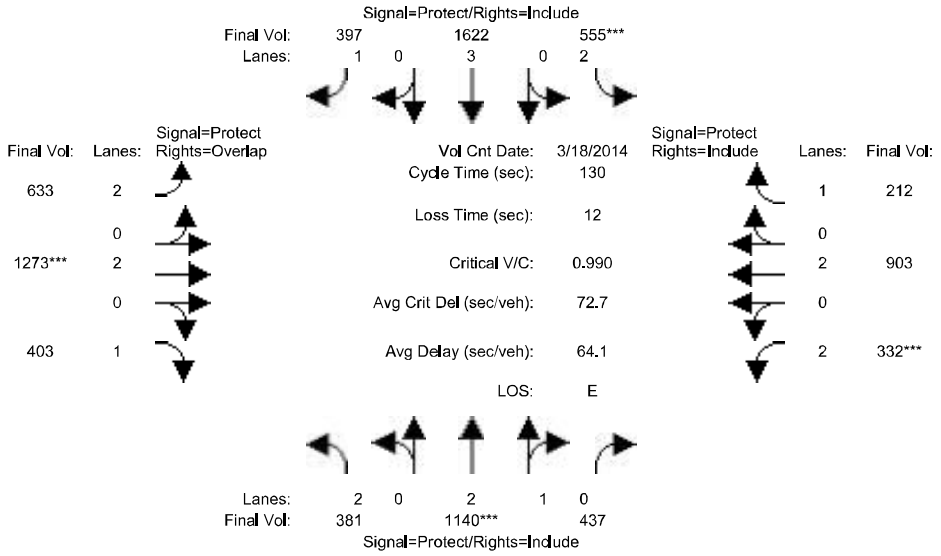
Street Name:	El Camino Real						Page Mill Rd/Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 18 Mar 2014 << 8:00 AM - 9:00 AM												
Base Vol:	558	1202	207	339	687	429	439	849	159	259	976	164
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:	558	1202	207	339	687	429	439	849	159	259	976	164
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:	558	1202	207	339	687	429	439	849	159	259	976	164
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:	558	1202	207	339	687	429	439	849	159	259	976	164
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	558	1202	207	339	687	429	439	849	159	259	976	164
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:	558	1202	207	339	687	429	439	849	159	259	976	164
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.54	0.46	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4776	823	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.18	0.25	0.25	0.11	0.12	0.25	0.14	0.22	0.09	0.08	0.26	0.09
Crit Moves:		****			****			****			****	
Green Time:	43.9	51.6	51.6	22.1	29.8	58.4	28.6	59.4	103.3	21.9	52.7	52.7
Volume/Cap:	0.67	0.81	0.81	0.81	0.67	0.70	0.81	0.63	0.15	0.63	0.81	0.30
Delay/Veh:	57.4	56.3	56.3	82.1	65.8	50.4	75.9	45.6	13.4	71.8	57.0	43.5
User DelAdj:	1.00	1.00	1.00	1.40	1.40	1.40	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.4	56.3	56.3	115.0	92.2	70.5	75.9	45.6	13.4	71.8	57.0	43.5
LOS by Move:	E	E	E	F	F	E	E	D	B	E	E	D
HCM2kAvgQ:	16	24	24	12	12	21	15	18	4	8	24	7

Note: Queue reported is the number of cars per lane.

Comprehensive Plan Update TIA - November 2016
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Scenario 5 PM

Intersection #6: El Camino Real & Page Mill Rd/Oregon Expwy (CMP #1104)



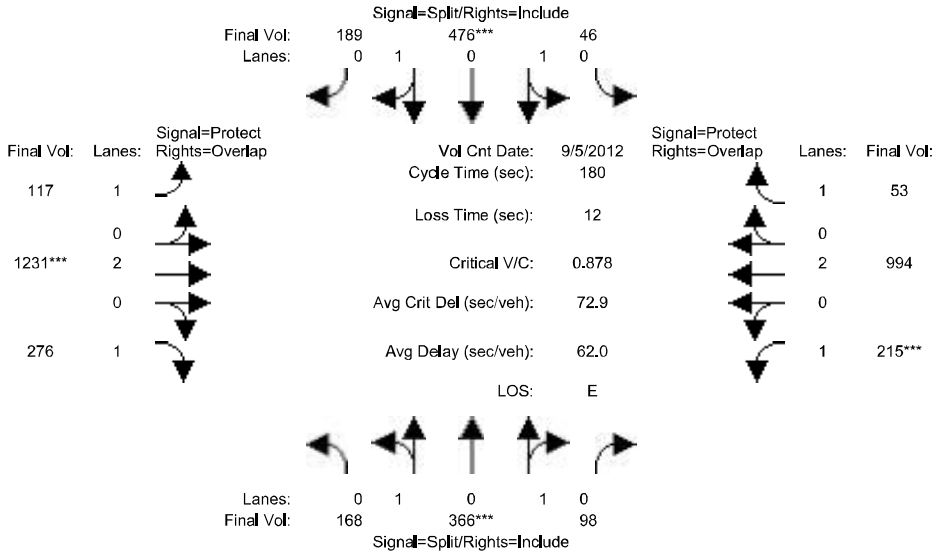
Street Name:	El Camino Real						Page Mill Rd/Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 18 Mar 2014 << 5:00 PM - 6:00 PM												
Base Vol:	381	1140	437	555	1622	397	633	1273	403	332	903	212
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:	381	1140	437	555	1622	397	633	1273	403	332	903	212
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:	381	1140	437	555	1622	397	633	1273	403	332	903	212
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:	381	1140	437	555	1622	397	633	1273	403	332	903	212
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	381	1140	437	555	1622	397	633	1273	403	332	903	212
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:	381	1140	437	555	1622	397	633	1273	403	332	903	212
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.14	0.86	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4046	1551	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.28	0.28	0.18	0.28	0.23	0.20	0.34	0.23	0.11	0.24	0.12
Crit Moves:		****		****				****		****		
Green Time:	17.9	37.0	37.0	23.1	42.2	42.2	26.5	44.0	61.9	13.8	31.3	31.3
Volume/Cap:	0.88	0.99	0.99	0.99	0.88	0.70	0.99	0.99	0.48	0.99	0.99	0.50
Delay/Veh:	72.8	66.4	66.4	88.6	46.5	42.2	83.3	65.3	23.6	104.2	75.2	43.6
User DelAdj:	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:	72.8	66.4	66.4	88.6	46.5	42.2	83.3	65.3	23.6	104.2	75.2	43.6
LOS by Move:	E	E	E	F	D	D	F	E	C	F	E	D
HCM2kAvgQ:	12	27	27	18	23	16	20	31	12	12	23	8

Note: Queue reported is the number of cars per lane.

Comprehensive Plan Update TIA - November 2016
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Scenario 5 PM

Intersection #17: Middlefield Road & Oregon Expressway (CMP #5108)



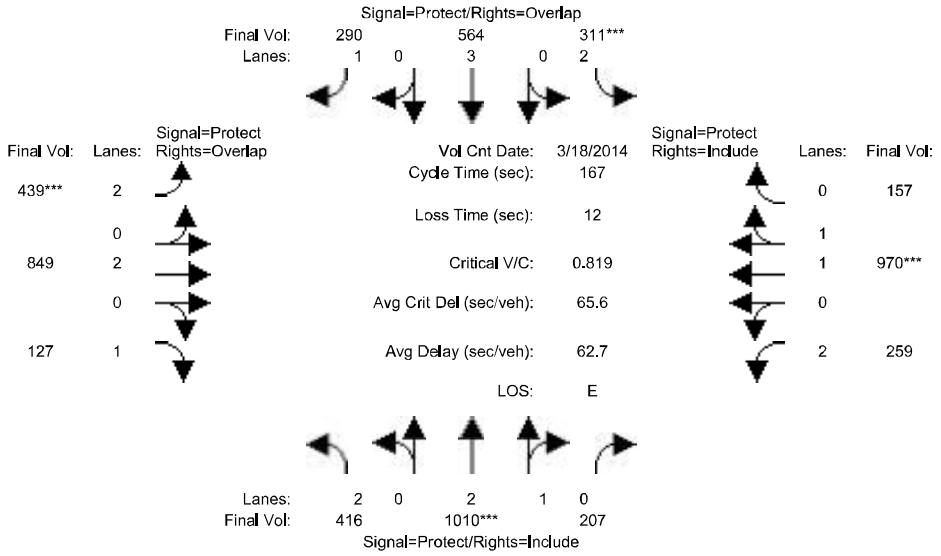
Street Name:	Middlefield Road						Oregon Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	14	10	10	14	10	10	14	67	10	14	68	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 5 Sep 2012 << 5:30-6:30PM												
Base Vol:	168	366	98	46	476	189	117	1231	276	215	994	53
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:	168	366	98	46	476	189	117	1231	276	215	994	53
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:	168	366	98	46	476	189	117	1231	276	215	994	53
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:	168	366	98	46	476	189	117	1231	276	215	994	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	168	366	98	46	476	189	117	1231	276	215	994	53
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:	168	366	98	46	476	189	117	1231	276	215	994	53
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.53	1.16	0.31	0.13	1.34	0.53	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	957	2085	558	233	2410	957	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.20	0.20	0.20	0.07	0.32	0.16	0.12	0.26	0.03
Crit Moves:		****			****			****			****	
Green Time:	35.8	35.8	35.8	40.2	40.2	40.2	15.7	67.0	102.8	25.0	76.3	116.5
Volume/Cap:	0.88	0.88	0.88	0.88	0.88	0.88	0.77	0.87	0.28	0.88	0.62	0.05
Delay/Veh:	82.7	82.7	82.7	79.0	79.0	79.0	100.8	58.6	19.8	105.4	41.2	11.6
User DelAdj:	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:	82.7	82.7	82.7	79.0	79.0	79.0	100.8	58.6	19.8	105.4	41.2	11.6
LOS by Move:	F	F	F	E	E	E	F	E	B	F	D	B
HCM2kAvgQ:	21	21	21	23	23	23	8	33	8	15	21	1

Note: Queue reported is the number of cars per lane.

Comprehensive Plan Update TIA - August 2015
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Count Year AM Peak Hour

Intersection #6: El Camino Real & Page Mill Rd/Oregon Expwy (CMP #1104)



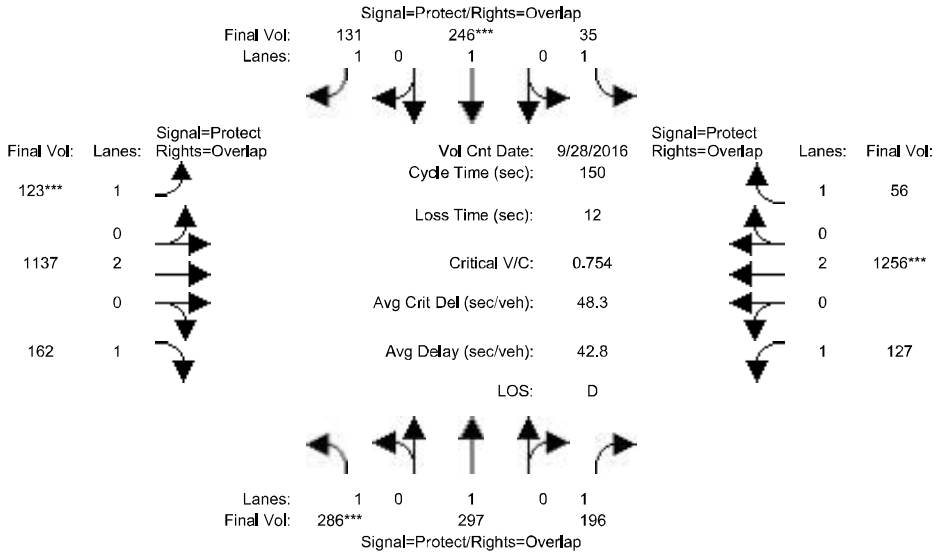
Street Name:	El Camino Real						Page Mill Rd/Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 18 Mar 2014 << 8:00 AM - 9:00 AM												
Base Vol:	416	1010	207	311	564	290	439	849	127	259	970	157
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:	416	1010	207	311	564	290	439	849	127	259	970	157
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:	416	1010	207	311	564	290	439	849	127	259	970	157
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:	416	1010	207	311	564	290	439	849	127	259	970	157
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	416	1010	207	311	564	290	439	849	127	259	970	157
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:	416	1010	207	311	564	290	439	849	127	259	970	157
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.47	0.53	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.71	0.29
Final Sat.:	3150	4646	952	3150	5700	1750	3150	3800	1750	3150	3184	515
Capacity Analysis Module:												
Vol/Sat:	0.13	0.22	0.22	0.10	0.10	0.17	0.14	0.22	0.07	0.08	0.30	0.30
Crit Moves:		****			****			****			****	
Green Time:	36.9	44.3	44.3	20.1	27.6	56.0	28.4	66.2	103.0	24.4	62.1	62.1
Volume/Cap:	0.60	0.82	0.82	0.82	0.60	0.49	0.82	0.56	0.12	0.56	0.82	0.82
Delay/Veh:	59.9	61.3	61.3	84.8	65.6	44.8	76.5	39.7	13.3	68.0	51.4	51.4
User DelAdj:	1.00	1.00	1.00	1.40	1.40	1.40	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.9	61.3	61.3	118.7	91.9	62.8	76.5	39.7	13.3	68.0	51.4	51.4
LOS by Move:	E	E	E	F	F	E	E	D	B	E	D	D
HCM2kAvgQ:	12	21	21	11	9	13	15	17	3	8	28	28

Note: Queue reported is the number of cars per lane.

Comprehensive Plan Update TIA - November 2016
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Count Year AM Peak Hour

Intersection #17: Middlefield Road & Oregon Expressway (CMP #5108)



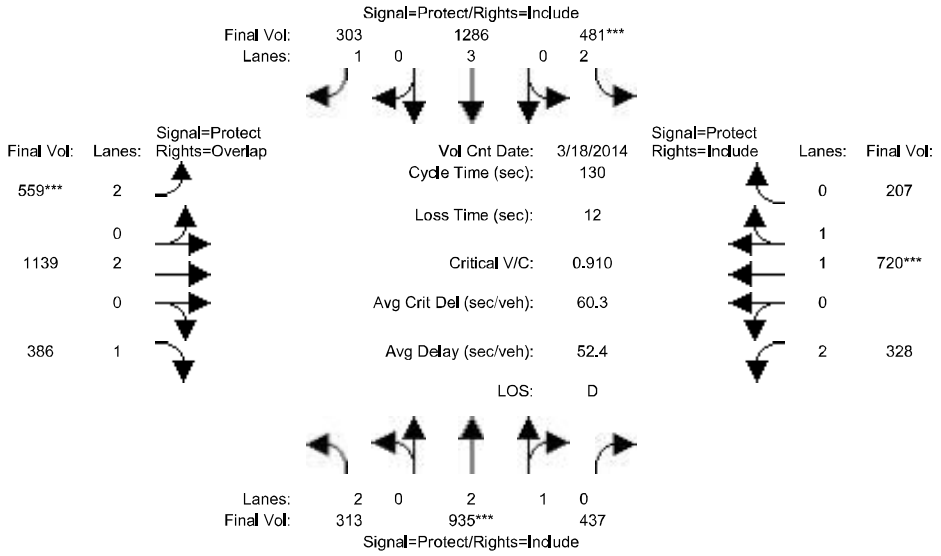
Street Name:	Middlefield Road						Oregon Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 28 Sep 2016 << AM												
Base Vol:	286	297	196	35	246	131	123	1137	162	127	1256	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:	286	297	196	35	246	131	123	1137	162	127	1256	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:	286	297	196	35	246	131	123	1137	162	127	1256	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:	286	297	196	35	246	131	123	1137	162	127	1256	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	286	297	196	35	246	131	123	1137	162	127	1256	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:	286	297	196	35	246	131	123	1137	162	127	1256	56
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.11	0.02	0.13	0.07	0.07	0.30	0.09	0.07	0.33	0.03
Crit Moves:	****				****		****				****	
Green Time:	32.5	44.9	60.4	13.4	25.8	39.7	14.0	64.2	96.7	15.6	65.8	79.1
Volume/Cap:	0.75	0.52	0.28	0.22	0.75	0.28	0.75	0.70	0.14	0.70	0.75	0.06
Delay/Veh:	63.3	44.6	30.3	64.2	68.7	44.1	84.3	36.4	10.5	76.4	37.3	17.3
User DelAdj:	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:	63.3	44.6	30.3	64.2	68.7	44.1	84.3	36.4	10.5	76.4	37.3	17.3
LOS by Move:	E	D	C	E	E	D	F	D	B	E	D	B
HCM2kAvgQ:	15	11	6	2	12	5	8	22	3	7	25	1

Note: Queue reported is the number of cars per lane.

Comprehensive Plan Update TIA - August 2015
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Count Year PM Peak Hour

Intersection #6: El Camino Real & Page Mill Rd/Oregon Expwy (CMP #1104)



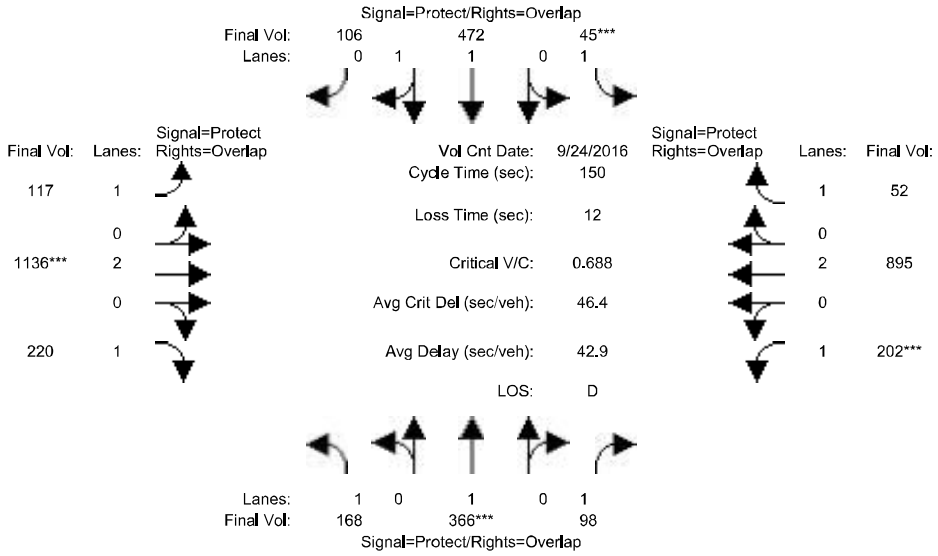
Street Name:	El Camino Real						Page Mill Rd/Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 18 Mar 2014 << 5:00 PM - 6:00 PM												
Base Vol:	313	935	437	481	1286	303	559	1139	386	328	720	207
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:	313	935	437	481	1286	303	559	1139	386	328	720	207
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:	313	935	437	481	1286	303	559	1139	386	328	720	207
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:	313	935	437	481	1286	303	559	1139	386	328	720	207
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	313	935	437	481	1286	303	559	1139	386	328	720	207
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:	313	935	437	481	1286	303	559	1139	386	328	720	207
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.01	0.99	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.54	0.46
Final Sat.:	3150	3814	1783	3150	5700	1750	3150	3800	1750	3150	2873	826
Capacity Analysis Module:												
Vol/Sat:	0.10	0.25	0.25	0.15	0.23	0.17	0.18	0.30	0.22	0.10	0.25	0.25
Crit Moves:		****			****			****			****	
Green Time:	17.4	35.0	35.0	21.8	39.5	39.5	25.4	45.4	62.8	15.8	35.8	35.8
Volume/Cap:	0.74	0.91	0.91	0.91	0.74	0.57	0.91	0.86	0.46	0.86	0.91	0.91
Delay/Veh:	61.2	54.5	54.5	72.9	42.5	39.6	68.8	45.2	22.7	73.4	57.4	57.4
User DelAdj:	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:	61.2	54.5	54.5	72.9	42.5	39.6	68.8	45.2	22.7	73.4	57.4	57.4
LOS by Move:	E	D	D	E	D	D	E	D	C	E	E	E
HCM2kAvgQ:	9	22	22	15	16	11	17	24	11	10	22	22

Note: Queue reported is the number of cars per lane.

Comprehensive Plan Update TIA - November 2016
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Count Year PM Peak Hour

Intersection #17: Middlefield Road & Oregon Expressway (CMP #5108)



Street Name:	Middlefield Road						Oregon Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	14	10	10	14	10	10	14	65	10	14	63	10
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: >> Count Date: 24 Sep 2016 << PM												
Base Vol:	168	366	98	45	472	106	117	1136	220	202	895	52
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:	168	366	98	45	472	106	117	1136	220	202	895	52
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:	168	366	98	45	472	106	117	1136	220	202	895	52
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:	168	366	98	45	472	106	117	1136	220	202	895	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	168	366	98	45	472	106	117	1136	220	202	895	52
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:	168	366	98	45	472	106	117	1136	220	202	895	52
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.62	0.38	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	3021	678	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.19	0.06	0.03	0.16	0.16	0.07	0.30	0.13	0.12	0.24	0.03
Crit Moves:		****		****				****		****		
Green Time:	19.4	36.9	59.0	14.0	31.5	47.4	15.8	65.0	84.4	22.1	71.3	85.3
Volume/Cap:	0.74	0.78	0.14	0.28	0.74	0.49	0.63	0.69	0.22	0.78	0.50	0.05
Delay/Veh:	75.4	61.2	29.3	64.2	59.4	41.9	71.3	35.6	16.5	76.1	27.2	14.4
User DelAdj:	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:	75.4	61.2	29.3	64.2	59.4	41.9	71.3	35.6	16.5	76.1	27.2	14.4
LOS by Move:	E	E	C	E	E	D	E	D	B	E	C	B
HCM2kAvgQ:	10	18	4	2	15	13	7	21	5	11	14	1

Note: Queue reported is the number of cars per lane.

APPENDIX H

Cumulative Conditions

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

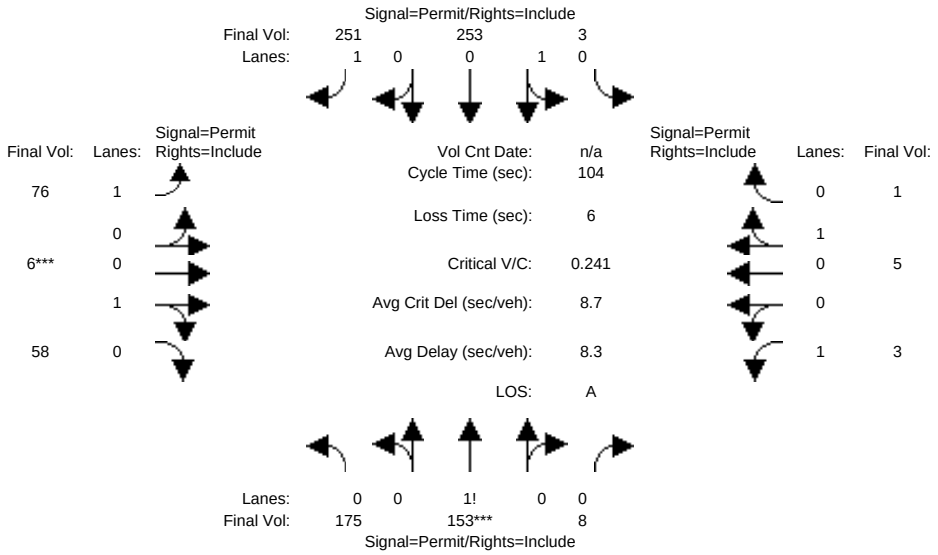
Summary Scenario Comparison Report (With Average Critical Delay)
Future Volume Alternative

Intersection		Cumulative AM				Cumulative + Project AM				Cumulative PM						Cumulative + Project PM			
		LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Crit V/C Change	Avg Crit Del (sec)	Avg Crit Del Change	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)
#1	Park Blvd/ Page Mill Rd	A	8.3	0.241	8.7	A	9.6	0.264	11.7	A	5.0	0.286	+ 0.021	4.2	- 7.5	A	5.7	0.314	6.6
#2	Park Blvd /Sherman Ave	B	2.8	0.066	2.8	B	2.7	0.066	2.7	B	4.2	0.202	+ 0.135	4.2	+ 1.5	B	4.2	0.203	4.2
#3	Birch St/ Sheridan Ave	E	4.3	0.287	4.3	E	5.6	0.298	5.6	C	4.7	0.269	- 0.029	4.7	- 0.9	D	5.1	0.308	5.1
#4	Birch St/ Grant Ave	B	14.0	0.681	14.0	C	15.1	0.716	15.1	A	9.7	0.451	- 0.264	9.7	- 5.4	A	9.9	0.466	9.9
#5	El Camino Real/ Page Mill Rd/ Oregon Expwy	D	50.2	0.890	56.0	D	50.9	0.901	57.0	D-	52.6	0.917	+ 0.016	60.6	+ 3.6	D-	53.2	0.924	61.6
#6	El Camino Real/ Grant Ave	C	0.9	0.261	0.9	C	1.0	0.261	1.0	D	0.7	0.204	- 0.058	0.7	- 0.3	D	0.7	0.204	0.7
#7	El Camino Real/ California Ave	C+	22.8	0.519	20.3	C	23.1	0.523	20.7	C	30.5	0.675	+ 0.152	30.6	+ 9.9	C	30.7	0.675	30.6
#8	Middlefield Rd/ Oregon Expwy	D	48.9	0.842	54.5	D	49.4	0.851	55.5	D	48.7	0.808	- 0.043	54.8	- 0.7	D	48.9	0.812	55.1
#9	Park Blvd/ Access#1	A	0.0	0.000	0.0	A	1.3	0.066	1.3	A	0.0	0.000	- 0.066	0.0	- 1.3	B	0.6	0.037	0.6

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative AM

Intersection #1: Park Blvd/ Page Mill Rd



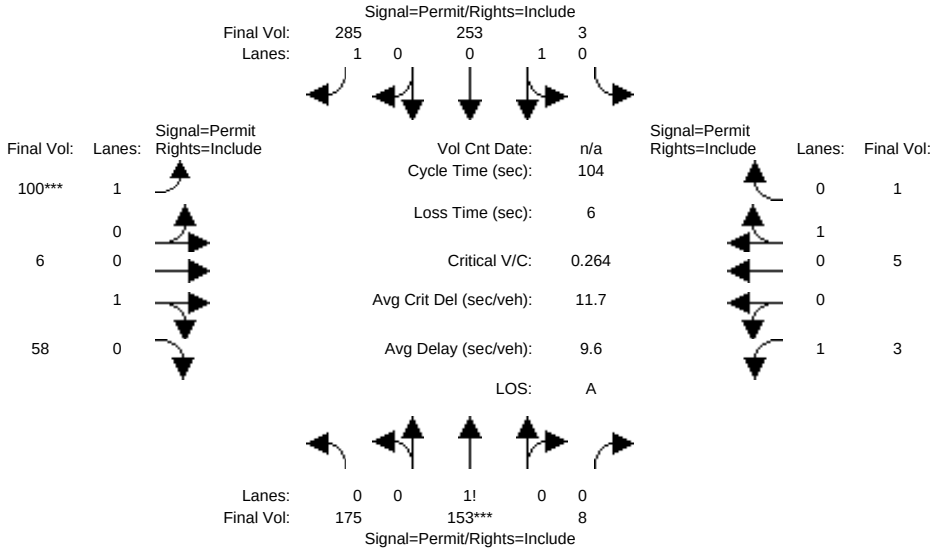
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	175	153	8	3	253	251	76	6	58	3	5	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:	175	153	8	3	253	251	76	6	58	3	5	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:	175	153	8	3	253	251	76	6	58	3	5	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:	175	153	8	3	253	251	76	6	58	3	5	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	153	8	3	253	251	76	6	58	3	5	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:	175	153	8	3	253	251	76	6	58	3	5	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.52	0.46	0.02	0.01	0.99	1.00	1.00	0.09	0.91	1.00	0.83	0.17
Final Sat.:	911	797	42	21	1779	1750	1750	169	1631	1750	1500	300
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.14	0.14	0.14	0.04	0.04	0.04	0.00	0.00	0.00
Crit Moves:		****						****				
Green Time:	82.7	82.7	82.7	82.7	82.7	82.7	15.3	15.3	15.3	15.3	15.3	15.3
Volume/Cap:	0.24	0.24	0.24	0.18	0.18	0.18	0.29	0.24	0.24	0.01	0.02	0.02
Delay/Veh:	2.8	2.8	2.8	2.6	2.6	2.6	40.2	39.7	39.7	37.9	38.0	38.0
User DelAdj:	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:	2.8	2.8	2.8	2.6	2.6	2.6	40.2	39.7	39.7	37.9	38.0	38.0
LOS by Move:	A	A	A	A	A	A	D	D	D	D+	D+	D+
HCM2kAvgQ:	75	75	75	52	52	53	63	51	51	2	4	4

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Project AM

Intersection #1: Park Blvd/ Page Mill Rd



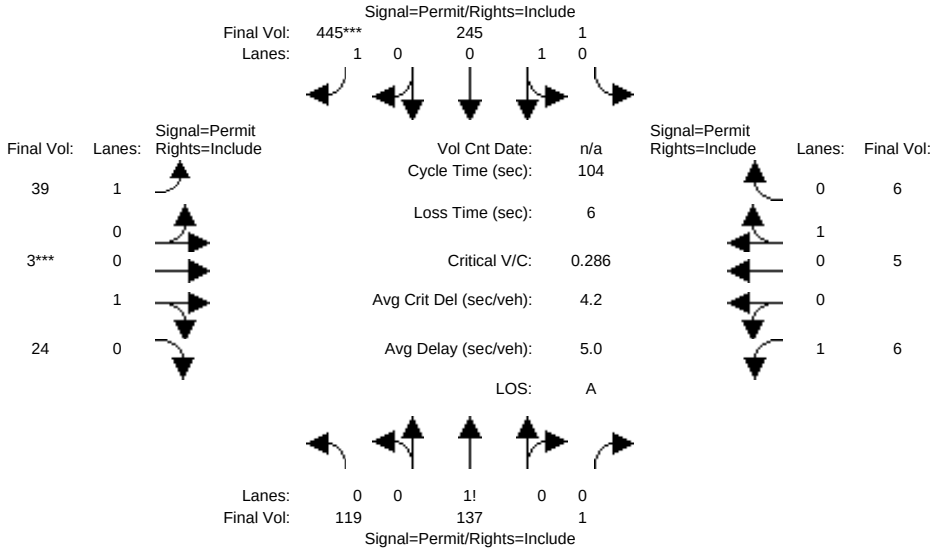
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	175	153	8	3	253	251	76	6	58	3	5	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:	175	153	8	3	253	251	76	6	58	3	5	1
Added Vol:	0	0	0	0	0	34	24	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	175	153	8	3	253	285	100	6	58	3	5	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:	175	153	8	3	253	285	100	6	58	3	5	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	153	8	3	253	285	100	6	58	3	5	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:	175	153	8	3	253	285	100	6	58	3	5	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.52	0.46	0.02	0.01	0.99	1.00	1.00	0.09	0.91	1.00	0.83	0.17
Final Sat.:	911	797	42	21	1779	1750	1750	169	1631	1750	1500	300
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.14	0.14	0.16	0.06	0.04	0.04	0.00	0.00	0.00
Crit Moves:		****					****					
Green Time:	75.5	75.5	75.5	75.5	75.5	75.5	22.5	22.5	22.5	22.5	22.5	22.5
Volume/Cap:	0.26	0.26	0.26	0.20	0.20	0.22	0.26	0.16	0.16	0.01	0.02	0.02
Delay/Veh:	4.9	4.9	4.9	4.6	4.6	4.7	34.3	33.3	33.3	32.0	32.1	32.1
User DelAdj:	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:	4.9	4.9	4.9	4.6	4.6	4.7	34.3	33.3	33.3	32.0	32.1	32.1
LOS by Move:	A	A	A	A	A	A	C-	C-	C-	C-	C-	C-
HCM2kAvgQ:	98	98	98	68	68	80	74	45	45	2	4	4

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative PM

Intersection #1: Park Blvd/ Page Mill Rd



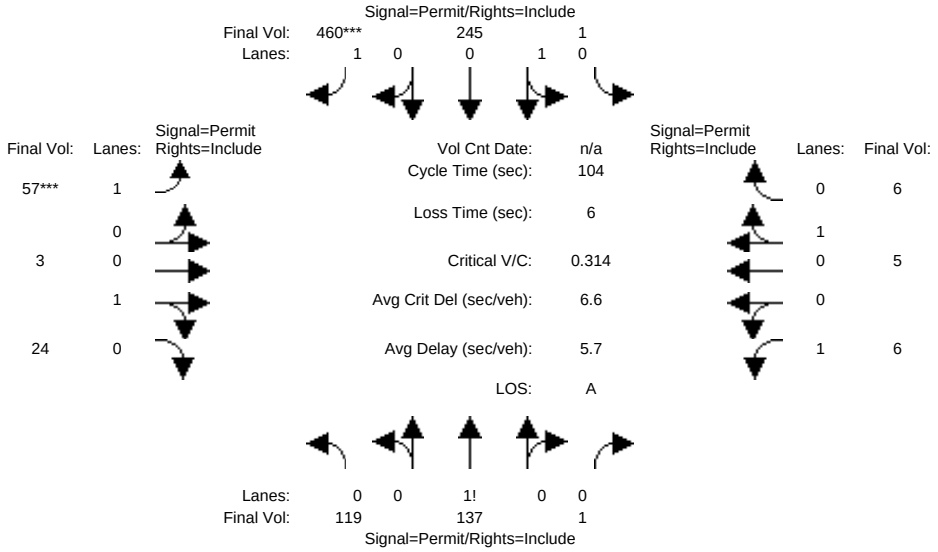
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	119	137	1	1	245	445	39	3	24	6	5	6
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:	119	137	1	1	245	445	39	3	24	6	5	6
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:	119	137	1	1	245	445	39	3	24	6	5	6
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:	119	137	1	1	245	445	39	3	24	6	5	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	137	1	1	245	445	39	3	24	6	5	6
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:	119	137	1	1	245	445	39	3	24	6	5	6
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.46	0.53	0.01	0.01	0.99	1.00	1.00	0.11	0.89	1.00	0.45	0.55
Final Sat.:	810	933	7	7	1793	1750	1750	200	1600	1750	818	982
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.15	0.14	0.14	0.25	0.02	0.02	0.02	0.00	0.01	0.01
Crit Moves:						****		****				
Green Time:	88.0	88.0	88.0	88.0	88.0	88.0	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.17	0.17	0.17	0.16	0.16	0.30	0.23	0.16	0.16	0.04	0.06	0.06
Delay/Veh:	1.5	1.5	1.5	1.5	1.5	1.8	44.2	43.6	43.6	42.7	42.9	42.9
User DelAdj:	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:	1.5	1.5	1.5	1.5	1.5	1.8	44.2	43.6	43.6	42.7	42.9	42.9
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	42	42	42	38	38	83	36	23	23	5	9	9

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Project PM

Intersection #1: Park Blvd/ Page Mill Rd



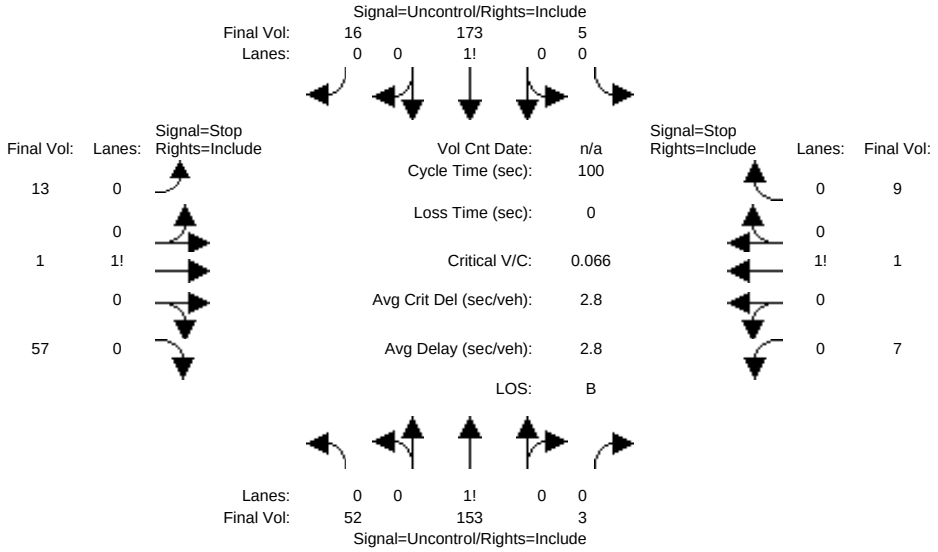
Street Name:	Park Blvd						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	119	137	1	1	245	445	39	3	24	6	5	6
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:	119	137	1	1	245	445	39	3	24	6	5	6
Added Vol:	0	0	0	0	0	15	18	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	119	137	1	1	245	460	57	3	24	6	5	6
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:	119	137	1	1	245	460	57	3	24	6	5	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	137	1	1	245	460	57	3	24	6	5	6
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:	119	137	1	1	245	460	57	3	24	6	5	6
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	0.46	0.53	0.01	0.01	0.99	1.00	1.00	0.11	0.89	1.00	0.45	0.55
Final Sat.:	810	933	7	7	1793	1750	1750	200	1600	1750	818	982
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.15	0.14	0.14	0.26	0.03	0.02	0.02	0.00	0.01	0.01
Crit Moves:						****	****					
Green Time:	87.2	87.2	87.2	87.2	87.2	87.2	10.8	10.8	10.8	10.8	10.8	10.8
Volume/Cap:	0.18	0.18	0.18	0.16	0.16	0.31	0.31	0.14	0.14	0.03	0.06	0.06
Delay/Veh:	1.6	1.6	1.6	1.6	1.6	2.0	44.2	42.7	42.7	42.0	42.1	42.1
User DelAdj:	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:	1.6	1.6	1.6	1.6	1.6	2.0	44.2	42.7	42.7	42.0	42.1	42.1
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	43	43	43	40	40	90	53	23	23	5	9	9

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative AM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	52	153	3	5	173	16	13	1	57	7	1	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:	52	153	3	5	173	16	13	1	57	7	1	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:	52	153	3	5	173	16	13	1	57	7	1	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:	52	153	3	5	173	16	13	1	57	7	1	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	52	153	3	5	173	16	13	1	57	7	1	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	189	xxxx	xxxxx	156	xxxx	xxxxx	455	451	181	479	458	155
Potent Cap.:	1397	xxxx	xxxxx	1436	xxxx	xxxxx	519	507	867	501	503	897
Move Cap.:	1397	xxxx	xxxxx	1436	xxxx	xxxxx	497	486	867	452	482	897
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.03	0.00	0.07	0.02	0.00	0.01
Level Of Service Module:												
2Way95thQ:	2.9	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	755	xxxxx	xxxx	616	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	xxxxx	11.0	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			10.3			11.0		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	52	153	3	5	173	16	13	1	57	7	1	9
ApproachDel:	xxxxxx			xxxxxx			10.3			11.0		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=71]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=490]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=17]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=490]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	52	153	3	5	173	16	13	1	57	7	1	9

Major Street Volume: 402
Minor Approach Volume: 71
Minor Approach Volume Threshold: 462

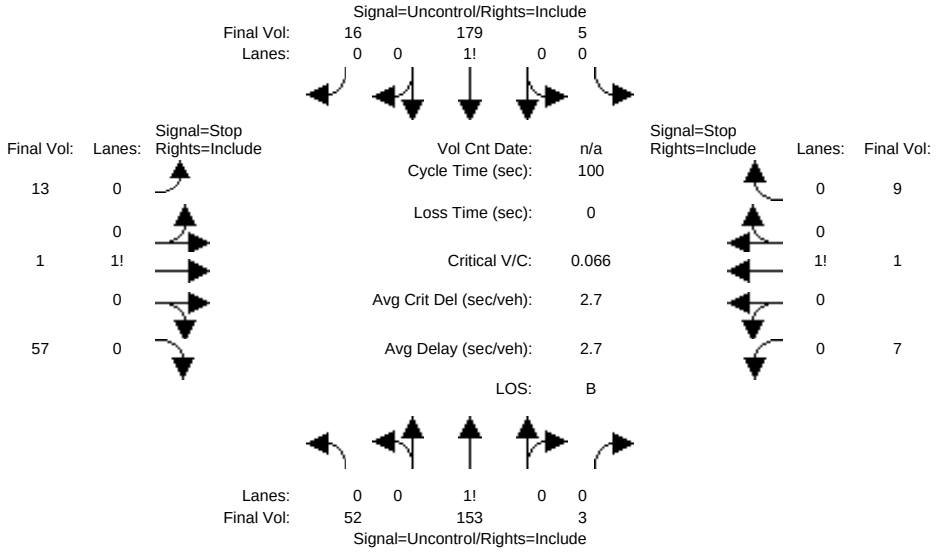
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Project AM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	52	153	3	5	173	16	13	1	57	7	1	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:	52	153	3	5	173	16	13	1	57	7	1	9
Added Vol:	0	0	0	0	6	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	52	153	3	5	179	16	13	1	57	7	1	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:	52	153	3	5	179	16	13	1	57	7	1	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	52	153	3	5	179	16	13	1	57	7	1	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	195	xxxx	xxxxx	156	xxxx	xxxxx	461	457	187	485	464	155
Potent Cap.:	1390	xxxx	xxxxx	1436	xxxx	xxxxx	515	503	860	496	499	897
Move Cap.:	1390	xxxx	xxxxx	1436	xxxx	xxxxx	492	482	860	448	478	897
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.03	0.00	0.07	0.02	0.00	0.01
Level Of Service Module:												
2Way95thQ:	2.9	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	749	xxxxx	xxxx	612	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	xxxxx	11.0	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			10.3			11.0		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	52	153	3	5	179	16	13	1	57	7	1	9
ApproachDel:	xxxxxx			xxxxxx			10.3			11.0		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=71]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=496]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=17]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=496]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	52	153	3	5	179	16	13	1	57	7	1	9

Major Street Volume: 408
Minor Approach Volume: 71
Minor Approach Volume Threshold: 458

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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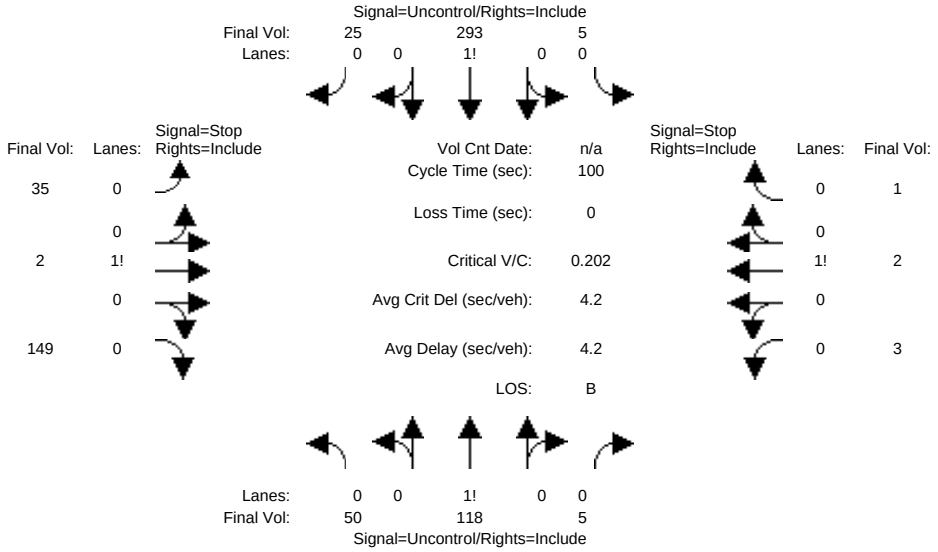
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative PM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	50	118	5	5	293	25	35	2	149	3	2	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:	50	118	5	5	293	25	35	2	149	3	2	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:	50	118	5	5	293	25	35	2	149	3	2	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:	50	118	5	5	293	25	35	2	149	3	2	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	50	118	5	5	293	25	35	2	149	3	2	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	318	xxxx	xxxxx	123	xxxx	xxxxx	538	539	306	612	549	121
Potent Cap.:	1253	xxxx	xxxxx	1477	xxxx	xxxxx	458	452	739	408	446	936
Move Cap.:	1253	xxxx	xxxxx	1477	xxxx	xxxxx	440	432	739	314	427	936
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.08	0.00	0.20	0.01	0.00	0.00
Level Of Service Module:												
2Way95thQ:	3.1	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.0	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	651	xxxxx	xxxx	392	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.2	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.7	xxxxx	xxxxx	14.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			12.7			14.3		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	50	118	5	5	293	25	35	2	149	3	2	1
ApproachDel:	xxxxxx			xxxxxx			12.7			14.3		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=186]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=688]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=688]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	50	118	5	5	293	25	35	2	149	3	2	1

Major Street Volume: 496
Minor Approach Volume: 186
Minor Approach Volume Threshold: 406

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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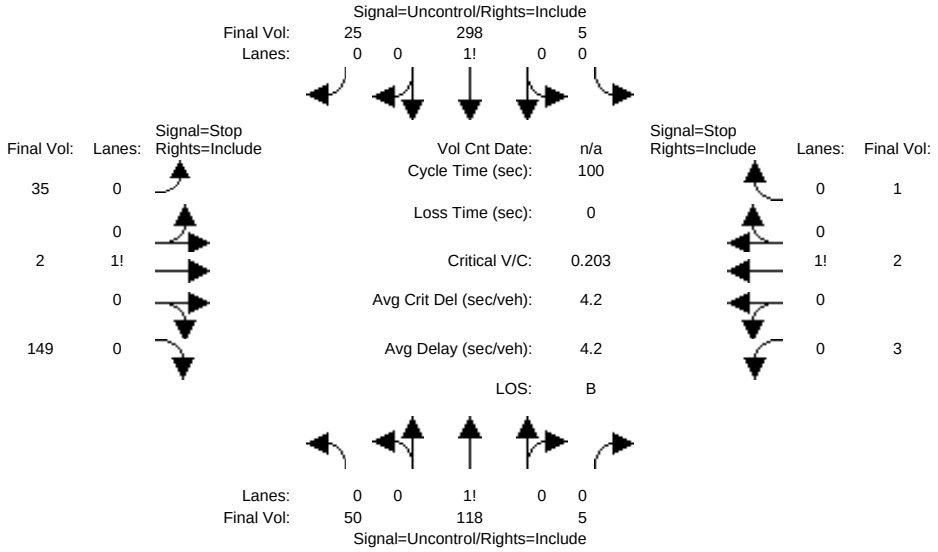
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Project PM

Intersection #2: Park Blvd /Sherman Ave



Street Name:	Park Blvd						Park Blvd /Sherman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	50	118	5	5	293	25	35	2	149	3	2	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:	50	118	5	5	293	25	35	2	149	3	2	1
Added Vol:	0	0	0	0	5	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	118	5	5	298	25	35	2	149	3	2	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:	50	118	5	5	298	25	35	2	149	3	2	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	50	118	5	5	298	25	35	2	149	3	2	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	323	xxxx	xxxxx	123	xxxx	xxxxx	543	544	311	617	554	121
Potent Cap.:	1248	xxxx	xxxxx	1477	xxxx	xxxxx	454	449	734	405	444	936
Move Cap.:	1248	xxxx	xxxxx	1477	xxxx	xxxxx	437	429	734	311	424	936
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.08	0.00	0.20	0.01	0.00	0.00
Level Of Service Module:												
2Way95thQ:	3.1	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.0	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	646	xxxxx	xxxx	389	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.2	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.8	xxxxx	xxxxx	14.4	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			12.8			14.4		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	50	118	5	5	298	25	35	2	149	3	2	1
ApproachDel:	xxxxxx			xxxxxx			12.8			14.4		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=186]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=693]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=693]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Park Blvd /Sherman Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	50	118	5	5	298	25	35	2	149	3	2	1

Major Street Volume: 501
Minor Approach Volume: 186
Minor Approach Volume Threshold: 404

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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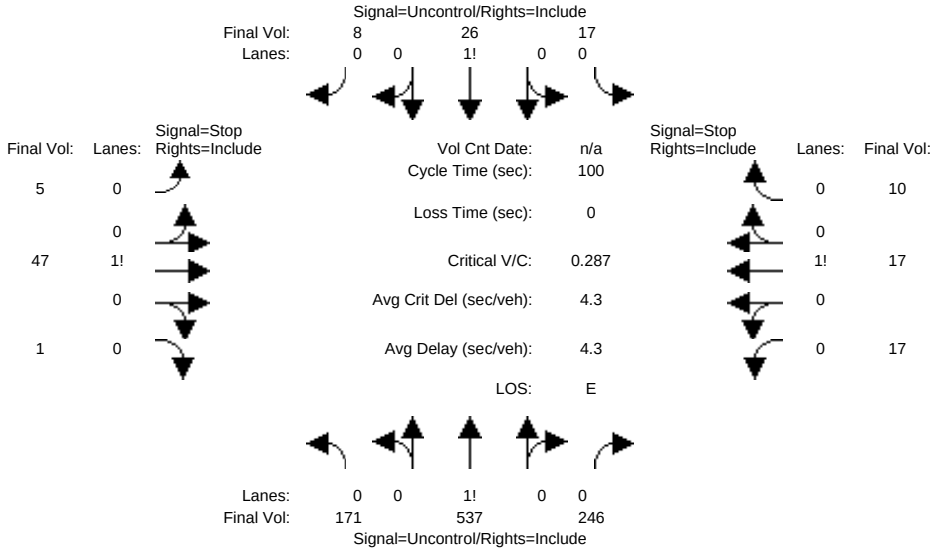
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative AM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	171	537	246	17	26	8	5	47	1	17	17	10
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:	171	537	246	17	26	8	5	47	1	17	17	10
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:	171	537	246	17	26	8	5	47	1	17	17	10
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:	171	537	246	17	26	8	5	47	1	17	17	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	171	537	246	17	26	8	5	47	1	17	17	10
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	34	xxxx	xxxxx	783	xxxx	xxxxx	1080	1189	30	1090	1070	660
Potent Cap.:	1591	xxxx	xxxxx	844	xxxx	xxxxx	198	190	1050	194	223	467
Move Cap.:	1591	xxxx	xxxxx	844	xxxx	xxxxx	162	164	1050	136	192	467
Volume/Cap:	0.11	xxxx	xxxx	0.02	xxxx	xxxx	0.03	0.29	0.00	0.13	0.09	0.02
Level Of Service Module:												
2Way95thQ:	9.0	xxxx	xxxxx	1.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	9.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	166	xxxxx	xxxx	187	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.3	xxxxx	xxxxx	0.9	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	36.5	xxxxx	xxxxx	30.0	xxxxx
Shared LOS:	*	*	*	*	*	*	*	E	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			36.5			30.0		
ApproachLOS:	*			*			E			D		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	171	537	246	17	26	8	5	47	1	17	17	10
ApproachDel:	xxxxxx			xxxxxx			36.5			30.0		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=53]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1102]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1102]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	171	537	246	17	26	8	5	47	1	17	17	10

Major Street Volume: 1005
Minor Approach Volume: 53
Minor Approach Volume Threshold: 218

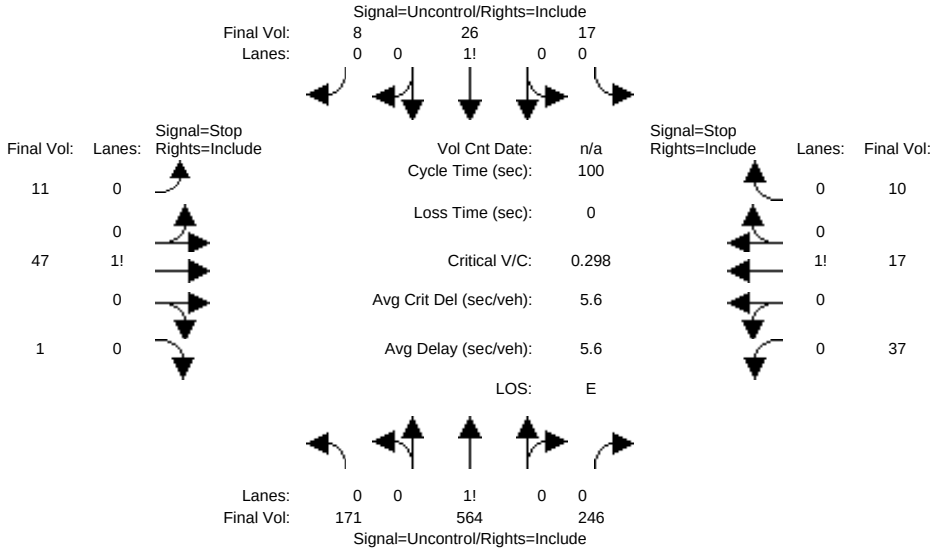
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Project AM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	171	537	246	17	26	8	5	47	1	17	17	10
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:	171	537	246	17	26	8	5	47	1	17	17	10
Added Vol:	0	27	0	0	0	0	6	0	0	20	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	171	564	246	17	26	8	11	47	1	37	17	10
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:	171	564	246	17	26	8	11	47	1	37	17	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	171	564	246	17	26	8	11	47	1	37	17	10
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	34	xxxx	xxxxx	810	xxxx	xxxxx	1107	1216	30	1117	1097	687
Potent Cap.:	1591	xxxx	xxxxx	825	xxxx	xxxxx	189	183	1050	186	215	450
Move Cap.:	1591	xxxx	xxxxx	825	xxxx	xxxxx	154	158	1050	129	185	450
Volume/Cap:	0.11	xxxx	xxxx	0.02	xxxx	xxxx	0.07	0.30	0.00	0.29	0.09	0.02
Level Of Service Module:												
2Way95thQ:	9.0	xxxx	xxxxx	1.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	9.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	159	xxxxx	xxxx	160	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.6	xxxxx	xxxxx	1.8	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	40.3	xxxxx	xxxxx	41.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	E	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			40.3			41.9		
ApproachLOS:	*			*			E			E		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	171	564	246	17	26	8	11	47	1	37	17	10
ApproachDel:	xxxxxx			xxxxxx			40.3			41.9		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=59]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1155]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1155]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	171	564	246	17	26	8	11	47	1	37	17	10

Major Street Volume: 1032
Minor Approach Volume: 64
Minor Approach Volume Threshold: 211

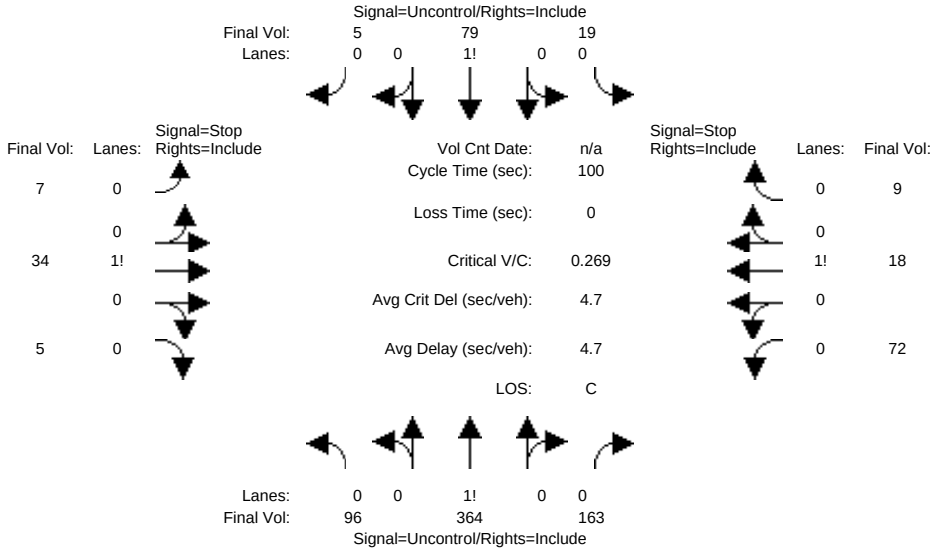
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative PM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	96	364	163	19	79	5	7	34	5	72	18	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:	96	364	163	19	79	5	7	34	5	72	18	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:	96	364	163	19	79	5	7	34	5	72	18	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:	96	364	163	19	79	5	7	34	5	72	18	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	96	364	163	19	79	5	7	34	5	72	18	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	84	xxxx	xxxxx	527	xxxx	xxxxx	771	839	82	777	760	446
Potent Cap.:	1526	xxxx	xxxxx	1050	xxxx	xxxxx	320	304	984	317	338	617
Move Cap.:	1526	xxxx	xxxxx	1050	xxxx	xxxxx	282	279	984	268	310	617
Volume/Cap:	0.06	xxxx	xxxx	0.02	xxxx	xxxx	0.02	0.12	0.01	0.27	0.06	0.01
Level Of Service Module:												
2Way95thQ:	5.0	xxxx	xxxxx	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	303	xxxxx	xxxx	290	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	1.5	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	19.0	xxxxx	xxxxx	23.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			19.0			23.7		
ApproachLOS:	*			*			C			C		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	96	364	163	19	79	5	7	34	5	72	18	9
ApproachDel:	xxxxxx			xxxxxx			19.0			23.7		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=46]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=871]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=99]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=871]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	96	364	163	19	79	5	7	34	5	72	18	9

Major Street Volume: 726
Minor Approach Volume: 99
Minor Approach Volume Threshold: 305

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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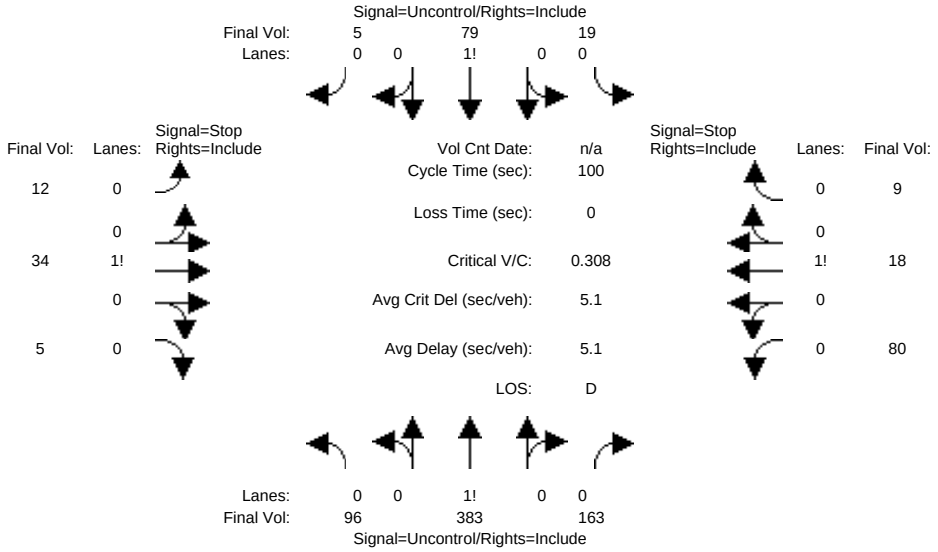
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Project PM

Intersection #3: Birch St/ Sheridan Ave



Street Name:	Birch St						Sheridan Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	96	364	163	19	79	5	7	34	5	72	18	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:	96	364	163	19	79	5	7	34	5	72	18	9
Added Vol:	0	19	0	0	0	0	5	0	0	8	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	96	383	163	19	79	5	12	34	5	80	18	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:	96	383	163	19	79	5	12	34	5	80	18	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	96	383	163	19	79	5	12	34	5	80	18	9
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	84	xxxx	xxxxx	546	xxxx	xxxxx	790	858	82	796	779	465
Potent Cap.:	1526	xxxx	xxxxx	1033	xxxx	xxxxx	311	297	984	308	330	602
Move Cap.:	1526	xxxx	xxxxx	1033	xxxx	xxxxx	273	272	984	259	302	602
Volume/Cap:	0.06	xxxx	xxxx	0.02	xxxx	xxxx	0.04	0.13	0.01	0.31	0.06	0.01
Level Of Service Module:												
2Way95thQ:	5.0	xxxx	xxxxx	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	293	xxxxx	xxxx	279	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	1.7	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	19.9	xxxxx	xxxxx	25.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			19.9			25.7		
ApproachLOS:	*			*			C			D		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	96	383	163	19	79	5	12	34	5	80	18	9
ApproachDel:	xxxxxx			xxxxxx			19.9			25.7		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=51]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=903]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.8]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=107]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=903]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 Birch St/ Sheridan Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	96	383	163	19	79	5	12	34	5	80	18	9

Major Street Volume: 745
Minor Approach Volume: 107
Minor Approach Volume Threshold: 298

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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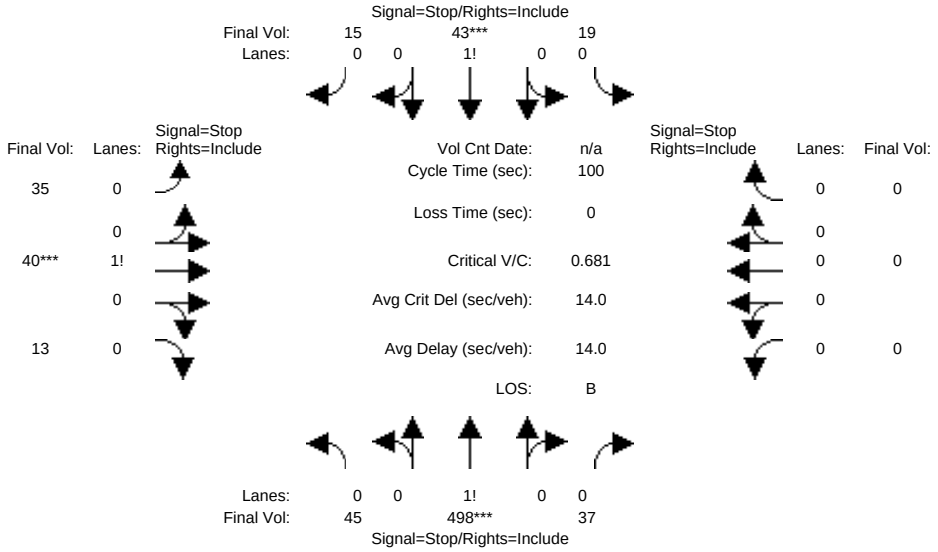
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative AM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	45	498	37	19	43	15	35	40	13	0	0	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:	45	498	37	19	43	15	35	40	13	0	0	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:	45	498	37	19	43	15	35	40	13	0	0	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:	45	498	37	19	43	15	35	40	13	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	498	37	19	43	15	35	40	13	0	0	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:	45	498	37	19	43	15	35	40	13	0	0	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:	0.08	0.86	0.06	0.25	0.56	0.19	0.40	0.45	0.15	0.00	0.00	0.00
Final Sat.:	66	731	54	185	418	146	249	284	92	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.68	0.68	0.68	0.10	0.10	0.10	0.14	0.14	0.14	xxxx	xxxx	xxxx
Crit Moves:		****			****			****				
Delay/Veh:	15.5	15.5	15.5	8.1	8.1	8.1	9.0	9.0	9.0	0.0	0.0	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:	15.5	15.5	15.5	8.1	8.1	8.1	9.0	9.0	9.0	0.0	0.0	0.0
LOS by Move:	C	C	C	A	A	A	A	A	A	*	*	*
ApproachDel:		15.5			8.1			9.0			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		15.5			8.1			9.0			xxxxxx	
LOS by Appr:		C			A			A			*	
AllWayAvgQ:	49.0	49.0	49.0	2.6	2.6	2.6	3.3	3.3	3.3	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 0 0	0	
Initial Vol:	45	498	37	19	43	15	35	40	13	0	0	0

Major Street Volume: 657
Minor Approach Volume: 88
Minor Approach Volume Threshold: 331

SIGNAL WARRANT DISCLAIMER

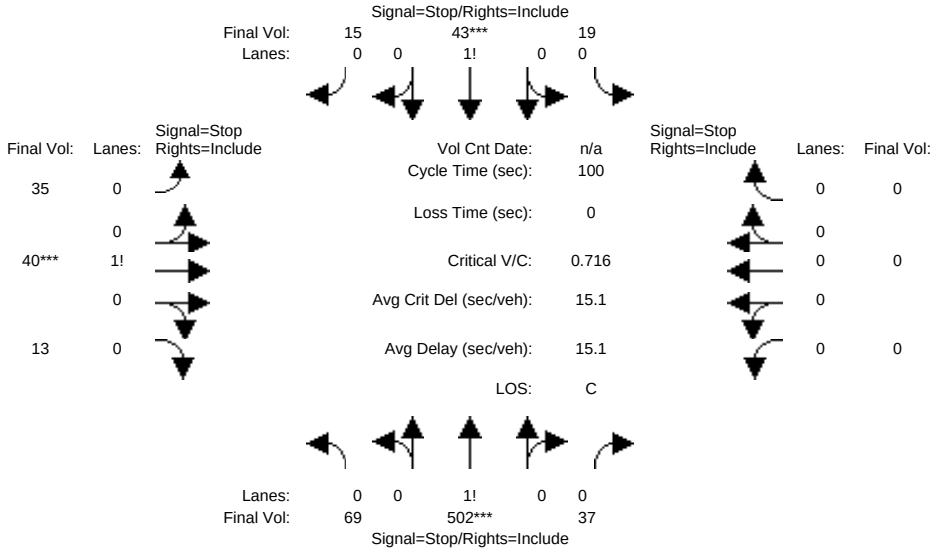
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative + Project AM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	45	498	37	19	43	15	35	40	13	0	0	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:	45	498	37	19	43	15	35	40	13	0	0	0
Added Vol:	24	4	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:	69	502	37	19	43	15	35	40	13	0	0	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:	69	502	37	19	43	15	35	40	13	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	502	37	19	43	15	35	40	13	0	0	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:	69	502	37	19	43	15	35	40	13	0	0	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:	0.11	0.83	0.06	0.25	0.56	0.19	0.40	0.45	0.15	0.00	0.00	0.00
Final Sat.:	96	701	52	183	415	145	245	280	91	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.72	0.72	0.72	0.10	0.10	0.10	0.14	0.14	0.14	xxxx	xxxx	xxxx
Crit Moves:		****			****			****				
Delay/Veh:	16.8	16.8	16.8	8.2	8.2	8.2	9.1	9.1	9.1	0.0	0.0	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:	16.8	16.8	16.8	8.2	8.2	8.2	9.1	9.1	9.1	0.0	0.0	0.0
LOS by Move:	C	C	C	A	A	A	A	A	A	*	*	*
ApproachDel:		16.8			8.2			9.1			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		16.8			8.2			9.1			xxxxxx	
LOS by Appr:		C			A			A			*	
AllWayAvgQ:	56.8	56.8	56.8	2.7	2.7	2.7	3.4	3.4	3.4	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 0 0	0	
Initial Vol:	69	502	37	19	43	15	35	40	13	0	0	0

Major Street Volume: 685
Minor Approach Volume: 88
Minor Approach Volume Threshold: 320

SIGNAL WARRANT DISCLAIMER

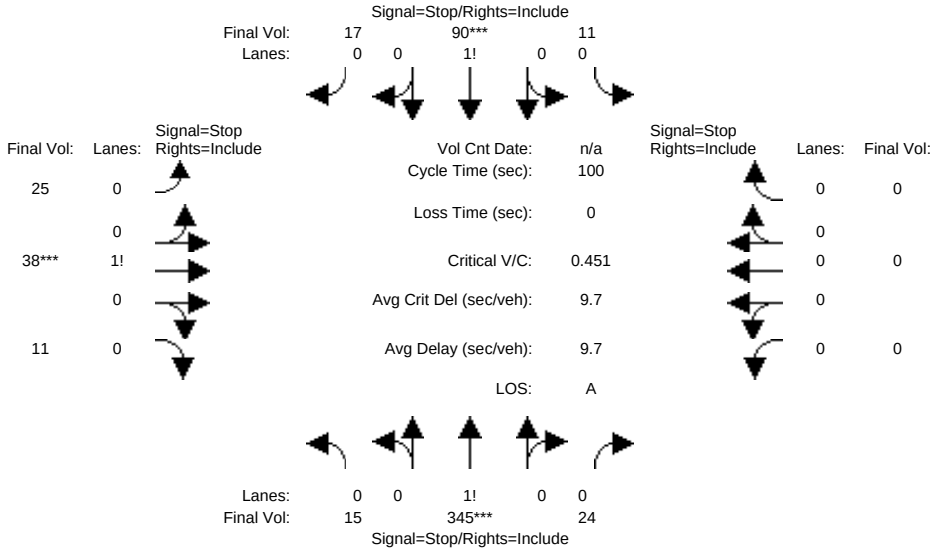
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative PM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	15	345	24	11	90	17	25	38	11	0	0	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:	15	345	24	11	90	17	25	38	11	0	0	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:	15	345	24	11	90	17	25	38	11	0	0	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:	15	345	24	11	90	17	25	38	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	345	24	11	90	17	25	38	11	0	0	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:	15	345	24	11	90	17	25	38	11	0	0	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:	0.04	0.90	0.06	0.09	0.77	0.14	0.34	0.51	0.15	0.00	0.00	0.00
Final Sat.:	33	765	53	74	609	115	229	349	101	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.45	0.45	0.45	0.15	0.15	0.15	0.11	0.11	0.11	xxxx	xxxx	xxxx
Crit Moves:		****			****			****				
Delay/Veh:	10.5	10.5	10.5	8.1	8.1	8.1	8.4	8.4	8.4	0.0	0.0	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:	10.5	10.5	10.5	8.1	8.1	8.1	8.4	8.4	8.4	0.0	0.0	0.0
LOS by Move:	B	B	B	A	A	A	A	A	A	*	*	*
ApproachDel:		10.5			8.1			8.4			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		10.5			8.1			8.4			xxxxxx	
LOS by Appr:		B			A			A			*	
AllWayAvgQ:	19.5	19.5	19.5	4.1	4.1	4.1	2.6	2.6	2.6	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	15	345	24	11	90	17	25	38	11	0	0	0

Major Street Volume: 502
Minor Approach Volume: 74
Minor Approach Volume Threshold: 403

SIGNAL WARRANT DISCLAIMER

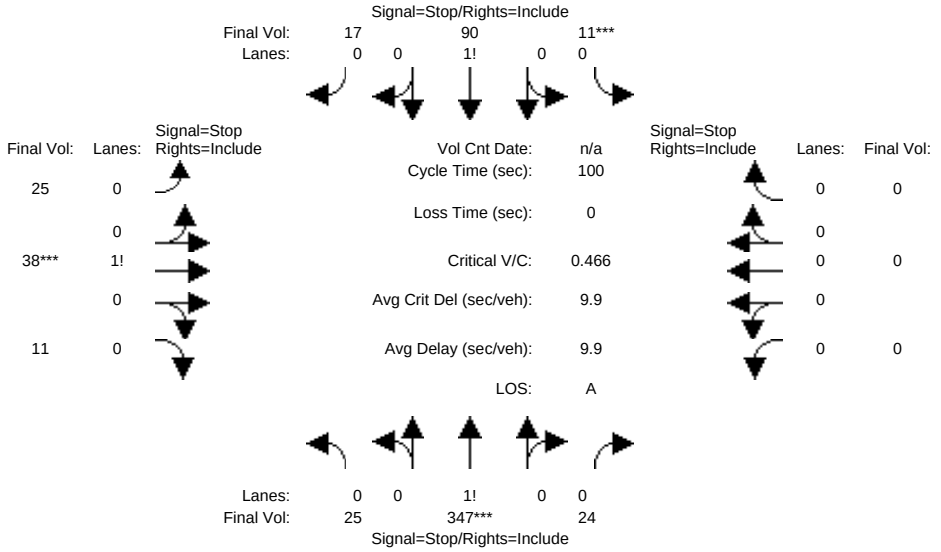
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative + Project PM

Intersection #4: Birch St/ Grant Ave



Street Name:	Birch St						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
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:	15	345	24	11	90	17	25	38	11	0	0	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:	15	345	24	11	90	17	25	38	11	0	0	0
Added Vol:	10	2	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:	25	347	24	11	90	17	25	38	11	0	0	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:	25	347	24	11	90	17	25	38	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	347	24	11	90	17	25	38	11	0	0	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:	25	347	24	11	90	17	25	38	11	0	0	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:	0.06	0.88	0.06	0.09	0.77	0.14	0.34	0.51	0.15	0.00	0.00	0.00
Final Sat.:	54	745	52	74	608	115	228	347	100	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.47	0.47	0.47	0.15	0.15	0.15	0.11	0.11	0.11	xxxx	xxxx	xxxx
Crit Moves:		****			****			****				
Delay/Veh:	10.7	10.7	10.7	8.1	8.1	8.1	8.5	8.5	8.5	0.0	0.0	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:	10.7	10.7	10.7	8.1	8.1	8.1	8.5	8.5	8.5	0.0	0.0	0.0
LOS by Move:	B	B	B	A	A	A	A	A	A	*	*	*
ApproachDel:		10.7			8.1			8.5			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		10.7			8.1			8.5			xxxxxx	
LOS by Appr:		B			A			A			*	
AllWayAvgQ:	20.7	20.7	20.7	4.1	4.1	4.1	2.6	2.6	2.6	0.0	0.0	0.0

Note: Queue reported is the distance per lane in feet.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Birch St/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 0	0	0
Initial Vol:	25	347	24	11	90	17	25	38	11	0	0	0

Major Street Volume: 514
Minor Approach Volume: 74
Minor Approach Volume Threshold: 397

SIGNAL WARRANT DISCLAIMER

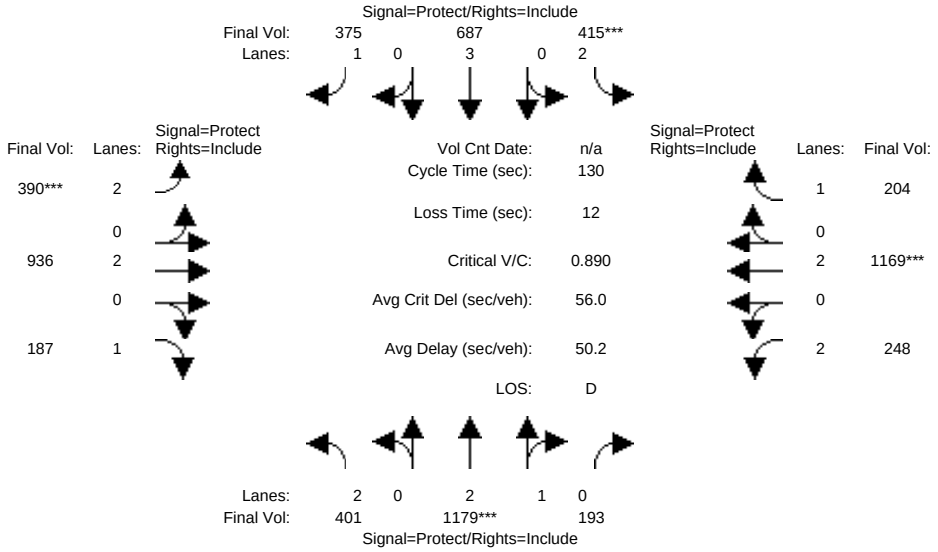
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative AM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



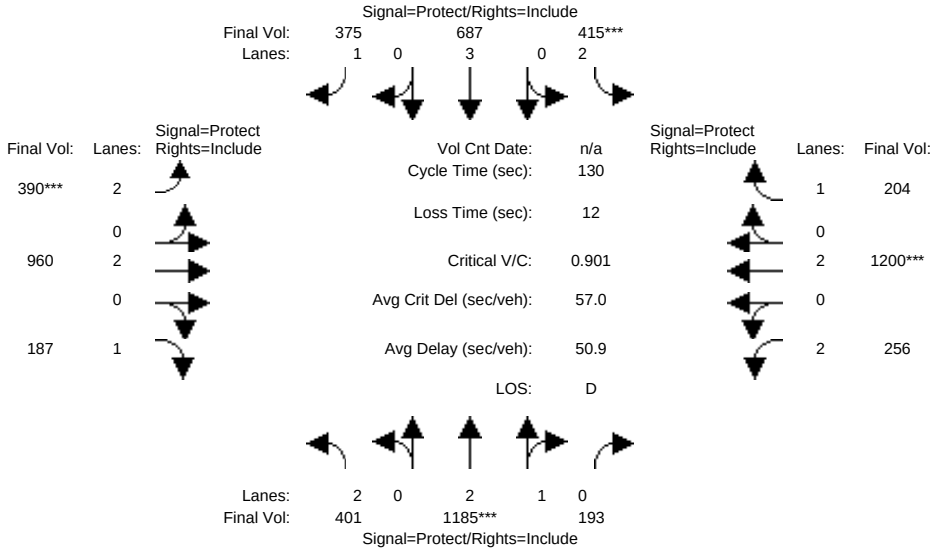
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	401	1179	193	415	687	375	390	936	187	248	1169	204
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:	401	1179	193	415	687	375	390	936	187	248	1169	204
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:	401	1179	193	415	687	375	390	936	187	248	1169	204
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:	401	1179	193	415	687	375	390	936	187	248	1169	204
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	401	1179	193	415	687	375	390	936	187	248	1169	204
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:	401	1179	193	415	687	375	390	936	187	248	1169	204
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.56	0.44	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4811	788	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.13	0.25	0.25	0.13	0.12	0.21	0.12	0.25	0.11	0.08	0.31	0.12
Crit Moves:		****		****			****				****	
Green Time:	20.5	35.8	35.8	19.2	34.5	34.5	18.1	47.7	47.7	15.3	44.9	44.9
Volume/Cap:	0.81	0.89	0.89	0.89	0.45	0.81	0.89	0.67	0.29	0.67	0.89	0.34
Delay/Veh:	62.3	52.1	52.1	73.1	40.1	54.7	74.7	35.8	29.4	59.7	48.1	31.9
User DelAdj:	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:	62.3	52.1	52.1	73.1	40.1	54.7	74.7	35.8	29.4	59.7	48.1	31.9
LOS by Move:	E	D-	D-	E	D	D-	E	D+	C	E+	D	C
HCM2kAvgQ:	285	525	525	322	193	426	306	403	140	172	628	161

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Project AM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



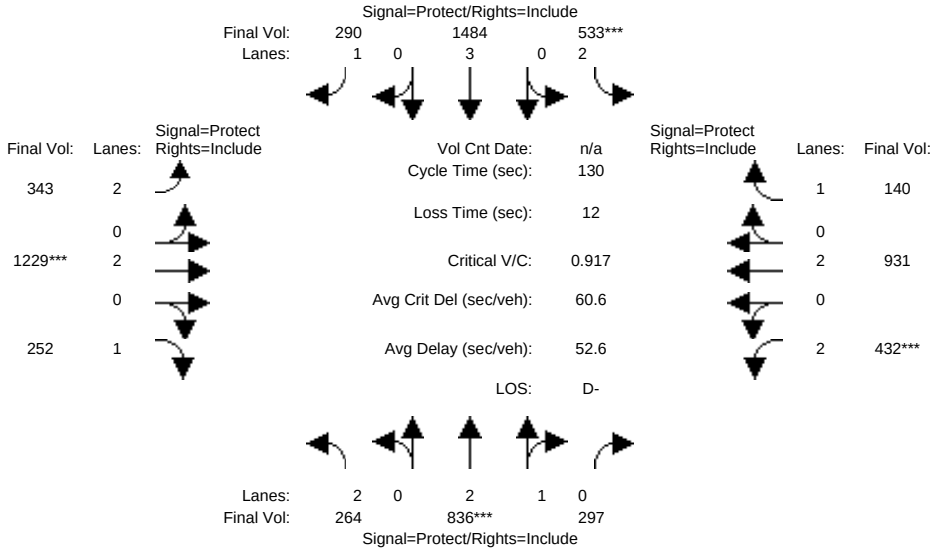
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	401	1179	193	415	687	375	390	936	187	248	1169	204
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:	401	1179	193	415	687	375	390	936	187	248	1169	204
Added Vol:	0	6	0	0	0	0	0	24	0	8	31	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	401	1185	193	415	687	375	390	960	187	256	1200	204
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:	401	1185	193	415	687	375	390	960	187	256	1200	204
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	401	1185	193	415	687	375	390	960	187	256	1200	204
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:	401	1185	193	415	687	375	390	960	187	256	1200	204
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.56	0.44	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4815	784	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.13	0.25	0.25	0.13	0.12	0.21	0.12	0.25	0.11	0.08	0.32	0.12
Crit Moves:		****		****			****				****	
Green Time:	20.3	35.5	35.5	19.0	34.2	34.2	17.9	48.0	48.0	15.4	45.6	45.6
Volume/Cap:	0.81	0.90	0.90	0.90	0.46	0.81	0.90	0.68	0.29	0.68	0.90	0.33
Delay/Veh:	63.1	53.2	53.2	75.0	40.3	55.6	76.6	36.0	29.2	60.1	48.7	31.3
User DelAdj:	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:	63.1	53.2	53.2	75.0	40.3	55.6	76.6	36.0	29.2	60.1	48.7	31.3
LOS by Move:	E	D-	D-	E	D	E+	E-	D+	C	E	D	C
HCM2kAvgQ:	287	534	534	325	194	429	310	416	140	179	651	159

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative PM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



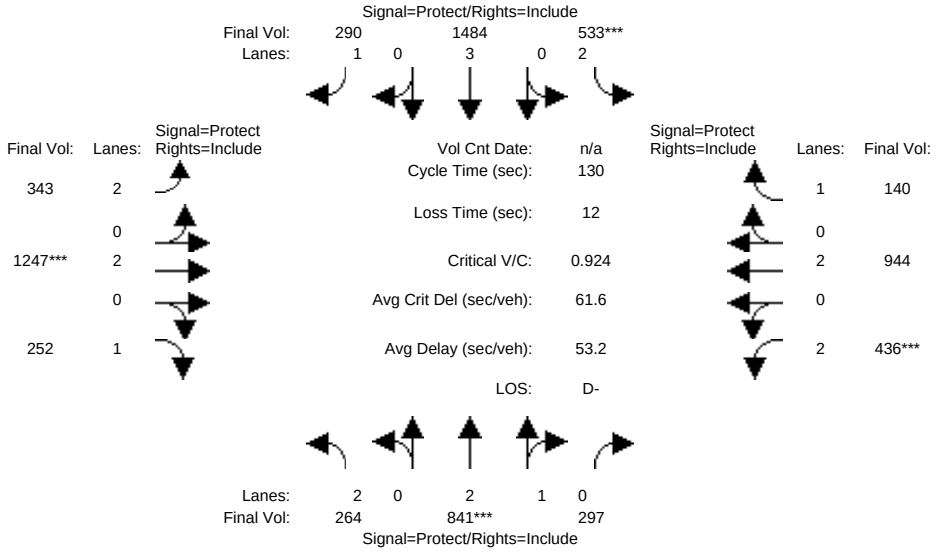
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	264	836	297	533	1484	290	343	1229	252	432	931	140
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:	264	836	297	533	1484	290	343	1229	252	432	931	140
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:	264	836	297	533	1484	290	343	1229	252	432	931	140
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	836	297	533	1484	290	343	1229	252	432	931	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	264	836	297	533	1484	290	343	1229	252	432	931	140
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:	264	836	297	533	1484	290	343	1229	252	432	931	140
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.18	0.82	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4130	1467	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.20	0.20	0.17	0.26	0.17	0.11	0.32	0.14	0.14	0.25	0.08
Crit Moves:		****		****				****		****		
Green Time:	12.8	28.7	28.7	24.0	39.9	39.9	20.1	45.9	45.9	19.4	45.2	45.2
Volume/Cap:	0.85	0.92	0.92	0.92	0.85	0.54	0.70	0.92	0.41	0.92	0.70	0.23
Delay/Veh:	76.9	60.3	60.3	71.5	46.4	38.6	56.8	50.3	32.3	77.2	38.4	30.2
User DelAdj:	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:	76.9	60.3	60.3	71.5	46.4	38.6	56.8	50.3	32.3	77.2	38.4	30.2
LOS by Move:	E-	E	E	E	D	D+	E+	D	C-	E-	D+	C
HCM2kAvgQ:	217	466	466	404	521	265	227	679	204	342	418	105

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Project PM

Intersection #5: El Camino Real/ Page Mill Rd/ Oregon Expwy



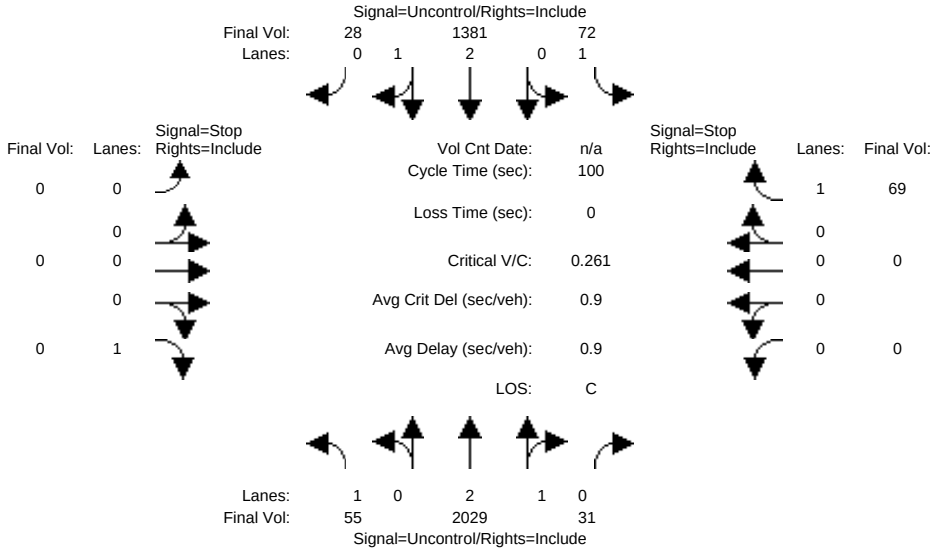
Street Name:	El Camino Real						Page Mill Rd/ Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	264	836	297	533	1484	290	343	1229	252	432	931	140
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:	264	836	297	533	1484	290	343	1229	252	432	931	140
Added Vol:	0	5	0	0	0	0	0	18	0	4	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	264	841	297	533	1484	290	343	1247	252	436	944	140
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	841	297	533	1484	290	343	1247	252	436	944	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	264	841	297	533	1484	290	343	1247	252	436	944	140
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:	264	841	297	533	1484	290	343	1247	252	436	944	140
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.19	0.81	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	4137	1461	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.20	0.20	0.17	0.26	0.17	0.11	0.33	0.14	0.14	0.25	0.08
Crit Moves:		****		****				****		****		
Green Time:	12.8	28.6	28.6	23.8	39.6	39.6	20.0	46.1	46.1	19.5	45.6	45.6
Volume/Cap:	0.85	0.92	0.92	0.92	0.85	0.54	0.71	0.92	0.41	0.92	0.71	0.23
Delay/Veh:	77.7	61.3	61.3	73.0	46.8	38.8	57.0	51.1	32.0	78.6	38.2	30.0
User DelAdj:	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:	77.7	61.3	61.3	73.0	46.8	38.8	57.0	51.1	32.0	78.6	38.2	30.0
LOS by Move:	E-	E	E	E	D	D+	E+	D-	C-	E-	D+	C
HCM2kAvgQ:	218	473	473	408	524	266	228	695	203	348	424	104

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative AM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	55	2029	31	72	1381	28	0	0	0	0	0	69
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:	55	2029	31	72	1381	28	0	0	0	0	0	69
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:	55	2029	31	72	1381	28	0	0	0	0	0	69
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:	55	2029	31	72	1381	28	0	0	0	0	0	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	55	2029	31	72	1381	28	0	0	0	0	0	69
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	1409	xxxx	xxxxx	2060	xxxx	xxxxx	xxxx	xxxx	474	xxxx	xxxx	692
Potent Cap.:	490	xxxx	xxxxx	275	xxxx	xxxxx	xxxx	xxxx	542	xxxx	xxxx	391
Move Cap.:	490	xxxx	xxxxx	275	xxxx	xxxxx	xxxx	xxxx	542	xxxx	xxxx	391
Volume/Cap:	0.11	xxxx	xxxx	0.26	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.18

Level Of Service Module:												
2Way95thQ:	9.4	xxxx	xxxxx	25.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	15.8
Control Del:	13.3	xxxx	xxxxx	22.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	16.2
LOS by Move:	B	*	*	C	*	*	*	*	*	*	*	C
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			16.2		
ApproachLOS:	*			*			*			C		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	55 2029	31		72 1381	28		0	0	0	0	0	69
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			16.2		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=69]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3665]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	55 2029	31		72 1381	28		0	0	0	0	0	69

Major Street Volume: 3596
Minor Approach Volume: 69
Minor Approach Volume Threshold: -156 [less than minimum of 100]

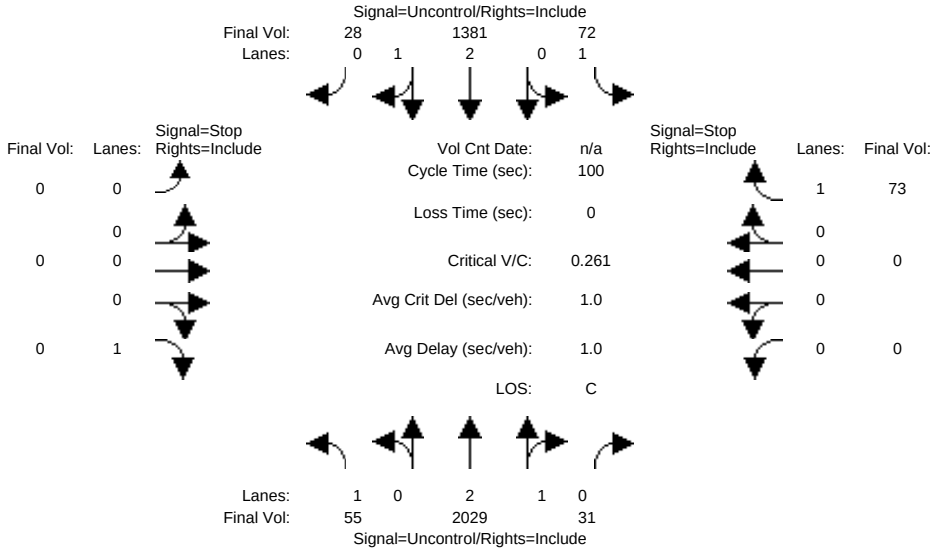
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Project AM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	55	2029	31	72	1381	28	0	0	0	0	0	69
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:	55	2029	31	72	1381	28	0	0	0	0	0	69
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	2029	31	72	1381	28	0	0	0	0	0	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:	55	2029	31	72	1381	28	0	0	0	0	0	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	55	2029	31	72	1381	28	0	0	0	0	0	73
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	1409	xxxx	xxxxx	2060	xxxx	xxxxx	xxxx	xxxx	474	xxxx	xxxx	692
Potent Cap.:	490	xxxx	xxxxx	275	xxxx	xxxxx	xxxx	xxxx	542	xxxx	xxxx	391
Move Cap.:	490	xxxx	xxxxx	275	xxxx	xxxxx	xxxx	xxxx	542	xxxx	xxxx	391
Volume/Cap:	0.11	xxxx	xxxx	0.26	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.19
Level Of Service Module:												
2Way95thQ:	9.4	xxxx	xxxxx	25.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	16.9
Control Del:	13.3	xxxx	xxxxx	22.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	16.3
LOS by Move:	B	*	*	C	*	*	*	*	*	*	*	C
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			16.3		
ApproachLOS:	*			*			*			C		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 0 0 1			0 0 0 0 1		
Initial Vol:	55 2029	31		72 1381	28		0	0	0	0	0	73
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			16.3		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=73]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3669]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 0 0 1			0 0 0 0 1		
Initial Vol:	55 2029	31		72 1381	28		0	0	0	0	0	73

Major Street Volume: 3596
Minor Approach Volume: 73
Minor Approach Volume Threshold: -156 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
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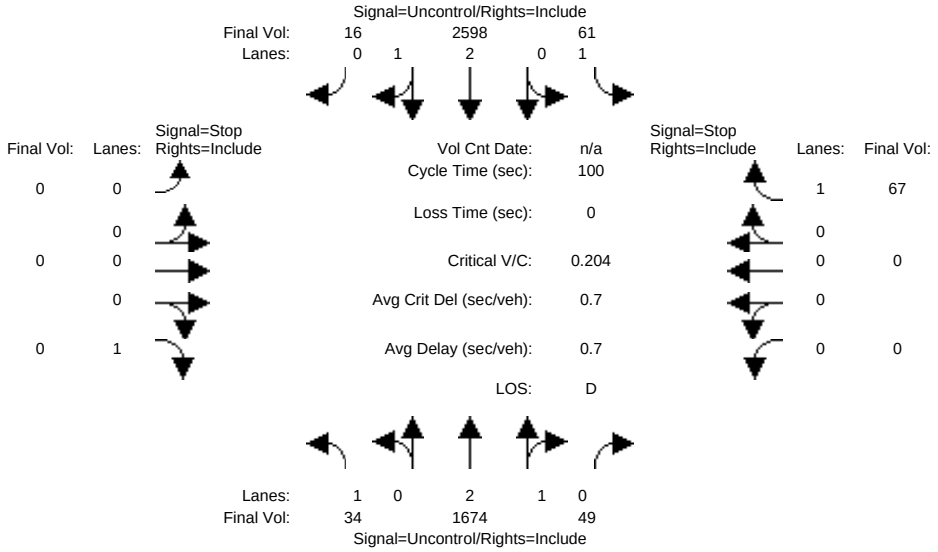
The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative PM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	34	1674	49	61	2598	16	0	0	0	0	0	67
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:	34	1674	49	61	2598	16	0	0	0	0	0	67
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:	34	1674	49	61	2598	16	0	0	0	0	0	67
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:	34	1674	49	61	2598	16	0	0	0	0	0	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	34	1674	49	61	2598	16	0	0	0	0	0	67
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	2614	xxxx	xxxxx	1723	xxxx	xxxxx	xxxx	xxxx	874	xxxx	xxxx	583
Potent Cap.:	167	xxxx	xxxxx	372	xxxx	xxxxx	xxxx	xxxx	297	xxxx	xxxx	461
Move Cap.:	167	xxxx	xxxxx	372	xxxx	xxxxx	xxxx	xxxx	297	xxxx	xxxx	461
Volume/Cap:	0.20	xxxx	xxxx	0.16	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.15
Level Of Service Module:												
2Way95thQ:	18.4	xxxx	xxxxx	14.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	12.6
Control Del:	32.0	xxxx	xxxxx	16.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.1
LOS by Move:	D	*	*	C	*	*	*	*	*	*	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.1		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	34 1674	49		61 2598	16		0	0	0	0	0	67
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.1		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=67]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=4499]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	34 1674	49		61 2598	16		0	0	0	0	0	67

Major Street Volume: 4432
Minor Approach Volume: 67
Minor Approach Volume Threshold: -228 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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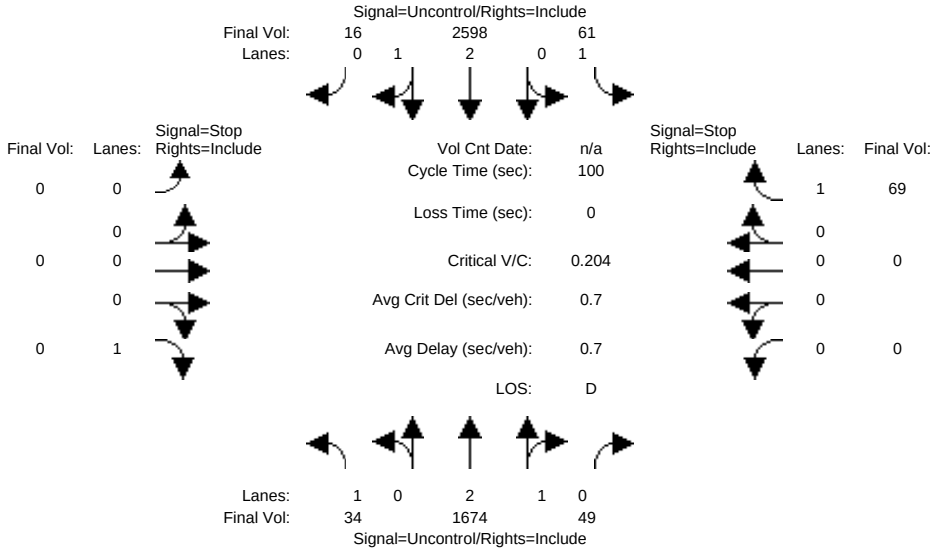
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Project PM

Intersection #6: El Camino Real/ Grant Ave



Street Name:	El Camino Real						Grant Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	34	1674	49	61	2598	16	0	0	0	0	0	67
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:	34	1674	49	61	2598	16	0	0	0	0	0	67
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:	34	1674	49	61	2598	16	0	0	0	0	0	69
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:	34	1674	49	61	2598	16	0	0	0	0	0	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	34	1674	49	61	2598	16	0	0	0	0	0	69
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	2614	xxxx	xxxxx	1723	xxxx	xxxxx	xxxx	xxxx	874	xxxx	xxxx	583
Potent Cap.:	167	xxxx	xxxxx	372	xxxx	xxxxx	xxxx	xxxx	297	xxxx	xxxx	461
Move Cap.:	167	xxxx	xxxxx	372	xxxx	xxxxx	xxxx	xxxx	297	xxxx	xxxx	461
Volume/Cap:	0.20	xxxx	xxxx	0.16	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.15
Level Of Service Module:												
2Way95thQ:	18.4	xxxx	xxxxx	14.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	13.1
Control Del:	32.0	xxxx	xxxxx	16.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.2
LOS by Move:	D	*	*	C	*	*	*	*	*	*	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.2		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	34 1674	49		61 2598	16		0 0	0		0 0	69	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.2		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=69]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=4501]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 El Camino Real/ Grant Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2	1 0		1 0 2	1 0		0 0 0	0 1		0 0 0	0 1	
Initial Vol:	34 1674	49		61 2598	16		0 0	0		0 0	69	

Major Street Volume: 4432
Minor Approach Volume: 69
Minor Approach Volume Threshold: -228 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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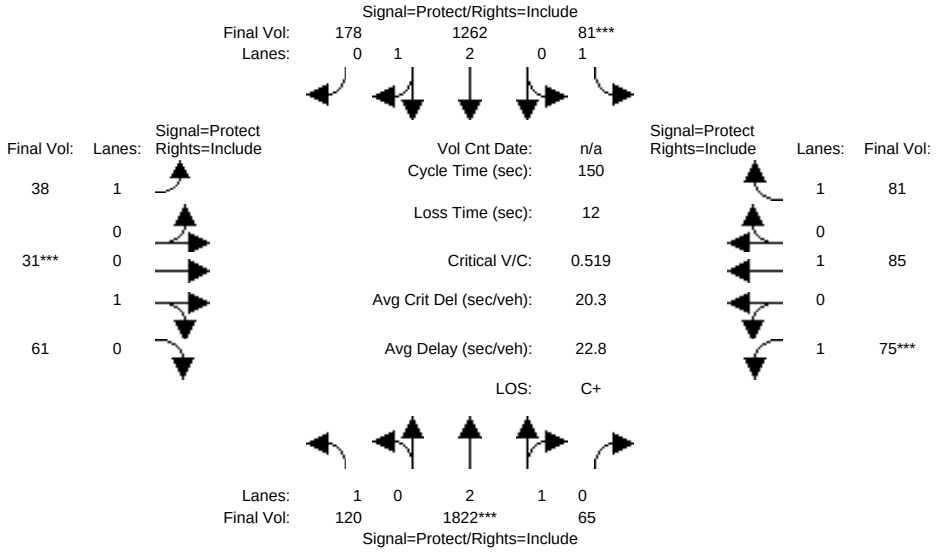
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative AM

Intersection #7: El Camino Real/ California Ave



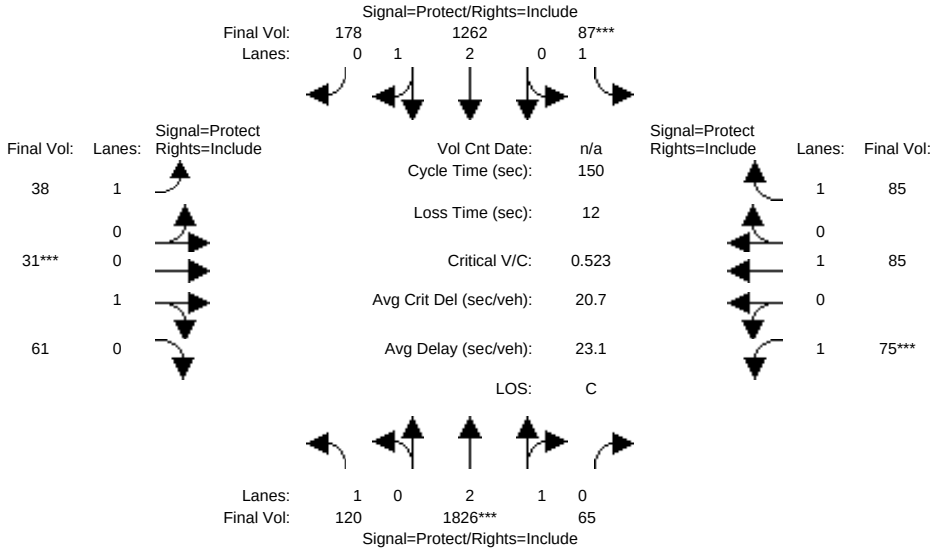
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	120	1822	65	81	1262	178	38	31	61	75	85	81
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:	120	1822	65	81	1262	178	38	31	61	75	85	81
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:	120	1822	65	81	1262	178	38	31	61	75	85	81
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:	120	1822	65	81	1262	178	38	31	61	75	85	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	120	1822	65	81	1262	178	38	31	61	75	85	81
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:	120	1822	65	81	1262	178	38	31	61	75	85	81
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.99	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.89	0.11	1.00	2.62	0.38	1.00	0.34	0.66	1.00	1.00	1.00
Final Sat.:	1750	5407	193	1750	4907	692	1750	607	1193	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.34	0.34	0.05	0.26	0.26	0.02	0.05	0.05	0.04	0.04	0.05
Crit Moves:		****		****				****		****		
Green Time:	23.3	97.4	97.4	13.4	87.5	87.5	11.2	14.8	14.8	12.4	16.0	16.0
Volume/Cap:	0.44	0.52	0.52	0.52	0.44	0.44	0.29	0.52	0.52	0.52	0.42	0.43
Delay/Veh:	58.6	14.0	14.0	68.3	17.6	17.6	66.9	66.9	66.9	69.2	64.1	64.4
User DelAdj:	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:	58.6	14.0	14.0	68.3	17.6	17.6	66.9	66.9	66.9	69.2	64.1	64.4
LOS by Move:	E+	B	B	E	B	B	E	E	E	E	E	E
HCM2kAvgQ:	142	379	379	112	305	305	51	121	121	106	100	104

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Project AM

Intersection #7: El Camino Real/ California Ave



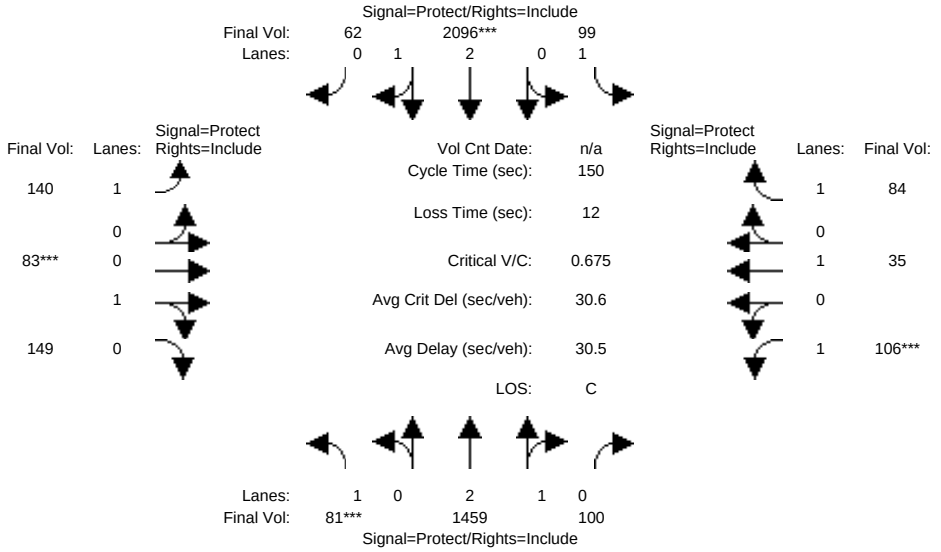
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	120	1822	65	81	1262	178	38	31	61	75	85	81
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:	120	1822	65	81	1262	178	38	31	61	75	85	81
Added Vol:	0	4	0	6	0	0	0	0	0	0	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	120	1826	65	87	1262	178	38	31	61	75	85	85
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:	120	1826	65	87	1262	178	38	31	61	75	85	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	120	1826	65	87	1262	178	38	31	61	75	85	85
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:	120	1826	65	87	1262	178	38	31	61	75	85	85
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.99	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.89	0.11	1.00	2.62	0.38	1.00	0.34	0.66	1.00	1.00	1.00
Final Sat.:	1750	5407	192	1750	4907	692	1750	607	1193	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.34	0.34	0.05	0.26	0.26	0.02	0.05	0.05	0.04	0.04	0.05
Crit Moves:		****		****				****		****		
Green Time:	23.4	96.8	96.8	14.3	87.7	87.7	11.1	14.7	14.7	12.3	15.8	15.8
Volume/Cap:	0.44	0.52	0.52	0.52	0.44	0.44	0.29	0.52	0.52	0.52	0.42	0.46
Delay/Veh:	58.5	14.4	14.4	67.7	17.5	17.5	67.0	67.2	67.2	69.5	64.2	64.9
User DelAdj:	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:	58.5	14.4	14.4	67.7	17.5	17.5	67.0	67.2	67.2	69.5	64.2	64.9
LOS by Move:	E+	B	B	E	B	B	E	E	E	E	E	E
HCM2kAvgQ:	142	385	385	119	304	304	51	121	121	106	100	110

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative PM

Intersection #7: El Camino Real/ California Ave



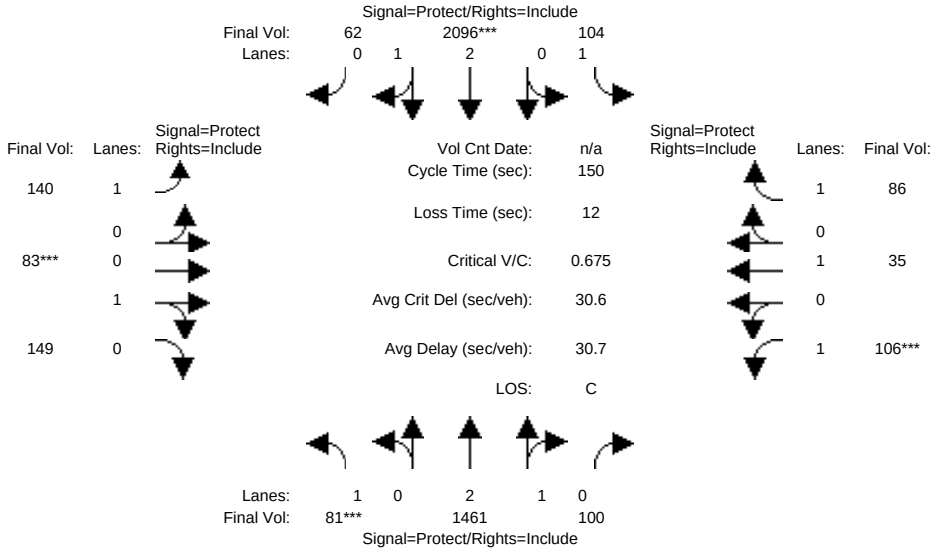
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	81	1459	100	99	2096	62	140	83	149	106	35	84
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:	81	1459	100	99	2096	62	140	83	149	106	35	84
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:	81	1459	100	99	2096	62	140	83	149	106	35	84
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:	81	1459	100	99	2096	62	140	83	149	106	35	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	81	1459	100	99	2096	62	140	83	149	106	35	84
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:	81	1459	100	99	2096	62	140	83	149	106	35	84
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.80	0.20	1.00	2.91	0.09	1.00	0.36	0.64	1.00	1.00	1.00
Final Sat.:	1750	5240	359	1750	5439	161	1750	644	1156	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.28	0.28	0.06	0.39	0.39	0.08	0.13	0.13	0.06	0.02	0.05
Crit Moves:	****				****			****			****	
Green Time:	10.3	79.7	79.7	16.2	85.6	85.6	23.0	28.6	28.6	13.5	19.1	19.1
Volume/Cap:	0.68	0.52	0.52	0.52	0.68	0.68	0.52	0.68	0.68	0.68	0.14	0.38
Delay/Veh:	82.4	23.0	23.0	65.9	23.1	23.1	60.3	61.6	61.6	77.2	58.4	61.0
User DelAdj:	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:	82.4	23.0	23.0	65.9	23.1	23.1	60.3	61.6	61.6	77.2	58.4	61.0
LOS by Move:	F	C+	C+	E	C	C	E	E	E	E-	E+	E
HCM2kAvgQ:	129	385	385	131	582	582	172	283	283	158	37	102

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Project PM

Intersection #7: El Camino Real/ California Ave



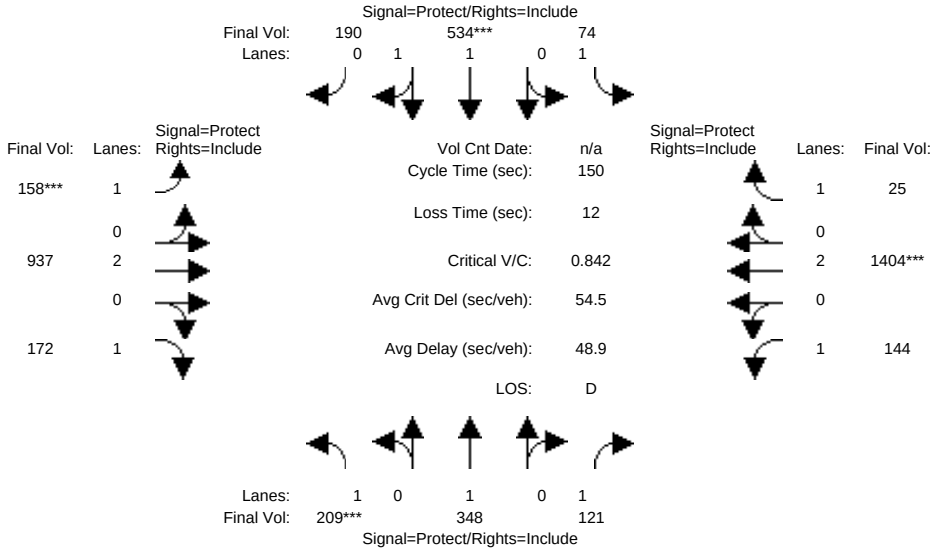
Street Name:	El Camino Real						California Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	81	1459	100	99	2096	62	140	83	149	106	35	84
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:	81	1459	100	99	2096	62	140	83	149	106	35	84
Added Vol:	0	2	0	5	0	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	81	1461	100	104	2096	62	140	83	149	106	35	86
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:	81	1461	100	104	2096	62	140	83	149	106	35	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	81	1461	100	104	2096	62	140	83	149	106	35	86
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:	81	1461	100	104	2096	62	140	83	149	106	35	86
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	1.00	2.80	0.20	1.00	2.91	0.09	1.00	0.36	0.64	1.00	1.00	1.00
Final Sat.:	1750	5241	359	1750	5439	161	1750	644	1156	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.28	0.28	0.06	0.39	0.39	0.08	0.13	0.13	0.06	0.02	0.05
Crit Moves:	****				****			****			****	
Green Time:	10.3	79.1	79.1	16.9	85.6	85.6	23.0	28.6	28.6	13.5	19.1	19.1
Volume/Cap:	0.68	0.53	0.53	0.53	0.68	0.68	0.52	0.68	0.68	0.68	0.14	0.39
Delay/Veh:	82.4	23.4	23.4	65.5	23.1	23.1	60.3	61.6	61.6	77.2	58.4	61.1
User DelAdj:	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:	82.4	23.4	23.4	65.5	23.1	23.1	60.3	61.6	61.6	77.2	58.4	61.1
LOS by Move:	F	C	C	E	C	C	E	E	E	E-	E+	E
HCM2kAvgQ:	129	389	389	137	582	582	172	283	283	158	37	104

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative AM

Intersection #8: Middlefield Rd/ Oregon Expwy



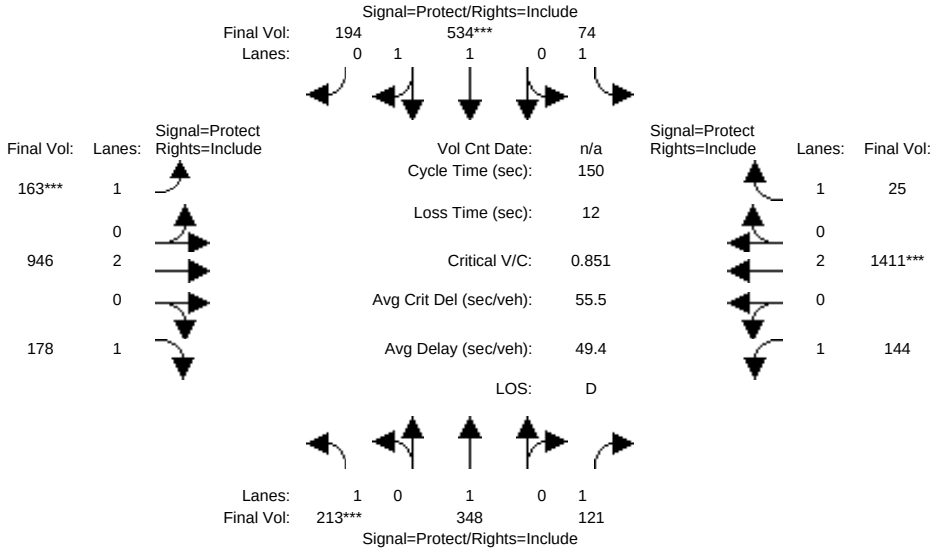
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	209	348	121	74	534	190	158	937	172	144	1404	25
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:	209	348	121	74	534	190	158	937	172	144	1404	25
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:	209	348	121	74	534	190	158	937	172	144	1404	25
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:	209	348	121	74	534	190	158	937	172	144	1404	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	209	348	121	74	534	190	158	937	172	144	1404	25
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:	209	348	121	74	534	190	158	937	172	144	1404	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.46	0.54	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	2728	971	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.18	0.07	0.04	0.20	0.20	0.09	0.25	0.10	0.08	0.37	0.01
Crit Moves:	****				****		****				****	
Green Time:	21.3	44.7	44.7	11.4	34.9	34.9	16.1	61.4	61.4	20.5	65.8	65.8
Volume/Cap:	0.84	0.61	0.23	0.56	0.84	0.84	0.84	0.60	0.24	0.60	0.84	0.03
Delay/Veh:	84.8	47.2	39.9	72.0	62.5	62.5	93.3	35.4	29.2	65.2	41.6	24.0
User DelAdj:	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:	84.8	47.2	39.9	72.0	62.5	62.5	93.3	35.4	29.2	65.2	41.6	24.0
LOS by Move:	F	D	D	E	E	E	F	D+	C	E	D	C
HCM2kAvgQ:	313	349	111	108	463	463	251	419	135	187	757	17

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Project AM

Intersection #8: Middlefield Rd/ Oregon Expwy



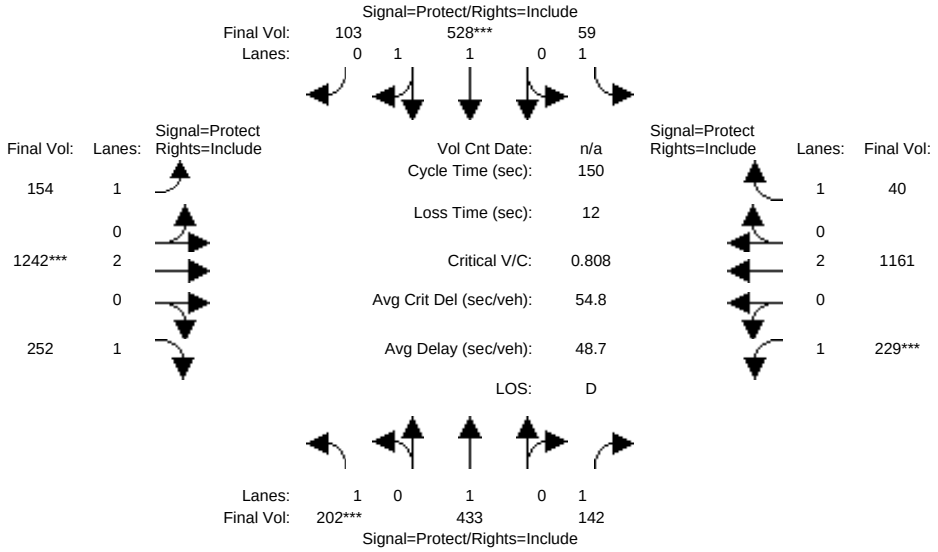
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	209	348	121	74	534	190	158	937	172	144	1404	25
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:	209	348	121	74	534	190	158	937	172	144	1404	25
Added Vol:	4	0	0	0	0	4	5	9	6	0	7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	213	348	121	74	534	194	163	946	178	144	1411	25
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:	213	348	121	74	534	194	163	946	178	144	1411	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	348	121	74	534	194	163	946	178	144	1411	25
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:	213	348	121	74	534	194	163	946	178	144	1411	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.45	0.55	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	2713	986	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.18	0.07	0.04	0.20	0.20	0.09	0.25	0.10	0.08	0.37	0.01
Crit Moves:	****				****		****				****	
Green Time:	21.5	44.7	44.7	11.4	34.7	34.7	16.4	61.5	61.5	20.3	65.4	65.4
Volume/Cap:	0.85	0.61	0.23	0.56	0.85	0.85	0.85	0.61	0.25	0.61	0.85	0.03
Delay/Veh:	86.0	47.2	39.9	72.0	63.3	63.3	94.2	35.4	29.2	65.5	42.3	24.2
User DelAdj:	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:	86.0	47.2	39.9	72.0	63.3	63.3	94.2	35.4	29.2	65.5	42.3	24.2
LOS by Move:	F	D	D	E	E	E	F	D+	C	E	D	C
HCM2kAvgQ:	320	349	111	108	470	470	260	424	140	188	770	17

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative PM

Intersection #8: Middlefield Rd/ Oregon Expwy



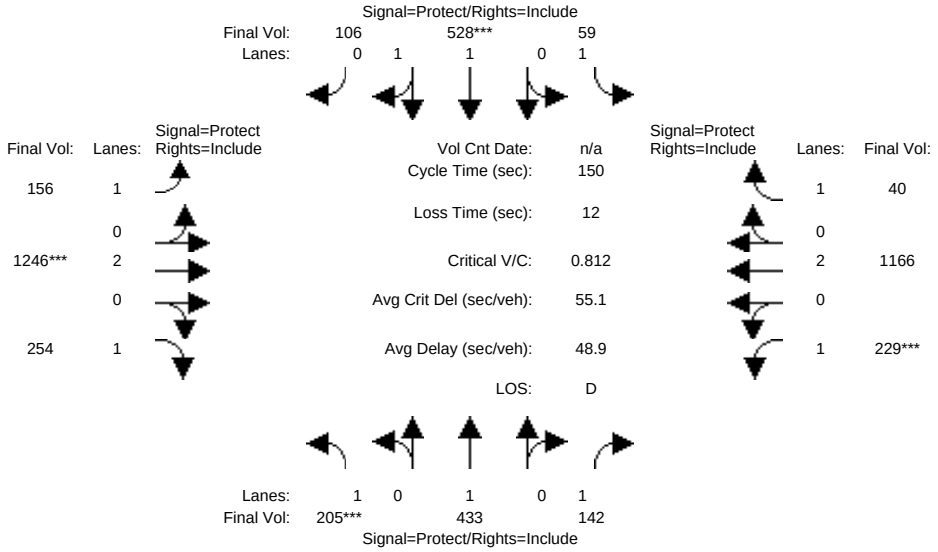
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	202	433	142	59	528	103	154	1242	252	229	1161	40
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:	202	433	142	59	528	103	154	1242	252	229	1161	40
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:	202	433	142	59	528	103	154	1242	252	229	1161	40
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:	202	433	142	59	528	103	154	1242	252	229	1161	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	202	433	142	59	528	103	154	1242	252	229	1161	40
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:	202	433	142	59	528	103	154	1242	252	229	1161	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.66	0.34	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	3096	604	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.23	0.08	0.03	0.17	0.17	0.09	0.33	0.14	0.13	0.31	0.02
Crit Moves:	****				****			****		****		
Green Time:	21.4	44.0	44.0	9.0	31.7	31.7	19.0	60.6	60.6	24.3	65.9	65.9
Volume/Cap:	0.81	0.78	0.28	0.56	0.81	0.81	0.70	0.81	0.36	0.81	0.70	0.05
Delay/Veh:	79.8	55.2	41.0	75.3	62.6	62.6	72.0	42.8	31.4	76.3	35.2	24.1
User DelAdj:	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:	79.8	55.2	41.0	75.3	62.6	62.6	72.0	42.8	31.4	76.3	35.2	24.1
LOS by Move:	E-	E+	D	E-	E	E	E	D	C	E-	D+	C
HCM2kAvgQ:	294	486	133	92	400	400	214	661	212	325	541	27

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Project PM

Intersection #8: Middlefield Rd/ Oregon Expwy



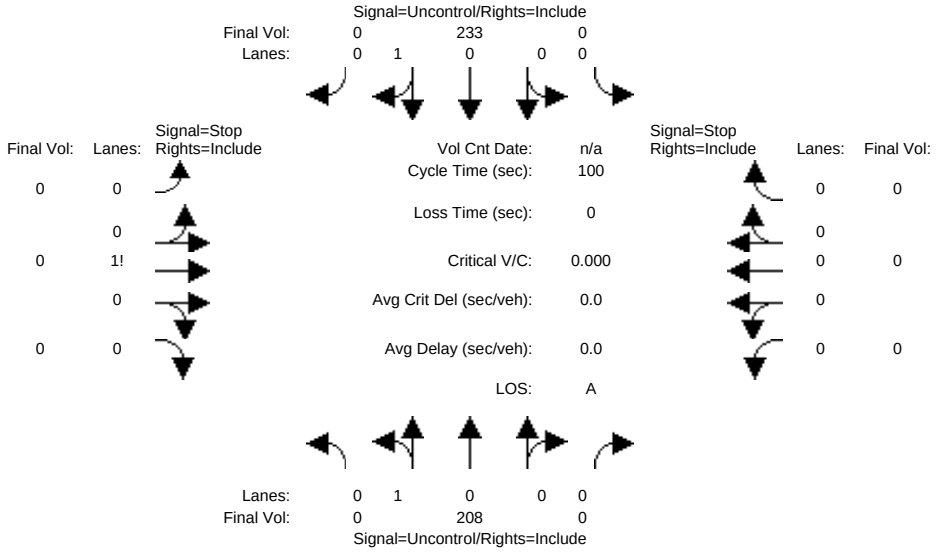
Street Name:	Middlefield Rd						Oregon Expwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	202	433	142	59	528	103	154	1242	252	229	1161	40
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:	202	433	142	59	528	103	154	1242	252	229	1161	40
Added Vol:	3	0	0	0	0	3	2	4	2	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	205	433	142	59	528	106	156	1246	254	229	1166	40
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:	205	433	142	59	528	106	156	1246	254	229	1166	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	433	142	59	528	106	156	1246	254	229	1166	40
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:	205	433	142	59	528	106	156	1246	254	229	1166	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.66	0.34	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	3081	619	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.23	0.08	0.03	0.17	0.17	0.09	0.33	0.15	0.13	0.31	0.02
Crit Moves:	****				****			****		****		
Green Time:	21.6	44.2	44.2	9.1	31.6	31.6	19.1	60.6	60.6	24.2	65.6	65.6
Volume/Cap:	0.81	0.77	0.28	0.56	0.81	0.81	0.70	0.81	0.36	0.81	0.70	0.05
Delay/Veh:	80.0	54.9	40.9	75.1	62.8	62.8	72.3	43.1	31.5	76.9	35.6	24.3
User DelAdj:	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:	80.0	54.9	40.9	75.1	62.8	62.8	72.3	43.1	31.5	76.9	35.6	24.3
LOS by Move:	F	D-	D	E-	E	E	E	D	C	E-	D+	C
HCM2kAvgQ:	299	484	133	92	404	404	217	666	214	326	547	27

Note: Queue reported is the distance per lane in feet.

231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative AM

Intersection #9: Park Blvd/ Access#1



Street Name: Park Blvd Access#1

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	208	0	0	233	0	0	0	0	0	0	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:	0	208	0	0	233	0	0	0	0	0	0	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:	0	208	0	0	233	0	0	0	0	0	0	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:	0	208	0	0	233	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	208	0	0	233	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	441	441	233	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	577	513	811	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	577	513	811	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx

Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 0		0 0 1	0 0		0 0 1!	0 0		0 0 0	0 0	
Initial Vol:	0	208	0	0	233	0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Park Blvd/ Access#1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 0		0 0 1	0 0		0 0 1!	0 0		0 0 0	0 0	
Initial Vol:	0	208	0	0	233	0	0	0	0	0	0	0

Major Street Volume: 441
Minor Approach Volume: 0
Minor Approach Volume Threshold: 438

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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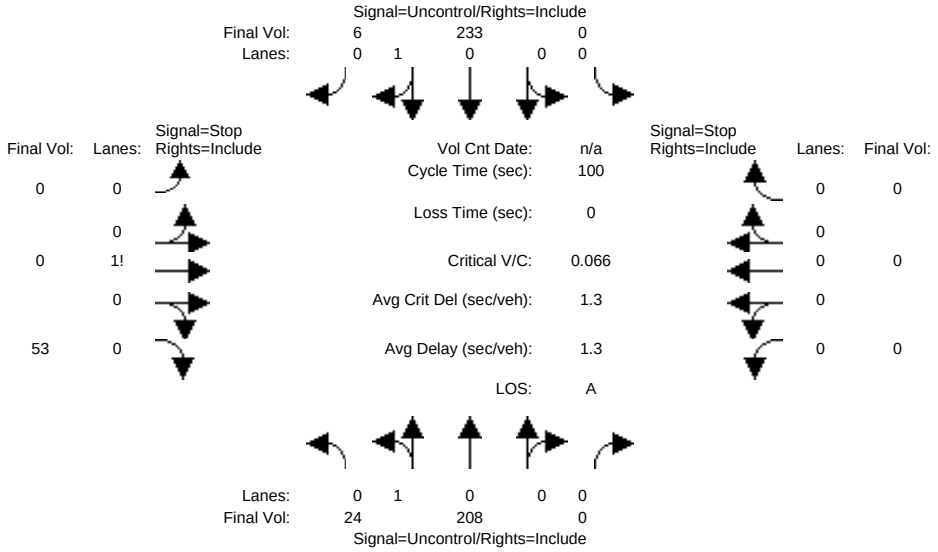
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Project AM

Intersection #9: Park Blvd/ Access#1



Street Name:	Park Blvd						Access#1					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	208	0	0	233	0	0	0	0	0	0	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:	0	208	0	0	233	0	0	0	0	0	0	0
Added Vol:	24	0	0	0	0	6	0	0	53	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	208	0	0	233	6	0	0	53	0	0	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:	24	208	0	0	233	6	0	0	53	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	24	208	0	0	233	6	0	0	53	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	239	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	236	xxxx	xxxx	xxxxx
Potent Cap.:	1340	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	808	xxxx	xxxx	xxxxx
Move Cap.:	1340	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	808	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.07	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	5.3	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.8	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	A	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.8			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 0	0	1	0 0 0	0	0
Initial Vol:	24 208	0		0 233	6		0 0	53		0 0	0	
ApproachDel:	xxxxxx			xxxxxx			9.8			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=53]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=524]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 0	0	1	0 0 0	0	0
Initial Vol:	24 208	0		0 233	6		0 0	53		0 0	0	

Major Street Volume: 471
Minor Approach Volume: 53
Minor Approach Volume Threshold: 420

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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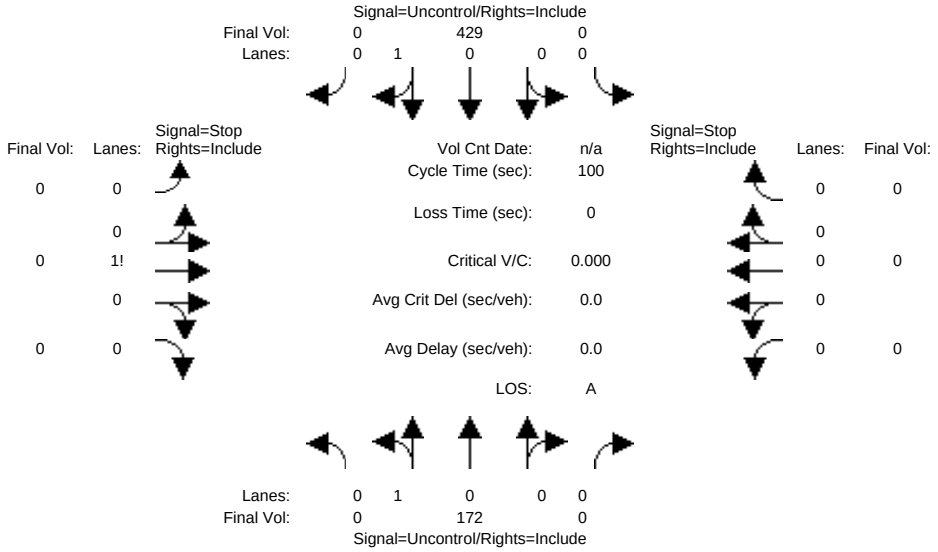
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative PM

Intersection #9: Park Blvd/ Access#1



Street Name: Park Blvd Access#1

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	172	0	0	429	0	0	0	0	0	0	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:	0	172	0	0	429	0	0	0	0	0	0	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:	0	172	0	0	429	0	0	0	0	0	0	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:	0	172	0	0	429	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	172	0	0	429	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	601	601	429	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	467	417	630	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	467	417	630	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1 0	0	0 0	1 0	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	0	172	0	0	429	0	0	0	0	0	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Park Blvd/ Access#1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1 0	0	0 0	1 0	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	0	172	0	0	429	0	0	0	0	0	0	0

Major Street Volume: 601
Minor Approach Volume: 0
Minor Approach Volume Threshold: 355

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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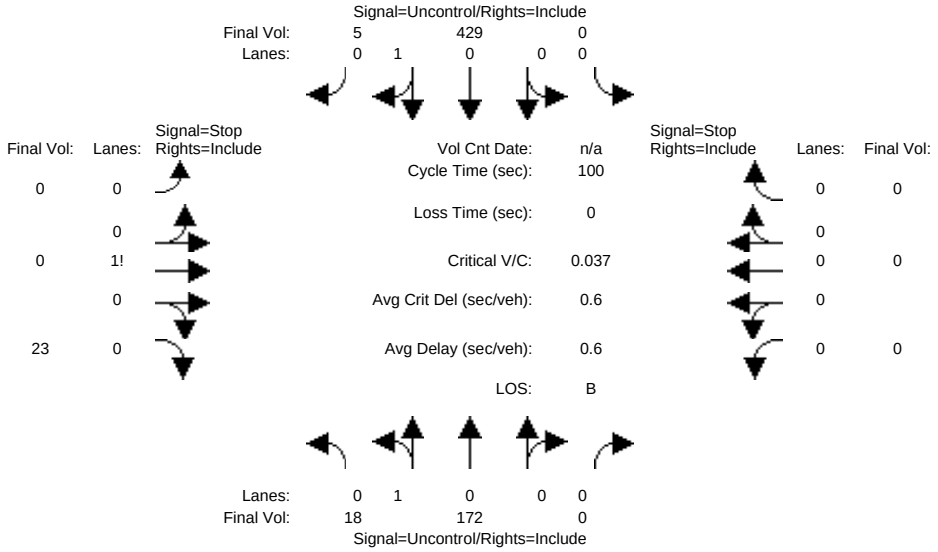
231 Grant Ave TIA
Palo Alto, CA
AECOM Transportation

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Project PM

Intersection #9: Park Blvd/ Access#1



Street Name:	Park Blvd						Access#1					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	172	0	0	429	0	0	0	0	0	0	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:	0	172	0	0	429	0	0	0	0	0	0	0
Added Vol:	18	0	0	0	0	5	0	0	23	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	172	0	0	429	5	0	0	23	0	0	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:	18	172	0	0	429	5	0	0	23	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	18	172	0	0	429	5	0	0	23	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	434	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	432	xxxx	xxxx	xxxxx
Potent Cap.:	1136	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	628	xxxx	xxxx	xxxxx
Move Cap.:	1136	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	628	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	1.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	2.8	xxxx	xxxx	xxxxx
Control Del:	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.9	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.9			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 0	0 1		0 0 0	0 0	
Initial Vol:	18	172	0	0	429	5	0	0	23	0	0	0
ApproachDel:	xxxxxx			xxxxxx			10.9			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=647]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 Park Blvd/ Access#1

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 0	0 1		0 0 0	0 0	
Initial Vol:	18	172	0	0	429	5	0	0	23	0	0	0

Major Street Volume: 624
Minor Approach Volume: 23
Minor Approach Volume Threshold: 345

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

