CLASS 32 ♦ CATEGORICAL EXEMPTION REPORT



3950 Fabian Way School Project

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1 INTRODUCTION

This report serves as the technical documentation of an environmental analysis for the 3950 Fabian Way School Project in the City of Palo Alto. The intent of the analysis is to document whether the project is eligible for a Class 32 Categorical Exemption (CE). The report provides an introduction, project description, and evaluation of the project's consistency with the requirements for a Class 32 exemption. The report concludes that the project is eligible for a Class 32 CE.

The State of California's *CEQA Guidelines* Section 15332 states that a CE is allowed when:

a. The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.
b. The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.
c. The project site has no value as habitat for endangered, rare, or threatened species.
d. Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.
e. The site can be adequately served by all required utilities and public services.

Additionally, *CEQA Guidelines* Section 15300.2 outlines exceptions to the applicability of a Categorical Exemption, including cumulative impacts, significant effects due to unusual circumstances, scenic highways, hazardous waste sites, and historical resources. A full listing of these exceptions and an assessment of their applicability to the proposed project is provided in this report.

The City, in coordination with Rincon Consultants, Inc., evaluated the project's consistency with the above requirements, including its potential impacts in the areas of biological resources, traffic, noise, air quality, greenhouse gas emissions (GHG), and water quality to confirm the project's eligibility for the Class 32 exemption.

2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

The project site consists of a single assessor's parcel (APN 127-37-023) of approximately 65,838 square feet (1.51 acres) located at 3950 Fabian Way. The site is on the west side of Fabian Way approximately 500 feet north of its intersection with East Charleston Road.

The project site is currently developed with a two-story, approximately 32,500 square-foot office and warehouse building that was constructed in the early 1990s and 121 surface parking spaces. The site is generally level. Landscaping is generally limited to a maintained lawn along a portion of the site's street frontage, and shrubs and approximately 35 landscape trees in and around the surface parking lot. Vehicular access is available from two in/out driveways from Fabian Way on either end of the surface parking lot that surrounds the existing building. Figure 1 shows the regional location of the project site and Figure 2 shows the project site in its immediate context. Photos of existing site conditions are shown on Figure 3a – Figure 3b.

Surrounding land uses include a high school to the north, residences to the west, commercial uses to the south, and institutional and commercial uses to the east across Fabian Way.

The project site has a Palo Alto Comprehensive Plan land use designation of Light Industrial and is zoned General Manufacturing (GM). The Light Industrial designation is intended for "Wholesale and storage warehouses and the manufacturing, processing, repairing and packaging of goods. Emission of fumes, noise, smoke, or other pollutants is strictly controlled…Compatible residential and mixed-use projects may also be located in this category…" (City of Palo Alto Comprehensive Plan 2030). The GM zone district is intended for "light manufacturing, research, and commercial service uses" (Palo Alto Municipal Code (PAMC) Section 18.20.010).

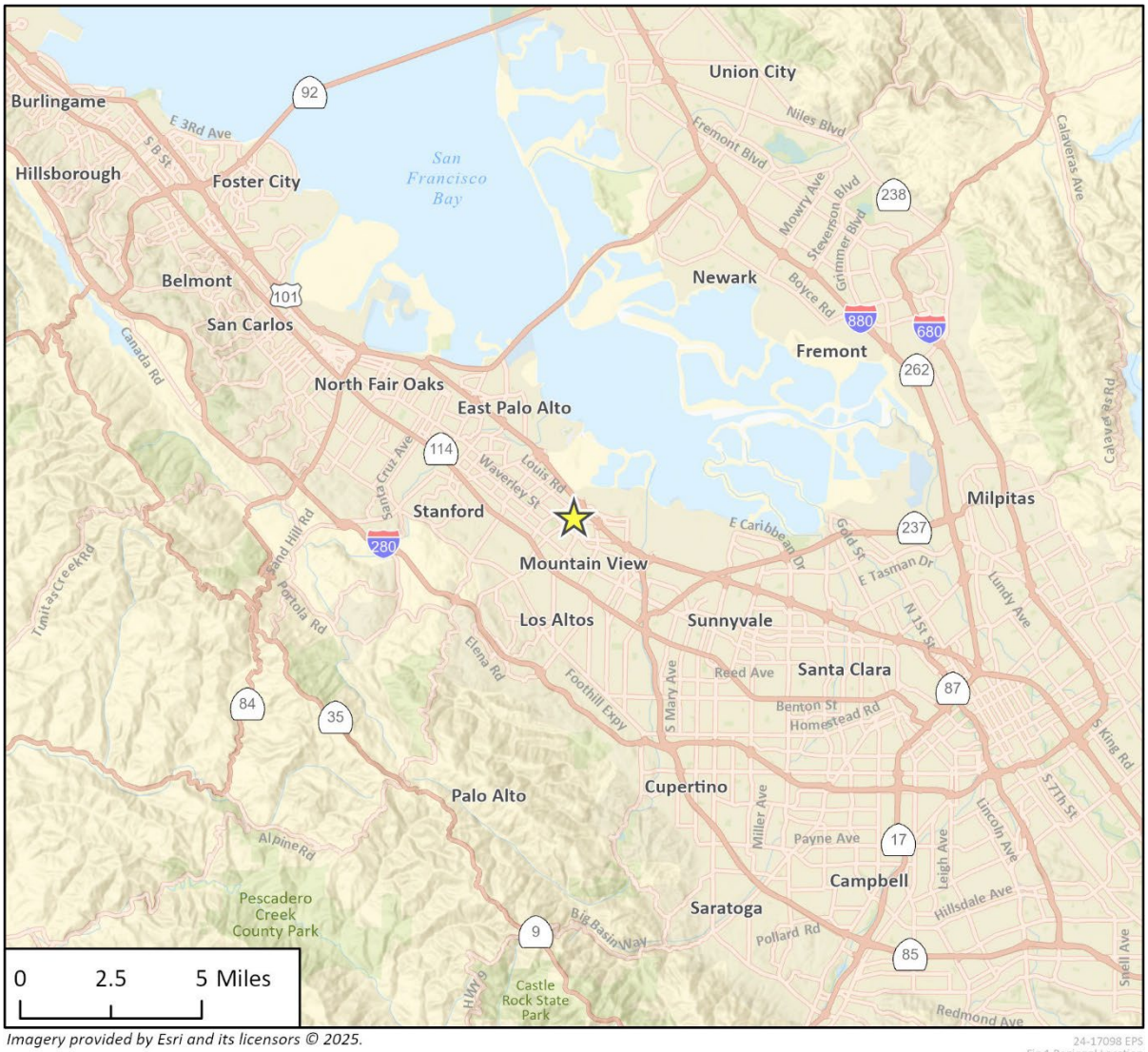
2.2 PROJECT CHARACTERISTICS

The proposed project would involve establishing a middle school (grades 6 through 8) for up to 240 students and 50 faculty/staff on the project site. The school use would occupy the existing building, which would be expanded as discussed further below. The school, The Girls' Middle School, would be moving from its current location at 3400 West Bayshore Road in Palo Alto.

OPERATIONS

School hours are 8:20 a.m. to 3:20 p.m. Faculty and staff begin arriving at approximately 7:30 a.m. Student drop-off can be any time after 7:30 a.m.; peak drop-off time is typically between 8:00 and 8:15 a.m. A school administrator receives and monitors student drop off and pick-up.

Figure 1 Regional Location



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24-17098 EPS
Fig 1 Regional Location

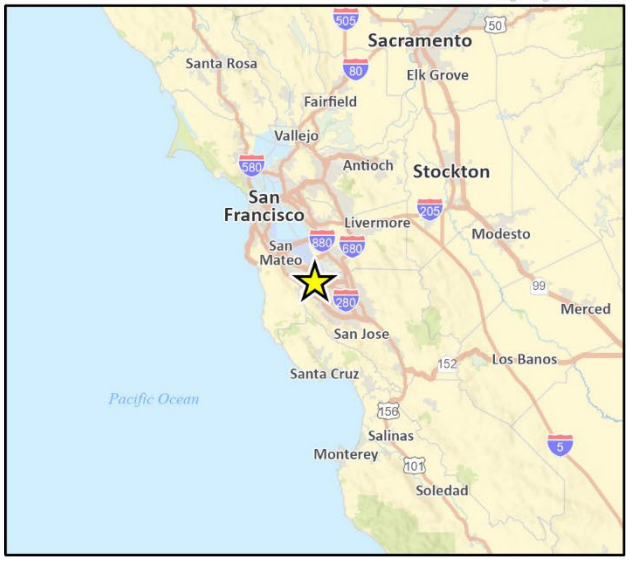


Figure 2 Project Site Location



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24-17098 EPS
Fig 2 Project Location

Figure 3a Existing Conditions



Photo 1: Existing building on the project site, shown looking southwest from across Fabian Way.



Photo 2: Northern portion of the existing building on the project site, shown looking southeast from the interior or the site. This view includes the portion of the building proposed to be demolished and replaced with an addition for the proposed new gym space.

Figure 3b Existing Conditions Continued



Photo 3: Rear (western) portion of the existing building on the project site, shown looking northeast from the interior of the site.



Photo 4: southern facade of the existing building on the project site, shown looking northwest from the Fabian Way sidewalk.

Most faculty and staff leave around 4:00 p.m. A smaller number of faculty and staff supporting after-school activities are on campus until 6:00 p.m. On-site after school programs (excluding sports) have approximately 25 students and 4 tutors. Other than tutors, up to 6 faculty and staff are present on site during after-school time. After school sports are off-site. After school volleyball and basketball would be on site in winter and spring from 3:30 p.m. to 5:00 p.m. Vanpools take students to offsite locations.

BUILDING IMPROVEMENTS

To accommodate the proposed school use, the northmost "bay" of the existing structure, which consists of approximately 4,000 square feet of space between the two floors, would be demolished and replaced with an approximately 4,446 square-foot, single floor gymnasium. The resulting building would be approximately 32,919 square feet in size. The rest of the site and building, including vehicular access, parking lot configuration and internal circulation, would remain generally similar to existing conditions. Limited outdoor educational and support space (physical education, workshop, lunch areas for students and staff) would be located adjacent to the building in place of some of the existing parking spaces. Approximately 19 landscape trees would be removed.

The proposed site plan is shown on Figure 4, and project data is summarized in Table 1.

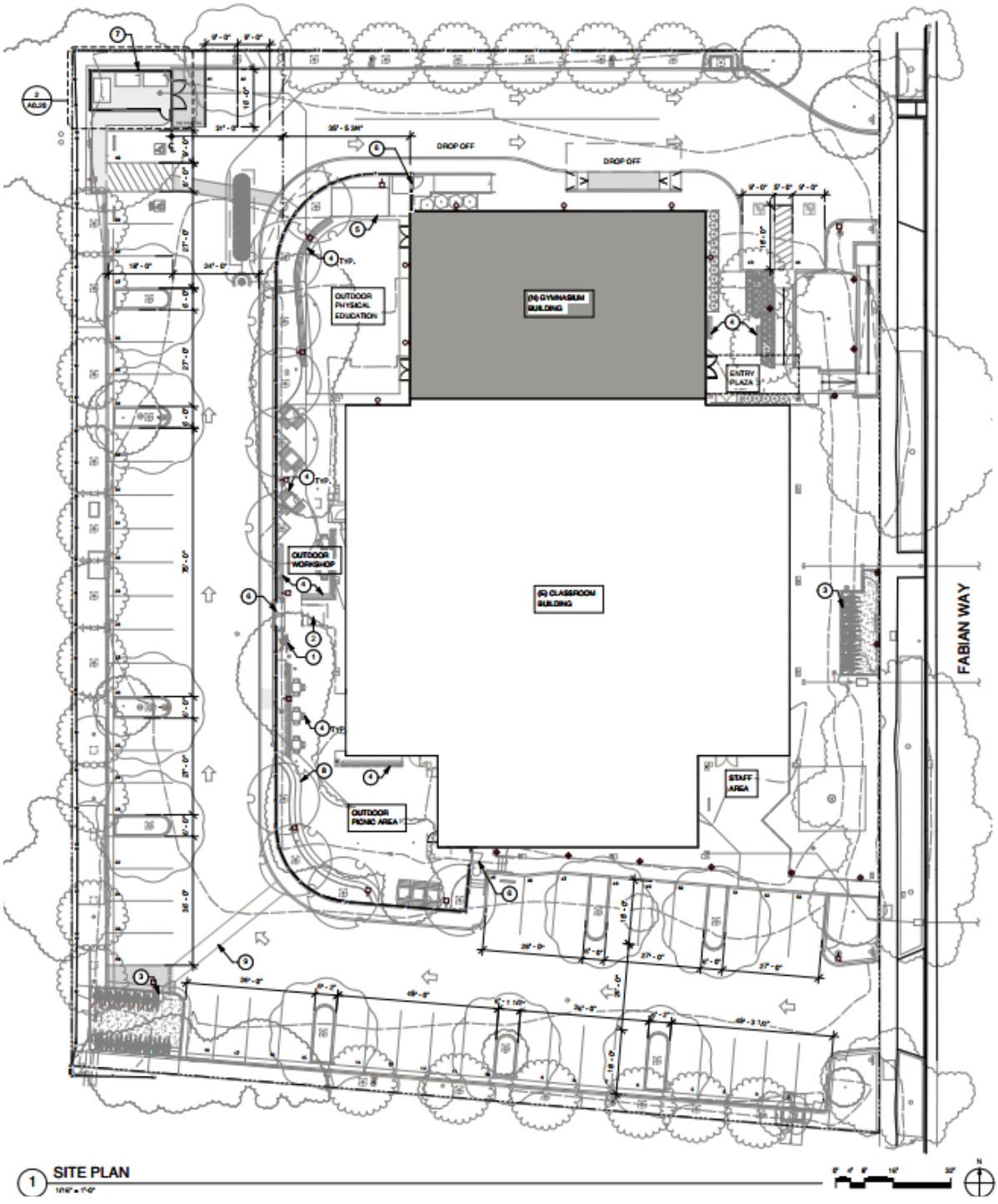
Table 1 Proposed Project Characteristics

Project Characteristic	Required	Proposed
Address	–	3950 Fabian Way
Assessor's Parcel Number	–	127-37-023
Lot Area	1 acre	65,838 sf (1.51 acres)
Gross Floor Area[1]	32,919 sf (1.5:1)	32,919 sf (1.5:1)
Vehicle Parking	38 (2 spaces per teaching station)	52 spaces
Bicycle Parking	48 (1 space per 5 students)	48

[1] The total gross floor area is calculated pursuant to Palo Alto Municipal Code §18.04.030. "Gross floor area" means the total area of all floors of a building measured to the outside surfaces of exterior walls. Net lot area is the area of a lot measured horizontally between bounding lot lines, but excluding any portion of a flag lot providing access to a street and lying between a front lot line and the street, and excluding any portion of a lot within the lines of any natural watercourse, river, stream, creek, waterway, channel, or flood control or drainage easement and excluding any portion of a lot within a public or private street right-of-way whether acquired in fee, easement, or otherwise.

ft = feet or foot; sf = square feet

Figure 4 Proposed Site Plan



SITE ACCESS AND CIRCULATION

The existing general access and circulation pattern – two driveways from Fabian Way serving a looping drive aisle and parking – would remain. The inner array of parking spaces on the building's north and west sides and part of its south side, however, would be replaced by pedestrian circulation and outdoor use areas. Overall parking spaces would be reduced from 121 spaces to 52 spaces. Bicycle racks would be located along the frontage of the building and in the southwest corner of the parking lot, totaling 48 bike spaces.

UTILITIES AND STORMWATER MANAGEMENT

City of Palo Alto Utilities (CPAU) provides electricity, natural gas, water, wastewater, and fiber optics services to the city. The City is currently contracted with GreenWaste of Palo Alto for collection of garbage, recycling and composting services. The site is currently served by these utilities, and the project would continue to be served by these same providers.

Stormwater runoff patterns would be similar to current conditions but stormwater control would be improved through installation of stormwater detention chambers. Due primarily to the replacement of some parking spaces with outdoor activity areas, the total impermeable surfaces on the site would decrease by approximately 1,191 square feet.

CONSTRUCTION

Construction is expected to occur over a 12-month period. The project would include demolition of 4,000 square feet of the existing building on site (two floors of 2,000 square feet per floor) as well as grading and site preparation for the new construction. Grading would be balanced on site and approximately 95 tons of demolition material would be hauled off site. Pile drivers would not be used in building construction. The maximum depth of excavation would be 6 inches for site work, 2 feet for foundations, 4 feet 2 inches for utility trenches, and 5 feet six inches for stormwater chambers.

3 CONSISTENCY ANALYSIS

3.1 CRITERION (A)

The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

The project site has a Comprehensive Plan land use designation of Light Industrial and is zoned General Manufacturing (GM). Pursuant to the Comprehensive Plan, the Light Industrial designation allows a range of use types, from industrial to housing. Pursuant to Section 18.20.030 of the PAMC, private schools are allowed in the GM district with approval of a Conditional Use Permit. To approve a Conditional Use Permit, the City must make the required findings in Section 18.76.010 of the PAMC, including that the project does not conflict with the Comprehensive Plan and that it would not be detrimental to the neighborhood or the public.

The City of Palo Alto has determined that the proposed project is generally consistent with the applicable 2030 Comprehensive Plan designation and policies as well as with applicable zoning designations and regulations, except where waivers and concessions are requested in accordance with State density bonus law. The project would comply with zoning ordinance requirements set forth in the PAMC related to use, building height, FAR, site coverage and setbacks. As discussed throughout this report, the project would not result in significant detrimental impacts to the neighborhood or public.

The project would be consistent with the site's Comprehensive Plan land use designation, Comprehensive Plan policies, zoning designation, and zoning regulations. Therefore, the project would meet the requirements of *Criterion (a)*.

3.2 CRITERION (B)

The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

The project is located on an approximately 1.51-acre site within a developed urban neighborhood in the City of Palo Alto. It is immediately surrounded by urban uses on all sides. Therefore, the project would be consistent with *Criterion (b)*.

3.3 CRITERION (C)

The project site has no value as habitat for endangered, rare, or threatened species.

The project site is located within a developed urban area that lacks suitable habitat for sensitive animal or plant species. The project site is currently developed with buildings and paving with limited, generally non-native landscaping and does not contain suitable habitat for sensitive species.

The project would include the removal of landscaping trees on the site. The trees to be removed are in areas of high human activity and presence and are isolated from forestlands, water bodies, and other foraging habitat; they do not provide structure or

habitat for substantial numbers of special status birds. The project would also include planting new trees, resulting in a net increase over time.

A search on the U.S. Fish and Wildlife Services (USFWS) National Wetlands Inventory for the project site and surrounding area for the occurrences of wetlands concluded that there are no wetlands on the project site or immediate vicinity (USFWS 2025a). Additionally, according to the USFWS Threatened & Endangered Species Critical Habitat map, the project site does not contain and is not adjacent to critical habitat for special status species (USFWS 2025b). The project site has no value as habitat for endangered, rare, or threatened species, and the project would meet the requirements under *Criterion (c)*.

3.4 CRITERION (D)

Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

The following discussion provides an analysis of the project's potential effects with respect to traffic, noise, air quality, and water quality.

A. TRAFFIC

This analysis is based primarily on a Local Transportation Analysis prepared by W-Trans for the project in April 2025. This report is included in Appendix A.

PROJECT TRIP GENERATION

Vehicle trip generation rates were based on traffic counts taken at the driveways of The Girls Middle School's existing driveways at 3400 West Bayshore Road during a typical school day on Wednesday, January 29, 2025. The site generated 196 vehicle trips during the morning peak hour, 117 vehicle trips during the afternoon peak hour for schools, and 53 vehicle trips during the standard afternoon peak hour. W-Trans used the results of the driveway counts to derive expected trip generation for the proposed project. This information is summarized in Table 3 of the Local Transportation Analysis (see Appendix A). W-Trans then calculated the projected change in trip generation with the proposed project, accounting for trips generated by the existing entitled office use at the site. The results are summarized in Table 2.

Table 2 Trip Generation Summary

		Daily		AM Peak Hour				School PM Peak Hour				PM Peak Hour			
Land Use	**Units**	**Rate**	**Trips**	**Rate**	**Trips**	**In**	**Out**	**Rate**	**Trips**	**In**	**Out**	**Rate**	**Trips**	**In**	**Out**
Entitled															
Office	32.5 ksf	10.84	352	1.52	49	43	6	**	28	13	15	1.44	47	8	39
Proposed															
School	240 stu	3.48*	835	1.07*	257	139	118	0.64*	154	68	86	0.29*	70	20	50
Difference		-	483	-	208	96	112	-	126	55	71	-	23	12	11

Notes:

*Estimated using observations at 3400 W. Bayshore Rd Campus

**Trips calculated using Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use per ITE Trip Generation Manual, 11th Edition

stu = students; ksf = 1,000 square feet

Source: Appendix A

As shown in Table 2, the project would result in 483 additional daily trips, 208 additional morning peak hour trips, 126 additional trips in the school afternoon peak hour, and 23 additional trips in the standard afternoon peak hour.

VEHICLE MILES TRAVELED (VMT)

Senate Bill (SB) 743 established the potential increase in VMT associated with a project as the basis for determining transportation impacts of development projects. Guidance provided by both the Governor's Office of Land Use and Climate Innovation in the publication Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory, 2018, and the City of Palo Alto VMT Transportation Analysis Methodology Under CEQA, 2020, were used. Neither publication specifically addresses school land uses, indicating that a VMT assessment on a case-by-case basis is allowed.

For land uses not addressed in the Office of Land Use and Climate Innovation Technical Advisory, it is common practice to consider whether the land use of interest has travel characteristics that are similar to the residential, employment-based, or retail land use types that are addressed in the Technical Advisory. If so, similar VMT assessment methodologies can often be used. Since the school is expected to draw students from the same community, relocation of the school would primarily redistribute where the students travel within Palo Alto as the new location is less than one mile south of the existing school with a frontage along the same roadway. This shift in travel patterns and VMT is similar to how the Office of Land Use and Climate Innovation considers retail uses, in which many types of retail projects may generally be presumed to have a less-than-significant VMT impact since the total amount of shopping that occurs in a given geographic area tends to remain unchanged.

The Technical Advisory indicates that retail development over 50,000 square feet is typically regional serving and subject to quantitative VMT analysis. Retail development under 50,000 square feet can generally be considered local-serving and screened from further VMT analysis per the Technical Advisory. The City of Palo Alto has established a more stringent threshold which states that retail projects consisting of up to 10,000 square feet can be classified as being local and therefore can be presumed to have a less-than-significant VMT impact.

Based on formulas contained in the ITE Trip Generation Manual, a 10,000-square-foot retail development would be expected to generate 545 daily vehicle trips. A retail project, or project exhibiting travel characteristics similar to retail such as a school, could therefore be considered to have a less-than-significant VMT impact if it generates fewer than this number of vehicle trips per day.

As noted in the Project Description, the project would include the relocation of the school and an additional 56 students, which is expected to generate approximately 194 new daily vehicle trips. The relocation of the school would not directly increase the total number of students in the region but would shift where the students would travel. Since the school would be relocated less than 0.5-mile south on the same street (West Bayshore Road-Fabian Way), the distance traveled to and from the school would only slightly increase or decrease based on the individual origin and destination of each student or staff member. Therefore, the total vehicle miles traveled by students or staff would be unlikely to change. Because the project would generate fewer new vehicle trips than would be generated by 10,000 square feet of retail, and would simply shift existing student trips, it is exempt from further VMT analysis and may be presumed to have a less-than-significant VMT impact.

SITE ACCESS

As shown on project plans on file with the City of Palo Alto, vehicle access would be provided by two existing driveways on Fabian Way; the south driveway would be designated for entering vehicles only and the north for exiting vehicles only. Left and right turn movements are permitted at each driveway.

SIGHT DISTANCE

At unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time should be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed.

Sight distance along Fabian Way at the project driveways was evaluated by W-Trans based on sight distance criteria contained in the Highway Design Manual published by Caltrans.

Adequate sight distance is available at both proposed driveway locations for all turning movements entering and exiting the site. Impacts would be less than significant. W-Trans did, however, recommend that, to maintain adequate sight lines, vegetation along the project frontage on Fabian Way should be designed and maintained to ensure that all landscaping lies below three feet in height.

ACCESS ANALYSIS

The need for a left-turn lane on Fabian Way at the project entrance driveway was evaluated by W-Trans based on criteria contained in the Intersection Channelization Design Guide, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as an update of the methodology developed by the Washington State Department of Transportation and published in the Method For Prioritizing Intersection Improvements, 1997 (see Appendix A for citations). Under Near-Term plus Project volumes a left-turn lane is warranted according to the NCHRP methodology during the a.m. and school p.m. peak hours based solely on volumes. However, given the preponderance of driveways along Fabian Way that do not have turn pockets, coupled with the presence of multiple northbound travel lanes which provide space for approaching drivers to avoid a rear-end crash and pass to the right of a left-turning vehicle, the driver turning left does not present a safety concern as this movement is consistent with driver expectation. Left-turn pockets therefore do not appear to be warranted despite the volume criteria being met. Impacts would be less than significant.

Additionally, the City's "*South Palo Alto Bikeways Demonstration Project*" would result in the installation of protected bikeways on Fabian Way, and such lanes require additional width to accommodate a buffer. Based on the volume of traffic on Fabian Way it appears that a three-lane configuration with a two-way left-turn lane would be adequate to accommodate traffic and also provide the extra width needed for the buffered bike lanes. Therefore, if the City implements these planned changes, the left turn pocket is already programmed as part of the project and the project would continue to have a less than significant impact. Copies of the turn lane warrant spreadsheets are provided in Appendix B of the Local Transportation Analysis in Appendix A to this report.

SITE CIRCULATION

The Kehillah School (a private high school) is located just north of the project site at 3900 Fabian Way. Vehicles exiting from the school would primarily use a driveway located approximately 70 feet north of the north project driveway. The peak hour of vehicle activity for the Kehillah School would coincide with the peak hour for the proposed project since both are schools.

There is the potential for conflicting movements between vehicles turning left from the project driveway and turning right from the Kehillah School driveway, as well as through traffic and pedestrians crossing Fabian Way in the midblock crosswalk between the driveways. To facilitate the movement of vehicles and pedestrians at this location, it is recommended that the school coordinate with the Palo Alto Police Department to gain the services of a qualified crossing guard to be positioned at the midblock crossing during the school morning drop off and afternoon pick up periods typically on weekdays from 8:00-9:00 a.m. and from 3:00-4:00 p.m. It is noted that a monetary fee may be required for the police department to provide a crossing guard. Sight lines from the project driveway to the Kehillah school driveway and crosswalk are unobstructed.

Additionally, The Girls Middle School should coordinate with the Kehillah School and establish a daily schedule so that the start of their classes and school dismissal times are staggered between each school by at least 15 to 20 minutes to minimize the potential for conflicting vehicle movements on Fabian Way.

In summary, potential conflicts between vehicles turning and through movements as well as pedestrian crossings could occur during morning and afternoon school peak hours due to coinciding peak activity periods, the proximity of exit driveways, and the midblock crossing on Fabian Way. Although these potential conflicts do not present a significant safety hazard, W-Trans recommended that a crossing guard guide vehicles and pedestrians at the midblock crossing on Fabian Way during the morning and afternoon peak hours. The Girls Middle School should stagger their class schedule so that start- and dismissal times are staggered with the Kehillah School by at least 15 to 20 minutes.

VEHICLE QUEUING

DROP-OFF LANE QUEUING

The proposed project includes a 460-foot-long drop-off area with storage capacity for 18 vehicles. The drop-off area is positioned in such a way that any vehicles in the queue beyond the 18-vehicle capacity may extend out of the site and onto Fabian Way.

The drop-off lane queuing was analyzed for both the morning drop-off and afternoon pick-up periods. As school traffic generally experiences short periods within the peak hour with concentrated arrivals and departures before and after the school bells, a peak hour factor adjustment was used to estimate the actual (design) flow rate of vehicles in the drop-off lane. The use of a peak hour factor adjusts the number of estimated vehicles arrivals to appropriately account for concentrated peaking that is typical for schools. A peak hour factor of 1.0 means traffic levels are evenly spread out over the whole hour, and a lower number of 0.80 or less means traffic spikes for a short period during the hour.

Based on the school's trip generation forecast there would be 118 vehicles per hour arriving and departing during the morning peak hour. Vehicle surveys conducted in February 2025 showed that the peak hour factor for The Girls Middle School during the morning drop-off is 0.474, meaning there is a concentrated peak of traffic just before the school bell. This is equivalent to a design flow rate of 249 vehicles per hour. Similarly, there would be 68 vehicles using the pick-up lane during the school afternoon peak hour which is equivalent to 120 vehicles per hour once the observed peak hour factor of 0.565 is applied.

Based on the estimated arrival rate and service rates, the available storage capacity of the drop-off/pick-up lanes is expected to be adequate to serve the demand if the drop-off lane operation can discharge at least one car every 14 seconds during the morning drop-off and 30 seconds during the afternoon pick-up periods. Impacts would be less than significant. However, W-Trans recommends that school staff should be deployed during drop off and pick up to guide students and drivers and ensure that no drivers are holding up the process. Drop off/pick-up lane operations should be monitored to confirm that the queue does not extend beyond the site boundaries.

VEHICLE QUEUING AT NORTHBOUND PROJECT ENTRANCE

Vehicle queuing analyses were conducted using the Existing plus Project volumes to determine the queuing conditions at the northbound Fabian Way approach to the entrance driveway during the morning and school afternoon peak hours. Though there is no dedicated northbound left-turn lane serving the project entrance driveway, two through lanes exist on Fabian way; the left through lane may be used as storage for left-turning movements and the right through lane may be used for through traffic. Consideration was given to the potential for the northbound left-turn queue to extend into the midblock crosswalk on Fabian Way south of the project site or into the intersection of Fabian Way/E. Charleston Road.

The Oregon Department of Transportation (ODOT) developed a methodology for estimating queue lengths at uncontrolled intersections using a mathematical model that considers vehicle volumes on every approach for the subject location. Using this methodology, it was determined that the northbound left-turn queue at the project entrance driveway on Fabian Way is expected to be 75 feet during the morning peak hour and 50 feet during the school afternoon peak hour under project-generated traffic. It should be noted that PHFs of 0.474 and 0.565 were applied to the northbound left-turning project trips to account for the concentrated peak of traffic during morning drop-off and afternoon pick-up, respectively. A summary of estimated queue lengths using this methodology is included in the technical appendices to Appendix A.

Since the existing crosswalk is 150 feet south of the project driveway on Fabian Way and the intersection of Fabian Way/E Charleston Road is 450 feet south of the project driveway, the anticipated maximum northbound left-turn queue would not extend into either the crosswalk or the intersection. Impacts would be less than significant.

PEDESTRIAN CROSSING WARRANTS

As a preliminary step to evaluate the potential use of enhancements at crossings for pedestrians, warrant analyses were conducted for the existing midblock crossing on Fabian Way north of the project exit driveway to assess the need for a High Intensity Activated Crosswalk (HAWK), Rectangular Rapid Flash Beacons (RRFBs), or other geometric crossing enhancements. The midblock crosswalk was selected based on its proximity to both exit driveways of the Kehillah School and the project site. It is noted that a high visibility crosswalk with signage and activated flashing beacons exists at this location so it was assessed to determine whether further enhancements would be recommended. Traffic counts, including pedestrian crossing counts, were conducted at this location on Wednesday, January 29, 2025, during the morning (7:00-9:00 a.m.), school afternoon (2:00-4:00 p.m.) and standard afternoon (4:00-6:00 p.m.) peak periods.

The crossing location was analyzed using the HAWK warrants from the California Manual on Uniform Traffic Control Devices (CA MUTCD) as well as the “Guidelines for Pedestrian Crossing Treatments” from Improving Pedestrian Safety at Unsignalized Crossings, National Cooperative Highway Research Program (NCHRP) Report 562, Transportation Research Board, 2006 (see citations in Appendix A). These methodologies are based on the volume of

pedestrians crossing, the volume of vehicle traffic, vehicle travel speeds, and pedestrian crossing distance. It was determined that this crosswalk currently does not meet the warrant for a HAWK, nor for active or enhanced crossing treatments, and only meets the warrant for a striped crosswalk during all peak hours.

Since the number of added pedestrian users at the crosswalk attributable to the project cannot be determined, a sensitivity analysis using existing school p.m. peak traffic volumes was conducted to identify the number of additional pedestrians needed to meet the warrants for further crosswalk enhancements (the greatest number of crossings observed was 32 pedestrians per hour during the school p.m. peak hour). From this analysis it was concluded that with the addition of seven project pedestrians, the crossing would meet the NCHRP warrant for enhanced/high visibility or "active when present" treatments, such as pushbutton flashing beacons, in-street crossing signs and high visibility signs and markings during the school p.m. peak hour, all of which are present at the crossing location. The MUTCD warrant for a HAWK signal would require an increase of over 100 pedestrians per hour to be met. Since the existing crossing treatments are adequate for triple the existing pedestrian volume, no further enhancements are warranted assuming the additional pedestrian crossings due to the project would remain below this threshold. Therefore, impacts would be less than significant and no further enhancements are recommended. Copies of the MUTCD HAWK Signal Warrant Output and the NCHRP Pedestrian Crossing Treatment Worksheet are provided in the technical appendices to Appendix A.

EMERGENCY VEHICLE ACCESS

The project's driveways and internal parking lot circulation network would be designed to meet current City standards and so can be expected to accommodate the access requirements for passenger vehicles. Vehicle access would be provided within the internal parking lot via a network of connected 24-foot-wide drive aisles. These aisles have sufficient width to accommodate traffic operations for circulating vehicles, as well as parking maneuvers to/from perpendicular parking spaces; this would be confirmed during the City's plan check process.

California Fire Code Section 503.1.1 states that all portions of the facility and all portions of the exterior walls on the first story of the building shall be within 150 feet of a public street or qualified fire apparatus access road. The proposed building would satisfy this requirement since it would be located within 150 feet of Fabian Way. Emergency response vehicles would be able to service the site via the use of ladder trucks parked on the street. It is noted that the Palo Alto Fire Department has sole responsibility for determining the suitability of the project site for adequate fire apparatus vehicle access. Regarding off-site impacts, the proposed project would result in nominal increases in delay for traffic in the surrounding vicinity, and emergency response vehicles can claim the right-of-way by using their lights and sirens and therefore the project would be expected to have a nominal effect on emergency response times. In summary, the project is designed to adequately accommodate emergency response vehicles and would have a nominal impact on emergency response times, resulting in a less-than-significant impact on emergency access.

PEDESTRIAN, BICYCLE, AND TRANSIT ANALYSIS

PEDESTRIAN ACCESS

The 2030 Palo Alto Comprehensive Plan includes the following relevant pedestrian policies.

Policy T-1.19 Provide facilities that encourage and support bicycling and walking.

Policy T-1.20 Regularly maintain off-roadway bicycle and pedestrian paths, including sweeping, weed abatement and surface maintenance.

Policy T-3.2 Enhance connections to, from and between parks, community centers, recreation facilities, libraries and schools for all users.

Policy T-3.7 Encourage pedestrian-friendly design features such as sidewalks, street trees, on-street parking, gathering spaces, gardens, outdoor furniture, art and interesting architectural details.

Policy T-3.8 Add planting pockets with street trees to provide shade, calm traffic and enhance the pedestrian realm.

A pedestrian path is proposed to connect the existing sidewalk along the project frontage on Fabian Way to the site and provide continuous pedestrian access along the northern and western sides of the building. Additionally, curb ramps would be provided near loading zones, including the designated drop-off area and on either side of a marked crosswalk between the accessible parking spaces and pedestrian path in the northwestern corner of the site. Given the proximity of existing residential uses to the west of the site and proposed residential uses to the east, it is reasonable to assume that some students and staff will walk, bicycle, and/or use transit to reach the school. As part of the project, a pedestrian path providing connectivity between the existing sidewalk on Fabian Way and the building's entry points, along with the provision of curb ramps, would allow adequate pedestrian access within the redesigned parking lot. Pedestrian facilities serving the project site are adequate, and the project would not conflict with policies for pedestrian access. Impacts would be less than significant.

BICYCLE ACCESS

Palo Alto Municipal Code Section 18.54.060 provides guidance on bicycle parking. The Code states that bicycle parking facilities shall be provided for additions to an existing building and the type (either short-term or long-term) depends on the use. Long-term bicycle parking is intended for bicyclists who need to park for extended periods during the day, such as students. A school bicycle enclosure, i.e., a locked area containing bicycle racks, is long-term bicycle parking intended for use at a school and must be located on the ground-floor level and situated near a vehicle parking area. Section 18.52.040 of the Code requires

that one bicycle parking space for every five students be provided. As there are 240 students proposed, 48 bicycle parking spaces are required.

The 2030 Palo Alto Comprehensive Plan, 2017, also includes the following relevant policies.

Policy T-1.16 Promote personal transportation vehicles an alternative to cars (e.g. bicycles, skateboards, roller blades) to get to work, school, shopping, recreational facilities and transit stops.

Policy T-1.19 Provide facilities that encourage and support bicycling and walking.

Policy T-1.20 Regularly maintain off-roadway bicycle and pedestrian paths, including sweeping, weed abatement and surface maintenance.

Policy T-3.6 Consider pedestrians, bicyclists, e-bikes and motorcycles when designing road surfaces, curbs, crossings, signage, landscaping and sight lines.

Policy T-5.12 To promote bicycle use, increase the number of safe, attractive and well-designed bicycle parking spaces available in the city, including spots for diverse types of bicycle and associated equipment, including bicycle trailers, prioritizing heavily travelled areas such as commercial and retail centers, employment districts, recreational/cultural facilities, multi-modal transit facilities and ride share stops for bicycle parking infrastructure.

Bicycle parking is proposed via racks located in an enclosed area at the southwest corner of the site as indicated in the proposed site plan. Bicyclists would be expected to ride alongside vehicle traffic in the parking lot. Existing bicycle facilities, including Class II bike lanes along the project frontage on Fabian Way, as well as on Charleston Road and Meadow Drive, together with shared use of minor streets provide adequate access for bicyclists.

Long-term bicycle parking is proposed on-site in a school bicycle enclosure with 48 racks, each with a single-bicycle capacity. The proposed number of bicycle parking spaces would meet the Municipal Code requirement.

Existing bicycle facilities would provide adequate access for bicyclists, and the project would not conflict with policies for bicycle facilities. Impacts would be less than significant.

TRANSIT FACILITIES

The 2030 Palo Alto Comprehensive Plan includes the following relevant transit policies.

Policy T-1.8 Work to ensure public and private school commute patterns are accommodated in the local transit system, including through schedule and route coordination.

Policy T-1.9 Continue to encourage the provision of amenities such as seating, lighting and signage, including real-time arrival information, at bus and shuttle stops and train stations to increase rider comfort, safety and convenience.

An existing bus stop served by VTA ACE Orange and School 288 routes is located on the project frontage approximately 100 feet from each project driveway. The proposed site plan does not include changes to the existing sidewalk, including the bus stop on the project frontage. Thus, transit facilities are located proximate to the project site. Transit demand generated by students and staff would be spread out across several lines and headways, and therefore the proposed project would have a nominal effect on local transit service. Existing transit routes are adequate to accommodate project-generated transit trips. Existing stops are within an acceptable walking distance of the site. In summary, the project site is adequately served by transit as it is located within a half-mile walk of bus stops serving multiple routes. The project would not conflict with policies for transit access and impacts would be less than significant.

CONCLUSION

Impacts related to traffic would be less than significant. VMT per capita from the project would be below the Palo Alto VMT significance criteria resulting in less than significant VMT impacts. There would be no significant access, on-site circulation or safety impacts. The project would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the area. Therefore, the project would meet the requirements for Traffic under *Criterion (d)*.

B. NOISE

NOISE CHARACTERISTICS AND MEASUREMENT

Noise is defined as unwanted sound that disturbs human activity. A noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

One of the most frequently used noise metrics that considers duration as well as sound power level is the equivalent continuous sound level (L_{eq}). The L_{eq} is a steady A-weighted sound level that is equivalent to the amount of energy contained in the actual varying levels over a period of time (essentially, L_{eq} is the average sound level over a given time period).

NOISE STANDARDS

The City's Comprehensive Plan Natural Environment Element (City of Palo Alto 2017) includes goals and policies intended to minimize the adverse impacts of noise within the City. This element establishes land use compatibility categories for community noise exposure, shown in Table 3. For residential uses, noise levels up to 60 dBA L_{dn} are identified as normally acceptable and noise levels between 60 and 75 dBA L_{dn} are identified as conditionally acceptable.

Table 3 Palo Alto Land Use Compatibility for Community Noise Environments

Land Use Category	Exterior Noise Exposure L_{dn} or CNEL, dB		
	Normally Acceptable[1]	Conditionally Acceptable[2]	Unacceptable[3]
Residential, Hotel and Motels	50-60	60-75	75+
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	50-67.5	67.5-80	80+
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches	50-60	60-75	75+
Office Buildings, Business Commercial, and Professional	50-70	70-80	80+
Auditoriums, Concert Halls, and Amphitheaters	N/A	50-75	75+
Industrial, Manufacturing, Utilities, and Agriculture	50-70	70+	N/A

[1] **Normally Acceptable**: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal convention, construction, without any special insulation requirements.

[2] **Conditionally Acceptable**: Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

[3] **Unacceptable**: New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: City of Palo Alto Comprehensive Plan Natural Environment Element, Table N-1 (City of Palo Alto 2017).

The Palo Alto Municipal Code (PAMC) regulates noise primarily through the Noise Ordinance, which comprises Chapter 9.10 of the Code, under Title 9, Public Peace, Morals and Safety. The PAMC contains noise limits for the allowable noise level produced upon an adjacent property, which vary depending on the receiving property type (e.g., residential, commercial, or industrial). Section 9.10.030(a) of the PAMC states that no person shall produce, suffer, or allow to be produced by any machine, animal, or device, or any combination of the same, on residential property, a noise level more than 6 dBA above the local ambient at any point outside of the property plane. While the project is not a residential use, the residential noise limit was used as it represents the most conservative noise threshold and due to the proximity of the project site to nearby sensitive receptors (the adjacent residential properties to the west and adjacent Kehillah School High School to the north). Therefore, operational noise impacts associated with the project's onsite stationary noise sources (e.g., heating, ventilation, and air conditioning [HVAC] equipment, use of outdoor educational and support spaces) would be considered significant if they were to increase the ambient noise environment by 6 dBA or more. Operational noise impacts associated with the project's offsite mobile noise sources (e.g., traffic) would be significant if operation of the project results in the exposure of sensitive receptors to a perceptible increase (i.e., 3 dBA or more) in noise levels. Roughly a doubling of traffic volume would be necessary to generate a 3 dBA or more increase.

Section 9.10.060 of the PAMC restricts construction activities to the hours of 8:00 a.m. to 6:00 p.m. Mondays through Fridays and 9:00 a.m. to 6:00 p.m. on Saturdays. Construction is prohibited on Sundays and holidays. Construction, demolition, or repair activities conducted during the City's allowable construction hours must also meet the following standards:

- No individual piece of equipment shall produce a noise level exceeding 110 dBA at a distance of 25 feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to 25 feet from the equipment as possible.
- The noise level at any point outside of the property plane of the project shall not exceed 110 dBA.
- The holder of a valid construction permit for a construction project in a non-residential zone shall post a sign at all entrances to the construction site upon commencement of construction, for the purpose of informing all contractors and subcontractors, their employees, agents, materialmen, and all other persons at the construction site, of the basic requirements of this chapter.

EXISTING AMBIENT NOISE LEVELS

The primary source of noise in the vicinity of the project site is motor vehicle traffic, including automobiles, trucks, buses, and motorcycles, along nearby roadways. Based on the noise contours map contained within the Natural Environment Element of the City's Comprehensive Plan, the project site is situated between the 60 and 65 dBA CNEL noise contours of US 101 (Bayshore Freeway). Based on the distances between the 60 and 65 dBA CNEL noise contours, it is estimated that the existing noise environment at the project site is approximately 64 dBA CNEL.

CONSTRUCTION NOISE

As discussed above, PAMC Section 9.10.060 regulates temporary construction noise. Construction of the project would generate temporary noise that would be audible at the nearest sensitive receptors, which include a high school to the north, multi-family residences to the northeast, and single-family residences to the west of the project site. Noise associated with construction is a function of the type and quantities of construction equipment used, the location and sensitivity of nearby land uses, and the timing and duration of the construction activities. Based on construction details provided by the applicant, it is estimated that construction would occur between 8:00 a.m. and 6:00 p.m. on Mondays through Fridays and between 9:00 a.m. and 6:00 p.m. on Saturdays, consistent with the provisions of Section 9.10.060 of the PAMC. While all phases of construction would generate noise, the demolition and paving phases are expected to generate the highest noise levels based on the default equipment list generated by the California Emissions Estimator Model (CalEEMod) as part of the air quality analysis (subsection C, Air Quality, below). Pile drivers would not be used during construction of the project.

Construction noise was estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) (FHWA 2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at nearby noise-sensitive receptors based on the default equipment list generated by CalEEMod and distances between anticipated construction activities and

nearby receptors. For a conservative estimate of potential project noise impacts, all equipment in each phase of construction was assumed to be operating simultaneously. See Appendix B for noise levels outputs from RCNM for each phase of construction.

As shown in Appendix B, construction noise would be as high as 90 dBA L_{max} at 50 feet away from the equipment during the demolition phase. Construction of the project would occur as close as approximately 30 feet from the nearest property line. At this distance, construction noise levels are expected to reach up to 94 dBA L_{max}; therefore, noise levels associated with construction of the project would not exceed the City's standard of 110 dBA L_{max} at any point outside the property line during allowable construction hours (PAMC Section 9.10.060). Construction noise at farther receptors (including the Kehillah School High School to the north) would continue to decrease with distance from construction activity and would also not exceed the City's limit of 100 dBA L_{max} at these farther receptors. Therefore, impacts related to construction noise would be less than significant.

CONSTRUCTION VIBRATION

Vibration limits used in this analysis to determine a potential impact to local land uses from construction activities are based on vibration criteria contained in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). These vibration criteria are shown in Table 4 and represent the limits at which minor architectural (i.e., non-structural) damage may occur to buildings of various construction types.

Table 4 FTA Vibration Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Nonengineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

PPV = peak particle velocity; in/sec = inches per second

Source: FTA 2018

Based on FTA recommendations shown in Table 4, limiting vibration levels to below 0.2 inches per second peak particle velocity (in/sec PPV) at residential structures and 0.5 inches per second peak particle velocity (in/sec PPV) for newer commercial structures would limit the risk of minor architectural damage.

The project would not include substantial vibration sources associated with operation. Therefore, construction activities would have the greatest potential to generate groundborne vibration affecting nearby receptors. The greatest sources of vibration expected during construction would be paving equipment (such as a vibratory roller) and large earthmoving equipment (such as a bulldozer, backhoe, or grader). A vibratory roller produces a vibration level of approximately 0.21 in/sec PPV at 25 feet away (FTA 2018), while large earthmoving equipment produces a vibration level of approximately 0.089

in/sec PPV at 25 feet away (FTA 2018). Based on the site plan, a vibratory roller may be used for paving near the northwestern corner of the project site, as close as approximately 40 feet from the nearest offsite residential structure to the west. At 40 feet away, a vibratory roller would produce a vibration level of approximately 0.104 in/sec PPV, which would not exceed the FTA's threshold of 0.2 in/sec PPV. Large earthmoving equipment may be used as close as approximately 30 feet from the nearest offsite residential structure to the west. At 30 feet away, large earthmoving equipment (such as a bulldozer, backhoe, or grader) would produce a vibration level of approximately 0.068 in/sec PPV, which would not exceed the FTA's threshold of 0.2 in/sec PPV. Vibration levels at farther receptors (including the Kehillah School High School to the north) would rapidly attenuate as distance from vibration-generating construction activities and off-site structures increases. Vibration impacts upon farther receptors would also not exceed the FTA's threshold of 0.2 in/sec PPV. Therefore, vibration impacts associated with the project would be less than significant.

OPERATIONAL NOISE

ON-SITE NOISE SOURCES

The primary on-site operational noise sources associated with the project would include three rooftop HVAC units and three outdoor educational and support spaces. Rooftop HVAC units would be grouped in a cluster and situated as close as approximately 46 feet from the western building edge. For a conservative approach, this analysis assumed that all HVAC units would operate simultaneously. This analysis assumes a typical commercial rooftop unit such as the Carrier WeatherMaker 50FCQ rooftop heat pump. Based on manufacturer's specifications, the 25-ton unit (model 50FCQM28) has a sound power level of 85.9 dBA, which equates to a sound pressure level of approximately 77.9 dBA at 3.28 feet/1 meter (manufacturer's specifications included in Appendix B). Based on the horizontal and vertical distances of these HVAC units relative to the nearest project property line to the west, simultaneous operation of these HVAC units would produce a sound pressure level of approximately 50 dBA L_{eq} at the nearest (i.e., western) project property line. Conservatively assuming that this noise level would be sustained over the course of a 24-hour period, the resulting 24-hour average noise level would be approximately 56 dBA CNEL, which would be below the existing noise environment of 64 dBA CNEL. HVAC noise levels would be even lower at the other project property lines and would also not exceed the existing ambient noise environment in the vicinity of the project site. Therefore, operational noise produced by the project's rooftop HVAC units would not increase the ambient noise environment by more than 6 dBA at the nearest project property lines, pursuant to Section 9.10.030(a) of the PAMC.

In addition to rooftop HVAC equipment, the project would include three outdoor educational and support spaces along the western edge of the project building. The Outdoor Workshop space would be located approximately 67 feet from the nearest (i.e., western) project property line and would represent the outdoor area with the potential to generate the highest levels of noise at the nearest project property line. Based on information provided by the project applicant, the project would not include any bells or

amplified sound systems; therefore, noise generated by use of this area would primarily include speech from conversations. Typically, a conversation between two people using a normal voice (not raised) at a distance of three feet is 60 dBA (The Engineering ToolBox 2005). Assuming that speech from 40 people (i.e., 20 conversations) would be occurring simultaneously in this area, the combined noise level at the western project property line would be approximately 46 dBA L_{eq}. Conservatively assuming this noise level would be sustained over the course of a typical school day (between 8:20 a.m. and 3:20 p.m.) and during any potential after-school activities (assumed to occur between 3:20 and 5:20 p.m.), the resulting 24-hour average noise level would be approximately 42 dBA CNEL at the nearest (i.e., western) project property line, which would be below the existing noise environment of 64 dBA CNEL. Noise levels produced by use of the outdoor educational and support spaces would be even lower at the other project property lines and would also not exceed the existing ambient noise environment in the vicinity of the project site. Therefore, operational noise produced by the project's outdoor educational and support spaces would not increase the ambient noise environment by more than 6 dBA at the nearest residential property line, pursuant to Section 9.10.030(a) of the PAMC.

During operation of the project, these on-site stationary noise sources may operate simultaneously and combine to generate increased noise levels. HVAC units may operate during all hours of the day; however, the outdoor educational and support spaces are assumed to only be operational during typical school hours (between 8:20 a.m. and 3:20 p.m.) and during any potential after-school activities (assumed to occur between 3:20 and 5:20 p.m.). Thus, simultaneous operation of these sources would only occur during this 9-hour period. When accounting for the simultaneous operation of the project's HVAC equipment and outdoor educational and support spaces, the combined noise level at the nearest (i.e., western) project property line would be approximately 52 dBA L_{eq}. Assuming this noise level would be sustained during typical school hours and that noise occurring during all other hours of the day would only be attributed to HVAC equipment, the resulting combined 24-hour average noise level would be approximately 57 dBA CNEL, which would be below the existing noise environment of 64 dBA CNEL. Noise generated by combined operation of HVAC equipment and use of the outdoor educational and support spaces would be even lower at the other project property lines. Therefore, noise impacts associated with the project's on-site stationary noise sources would be less than significant.

OFF-SITE MOBILE NOISE SOURCES

In addition to stationary noise sources located on-site, the proposed project would generate off-site noise in the form of vehicle traffic resulting from travel to and from the project site, assumed to occur primarily on Fabian Way. As shown in Table 2, the proposed project would generate an increase of 483 daily trips, including 208 trips during the AM peak hour and 23 trips during the PM peak hour, based on the Transportation Analysis prepared for the project (W-Trans 2025; Appendix A).

The project would not make substantial alterations to roadway alignments or substantially change the vehicle classifications mix on local roadways. Therefore, the primary factor affecting off-site noise levels would be increased traffic volumes. As outlined in the

Transportation Analysis, the existing PM peak hour traffic volume on Fabian Way is 1,071 vehicles based on turning movement volumes at intersections near the project site. Assuming that the peak hour volume represents 10 percent of the average daily traffic (ADT) volume, the existing ADT volume on Fabian Way is approximately 10,710 vehicles. An increase of 483 daily vehicle trips on this roadway (increasing the ADT volume to 11,193 vehicles) would result in a noise increase of approximately 0.2 dBA CNEL, which would not create a perceptible change in noise level of 3 dBA or greater. Therefore, noise impacts associated with the project's off-site mobile noise sources (i.e., traffic) would be less than significant.

CONCLUSION

The loudest phase of construction could generate noise levels of up to 94 dBA L_{max} at 30 feet away from equipment, which is the closest distance equipment is expected to operate from the nearest project property line. This would not exceed the City's construction noise threshold of 110 dBA L_{max}. In addition, construction would be conducted within the hours allowed by the City's Municipal Code. Noise impacts associated with construction of the project would be less than significant. Vibration generated by construction equipment would not exceed the FTA's recommended threshold of 0.2 inches per second peak particle velocity (in/sec PPV) at the nearest off-site residential structures and vibration impacts associated with construction of the project would be less than significant. The project would introduce stationary sources of operational noise to the project site vicinity, including rooftop mechanical equipment (HVAC) and outdoor educational and support spaces. However, noise levels generated by individual operation of these on-site stationary noise sources, as well as combined operation of these sources, would not increase the ambient noise environment at the nearest adjoining property lines by 6 dBA or more pursuant to Section 9.10.030(a) of the City's Municipal Code. Therefore, operational noise impacts associated with the project's on-site stationary noise sources would be less than significant. Project-generated traffic would increase traffic noise levels by approximately 0.2 dBA CNEL over existing conditions along Fabian Way. Therefore, the project would not cause a perceptible traffic noise increase of 3 dBA or more on this roadway. Operational noise impacts associated with the project's off-site mobile noise source would be less than significant. The project would meet the requirements for Noise under *Criterion (d)*.

C. AIR QUALITY

ENVIRONMENTAL SETTING

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for "criteria pollutants" and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon

monoxide (CO), volatile organic compounds (VOC)/reactive organic gases (ROG),[1] nitrogen oxides (NO_X), particulate matter with diameters of ten microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between ROG and NO_X. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog). Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles. Air pollutant emissions are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories:

- Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat.
- Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products.

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and can also be divided into two major subcategories:

- On-road sources may be legally operated on roadways and highways.
- Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

AIR QUALITY STANDARDS AND ATTAINMENT

The project site is located within the San Francisco Bay Area Air Basin (SFBAAB) and falls under the jurisdiction of the Bay Area Air District (BAAQMD). As the local air quality management agency, BAAQMD is required to monitor air pollutant levels to ensure that the NAAQS and CAAQS are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the SFBAAB is classified as being in "attainment" or "nonattainment." In areas designated as non-attainment for one or more air pollutants, a cumulative air quality impact exists for those air pollutants, and the human health impacts associated with these criteria pollutants are already occurring in that area as part of the environmental baseline condition. Under State law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-attainment. The SFBAAB is currently designated nonattainment for the ozone NAAQS and CAAQS, the PM_{10} CAAQS, and the $PM_{2.5}$ NAAQS and CAAQS. The SFBAAB is either unclassified or designated attainment for all other NAAQS and CAAQS (CARB 2023).

[1] CARB defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term ROG is used in this analysis.

BAAQMD has adopted guidelines for quantifying and determining the significance of air quality emissions in its *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2023a). To determine if further review under CEQA is necessary, the project was compared to BAAQMD's criteria air pollutant screening criteria. BAAQMD developed screening criteria to provide a conservative indication of whether a project could result in potentially significant air quality impacts. If all the screening criteria are met by a project, the lead agency or applicant does not need to perform a detailed air quality assessment of the project's air pollutant emissions, and air quality impacts would be considered less than significant. BAAQMD's screening criteria for junior high school development are 475,000 square feet for operational criteria pollutants and 452,000 square feet for construction-related emissions (BAAQMD 2023b).

For construction-related emissions to be considered less than significant, projects must meet the following criteria in addition to being below the applicable screening level (BAAQMD 2023b):

1. All best management practices (see Table 5-2 in Chapter 5, "Project-Level Air Quality Impacts") are included in the project design and implemented during construction.
2. Construction-related activities would not overlap with operational activities.
3. Construction-related activities would not include any of the following:
    - ♦ Demolition
    - ♦ Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would not occur simultaneously)
    - ♦ Extensive site preparation ((e.g., grading, cut and fill, or earth movement)
    - ♦ Extensive material transport (e.g., soil import and export requiring a considerable amount of haul truck activity)
    - ♦ Stationary sources (e.g., backup generators) subject to Air District rules and regulations.

In addition, for operational-related emissions to be considered less than significant, projects must meet the following criteria in addition to being below the applicable screening level (BAAQMD 2023b):

1. Operational activities would not include stationary engines (e.g., backup generators) and industrial sources subject to Air District rules and regulations.
2. Operational activities would not overlap with construction-related activities.

The project meets BAAQMD's operational screening size criteria; therefore, this analysis utilizes the screening size process to evaluate the significance of the project's operational criteria pollutant emissions. However, the project would involve partial demolition of existing structures, which means it does not meet all of the screening criteria for construction emissions. For projects that do not meet the screening criteria, BAAQMD provides numeric significance thresholds. Table 5 shows the significance thresholds that have been recommended by BAAQMD for project construction in the SFBAAB.

Table 5 Air Quality Thresholds of Significance

Pollutant/Precursor	Construction-Related Thresholds Average Daily Emissions (pounds per day)
ROG	54
NO_X	54
PM_{10}	82 (exhaust)
$PM_{2.5}$	54 (exhaust)

Notes: NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases.

Source: BAAQMD 2023c, Table 3-1

In addition, BAAQMD provides a preliminary screening methodology to conservatively determine whether a proposed project would exceed CO thresholds at the local level. If the following criteria are met, a project would result in a less than significant impact related to local CO concentrations:

1. Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

METHODOLOGY

Air pollutant emissions generated by project construction were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod uses project-specific information, including the project's land uses, square footages, and location to model a project's construction emissions. The analysis reflects the construction of the project as described under *Project Description*.

Project construction would primarily generate temporary criteria pollutant emissions from construction equipment operation onsite and construction worker vehicle trips to and from the site. Construction activity was analyzed based on information provided by the applicant, such as building characteristics, construction phasing and demolition activities. Construction of the proposed project is expected to start in March 2026 and end in March 2027. The construction activities would occur six days per week, consistent with the City of Palo Alto's construction noise limits. Based on applicant provided land uses, CalEEMod generates assumptions for equipment lists and vehicle trips. Project construction would be approximately 13 months and would involve the demolition of around 95 tons of existing building material. Additionally, approximately 85 cubic yards of soil would be imported for

both the site preparation and grading phase. It is assumed that all construction equipment would be diesel-powered, and the project would comply with all applicable regulatory standards, specifically with BAAQMD Regulation 8 Rule 3 for architectural coatings. In addition, pursuant to Policy N-5.5 of the Palo Alto 2030 Comprehensive Plan (City of Palo Alto 2017), the project would also comply with the BAAQMD's Basic Best Management Practices for Construction-Related Fugitive Dust Emissions (BAAQMD 2023d):

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

Project operations would include mobile source emissions and area source emissions. Mobile source emissions are generated by vehicle trips to and from the project site, and trip generation rates from the Local Transportation Analysis from W-Trans were used (Appendix A). Area source emissions are generated by consumer products and architectural coatings. Natural gas would not be utilized during project operations; therefore, there would be no onsite energy source emissions. Since the proposed project meets BAAQMD's operational screening criteria, operational impacts are discussed qualitatively.

CONSTRUCTION EMISSIONS

Construction of the proposed project would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction equipment and construction vehicles. Additionally, ROG emissions that would

be released during the drying of architectural coating and paving phases. Table 6 summarizes the estimated average daily emissions of ROG, NO_X, CO, PM_{10} exhaust, $PM_{2.5}$ exhaust, and sulfur oxide during project construction. As shown in Table 6, project construction emissions for criteria pollutants would be below the BAAQMD average daily thresholds of significance and the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. Construction impacts would be less than significant.

Table 6 Project Construction Average Daily Emissions

	Average Daily Emissions (pounds per day)					
Construction Year	**ROG**	**NO_X**	**CO**	**PM_{10} (exhaust)**	**$PM_{2.5}$ (exhaust)**	**SO_X**
2026	1	5	7	<1	<1	<1
2027	<1	1	1	<1	<1	<1
BAAQMD Thresholds (average daily emissions)	54	54	N/A	82	54	N/A
Threshold Exceeded?	No	No	N/A	No	No	N/A

See Appendix C for CalEEMod outputs; emission data presented is the average daily outputs.

N/A = not applicable; ROG = reactive organic gases; NO_X = oxides of nitrogen; CO = Carbon Monoxide; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; SO_x = oxides of sulfur.

No BAAQMD threshold for CO or SO_X

BAAQMD does not establish quantitative thresholds for fugitive dust emissions during construction. Instead, it recommends implementing best management practices to mitigate these emissions. The City of Palo Alto requires that projects adopt BAAQMD's Basic Best Management Practices for Construction-Related Fugitive Dust Emissions as part of the standard conditions of approval for project construction. Therefore, construction-related air quality impacts from fugitive dust would be less than significant.

OPERATIONAL EMISSIONS

BAAQMD's operational screening level size for junior high schools is 475,000 square feet. The screening table was developed using default assumptions and does not account for project-specific design features or local requirements that could further reduce emissions. The proposed project includes the addition of a 2,334-square-foot gymnasium, resulting in a total junior high school building size of approximately 32,919 square feet. Furthermore, the project would not involve stationary engines or industrial sources, and operational activities would not overlap with construction-related activities. Therefore, the project's operational activities meet the operational screening criteria, which indicates that the operational emissions would not exceed significant thresholds pursuant to BAAQMD guidance, eliminating the need for a detailed assessment. Project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region

is non-attainment under an applicable federal or state ambient air quality standard, and operational impacts would be less than significant.

PROJECT CONSISTENCY WITH THE 2017 CLEAN AIR PLAN

The California CAA requires that air districts create a Clean Air Plan that describes how the jurisdiction will meet air quality standards. The most recently adopted air quality plan is the 2017 Plan. The 2017 Plan focuses on two paramount goals, both consistent with the mission of BAAQMD (BAAQMD 2017a):

- Protect air quality and health at the regional and local scale by attaining all national and state air quality standards and eliminating disparities among Bay Area communities in cancer health risk from TACs.
- Protect the climate by reducing Bay Area GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050.

Under BAAQMD's methodology, a determination of consistency with the 2017 Plan should demonstrate that a project:

- Supports the primary goals of the air quality plan.
- Includes applicable control measures from the air quality plan.
- Does not disrupt or hinder implementation of any air quality plan control measures.

A project that would not support the 2017 Plan's goals would not be considered consistent with the 2017 Plan. On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support with the 2017 Plan's goals. Since the project would not exceed BAAQMD thresholds for criteria air pollutants, it would not conflict with the 2017 Plan's goal of attaining air quality standards.

The 2017 Plan includes goals and measures to promote building decarbonization, conservation of water, use of on-site renewable energy, and energy efficiency. The project would equip all-electric appliances, and electricity would be supplied by City of Palo Alto Power, which has provided 100 percent carbon neutral power since 2013. The project would comply with California Green Building Standards, including but not limited to, installation of energy-efficient equipment and lighting and incorporation of EV charging requirements for a junior high school. Therefore, the project would not conflict with or obstruct the implementation of an applicable air quality plan, and impacts would be less than significant impact.

CO EMISSIONS

According to BAAQMD, a project would have less than significant CO impacts if project-generated traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour or would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway). The San Francisco Bay Area Air Basin has been designated

attainment for both federal and State standards for CO since 1998 (BAAQMD 2017b). As shown in Figure 6, *Existing plus Project Traffic Volumes*, of the Local Transportation Analysis (see Appendix A to this report), the maximum traffic volume per hour for all intersections in the study area are well below 44,000 vehicles per hour (W-Trans 2025). In addition, the project is not located near an intersection where vertical and/or horizontal mixing is substantially limited. Therefore, the project would not result in a significant CO impact. Impacts related to CO emissions would be less than significant.

TOXIC AIR CONTAMINANTS

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015). The sensitive receptors nearest to the project site are residential receptors located along the western boundary of the project site. The project would introduce new sensitive receptors onsite, specifically junior high students. The following subsections discuss the project's potential to result in impacts related to TAC emissions during construction and operation.

CONSTRUCTION

Construction-related activities would result in short-term, project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts (CARB 2025).

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately 13 months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that a person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period (assumed to be the approximate time that a person spends in a household). OEHHA recommends this risk be bracketed with 9-year and 70-year exposure periods. Health risk assessments should be limited to the period/duration of activities associated with the project.

The maximum $PM_{2.5}$ emissions, which is used to represent DPM emissions for this analysis, would occur during site preparation and grading activities. While site preparation and grading emissions represent the worst-case condition, such activities would occur for 52 days, less than two percent for a 9-year and less than one percent for a 30-year, and 70-year health risk calculation period. $PM_{2.5}$ emissions would decrease for the remaining construction period because construction activities such as building construction, architectural coating, and paving would require less construction equipment. The proposed project would primarily involve interior construction work. This type of work requires less intensive construction equipment and would generate lower construction-related TAC emissions compared to construction on a vacant site. Additionally, the air monitoring station at Palo Alto Airport indicates a prevailing wind direction from the north and northwest (Western Regional Climate Center 2025). Therefore, project-related construction TAC emissions would blow away from the nearest sensitive receptors located west of the project site. Given the aforementioned, DPM generated by project construction is not expected to create conditions where the probability that the Maximally Exposed Individual would contract cancer is greater than 10 in one million. This impact would be less than significant.

OPERATION

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) identifies various sources that potentially emit TAC emissions including, freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities. In addition, CARB provides distance recommendations regarding the siting of new sensitive land uses near potential sources of TAC emissions. The proposed project would add sensitive receptors, specifically junior high school students, during the operation of the project site. However, the project siting sensitive receptors is consistent with CARB's recommended avoid siting distances from sources emitting TACs. Therefore, the project would not expose sensitive receptors to substantial operational TAC pollutant concentrations and impacts would be less than significant.

ODORS

BAAQMD's 2022 CEQA Air Quality Guidelines identifies land uses that have the potential to generate substantial odor complaints. The uses in the table include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants (BAAQMD 2023d). Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills.

The project does not involve, nor would locate, new sensitive receptors in proximity to odor-emitting uses as identified in BAAQMD's 2022 CEQA Air Quality Guidelines. The proposed uses would not generate objectionable odors that would affect a substantial number of people. Furthermore, the project would be subject to BAAQMD Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor

complaint. Therefore, the project would not substantially cause new sources of odors and would not significantly expose sensitive receptors to existing or new odors, and impacts would be less than significant.

CONCLUSION

The proposed project would not generate significant air quality impacts or require analysis for CO hotspots or TACs based on BAAQMD criteria. Therefore, the project would meet the requirements for Air Quality under *Criterion (d)*.

D. WATER QUALITY

The project site is currently developed with structures, surface parking and limited landscaping. It does not contain ponds, a creek, or other surface water. The closest surface water or wetland is Adobe Creek, approximately 120 feet northwest of the site.

The project site is connected to an existing stormwater drainage system managed and maintained by the city of Palo Alto. Currently the project site is almost entirely covered in impervious structures and paving. The project would replace the impervious surface with new imperious paving, landscaping, and new building area. As discussed in the Project Description, impermeable surfaces on the site would decrease by approximately 1,191 square feet, incrementally decreasing runoff quantities. Construction of the proposed project would also not alter the course of a stream or river including Adobe Creek, nor the pattern, quantity or quality of runoff entering the creek.

Because the project would not increase stormwater runoff and would be required to comply with City requirements to control and filter runoff, development of the proposed project would not significantly degrade the quality of stormwater runoff from the site. Impacts related to water quality would be less than significant.

CONCLUSION

The proposed project would not introduce new surface water discharges, would not increase runoff volumes, result in substantial erosion or siltation, or result in flooding on- or off-site. Additionally, the project would not substantially alter the existing drainage pattern of the site. Therefore, the project would meet the requirements for Hydrology and Water Quality under *Criterion (d)*.

3.5 CRITERION (E)

The site can be adequately served by all required utilities and public services.

The project site is in an existing urban area served by existing public utilities and services. The proposed project, due to the modest size of proposed new floor area and because the existing office uses currently require such services, would not result in a substantial increase in demand for services or utilities. The City of Palo Alto, City of Palo Alto Power and City of Palo Alto Waste-Gas-Water provide police, fire, electricity, water, sewer, and solid waste collection (through GreenWaste of Palo Alto) services to the existing commercial and

motel uses as well as neighboring residences and commercials buildings. The existing infrastructure would continue to provide these services for the proposed project.

CONCLUSION

The proposed project involves infill development on a project site in an urban area that is already served by existing utilities and public services. As discussed under *Criterion (a)*, the project is within the allowed building intensity and use for the site and is consistent with the 2030 Comprehensive Plan land use designation for the site. The project would not change the site's use or increase the intensity of use such that existing utility and public service providers would not be able to serve the project site. Therefore, the project would meet the requirements for utilities and public services Systems under *criterion e*.

4 EXCEPTIONS TO THE EXEMPTION

CEQA Guidelines Section 15300.2 outlines exceptions to the applicability of a Categorical Exemption, including cumulative impacts, significant effects due to unusual circumstances, scenic highways, hazardous waste sites, and historical resources. These exceptions are discussed below. As shown, none of the exceptions would apply.

4.1 CUMULATIVE IMPACTS CRITERION

CEQA Guidelines Section 15300.2 states that "all exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant." Table 7 includes a list of relevant cumulative projects in proximity to the project site. Minor projects that do not involve substantial new construction or substantial new or expanded land uses are not included.

Table 7 Cumulative Projects

Project Location	Land Use	Size	Status	Distance to Project Site (Approximate)
3997 Fabian Way	Residential	Seven stories, 295 units	Under review	350 feet
824 San Antonio Road	Mixed use	Four stories, 28 units and 2,948 square feet of retail space	Review complete	1,200 feet
800 San Antonio Road	Mixed Use	Five-stories, 120 units and 1,058 square feet of retail space	75-unit project approved; proposed increase to 120 units under review	1,400 feet
788 San Antonio Road	Residential	Eight stories, 168 units	Under review	1,700 feet
762 San Antonio Road	Residential	Seven stories, 198 units	Under review	1,800 feet

sf = square feet

Source: City of Palo Alto 2025. Cumulative project details were sourced from building eye, a citizen-facing mapping interface provided by the City of Palo Alto and available online at https://paloalto.buildingeye.com/planning and verified with City planning staff.

As discussed in Section 3.3, Criterion (C) above, the project would have no impact on sensitive biological resources and therefore would not result in a cumulative impact related to biological resources. As discussed in Section 3.4, subsections A and C above, VMT and air quality analyses already take into account cumulative impacts and the project's contributions to these impacts were found to be less than significant. As discussed in Section 3.4, subsection D and Section 3.5, Criterion (E), the proposed project would not contribute pollutants such that water quality would be impacted and would be served by available utilities and public services. Therefore, the project would not result in a cumulatively considerable contribution to potential significant cumulative impacts related to these issue areas.

The project would involve temporary noise and vibration during construction; however, these effects are localized and would cease upon cessation of construction activities. Additionally, noise levels would not exceed the City's threshold for construction noise. Construction noise impacts may overlap for the proposed project and the projects listed above. However, construction noise impacts would be temporary and would continue to decrease as the distance from construction activity increases. Overall, the project would not result in significant contributions to cumulative impacts. There are no successive projects of the same type in the same place that would result in significant cumulative impacts to which the project could make a significant cumulative contribution, and this exception does not apply to the proposed project.

4.2 SIGNIFICANT EFFECTS DUE TO UNUSUAL CIRCUMSTANCES CRITERION

State CEQA Guidelines Section 15300.2 states that "a categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances." As discussed under *Project Location and Setting* above, the project site is currently developed with a building and surface parking. The project site is generally level and does not possess characteristics which would qualify as unusual circumstances under Section State CEQA Guidelines Section 15300.2. Therefore, no known circumstances at the project site or related to project operations would result in a reasonable possibility of significant effects to the environment. This exception would not apply to the project.

4.3 SCENIC HIGHWAYS CRITERION

State CEQA Guidelines Section 15300.2 states that a categorical exemption "shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway." There are no designated State Scenic Highways in the vicinity of the project site. The closest scenic highway is I-280, which has been recognized as eligible for designation as a State Scenic Highway, located approximately 3 miles southwest of the project site (Caltrans 2018). Due to distance and intervening structures, the project site is not visible from 1-280. Therefore, the project would not damage scenic resources within a highway officially designated as a state scenic highway. This exception would not apply to the project.

4.4 HAZARDOUS WASTE SITES CRITERION

State CEQA Guidelines Section 15300.2 states that a categorical exemption "shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code." A search of the EnviroStor environmental database, the California Department of Toxic Substances Control Hazardous Waste and Substances Sites (Cortese) List, and the State Water Resources Control Board's (SWRCB) Geotracker Database was conducted in January 2025. The records review indicated that this project is not located on a site included on any list compiled pursuant to Section 65962.5 of

the Government Code (Department of Toxic Substances Control 2025, State Water Resources Control Board 2025). Therefore, this exception does not apply to the project.

4.5 HISTORIC RESOURCES CRITERION

State CEQA Guidelines Section 15300.2 states that a categorical exemption "shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource." The existing building on the project site dates to 1991. Based on its construction fewer than 45 years before the present, the existing building would not be eligible for listing as a historic resource, The proposed alteration of the existing building would not result in an adverse impact to built-environment historic resources.

In February of 2025, Rincon Consultants prepared a Cultural Resources Assessment for the project to assess the project site's sensitivity for archaeological resources. This assessment included a cultural resources records search, a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search, historic map and aerial review, and geoarchaeological sensitivity assessment, and is included at Appendix D to this report. The Cultural Resources Assessment did not identify archaeological resources or archaeological deposits in the project site, and the archaeological sensitivity of the project site is considered to be low based on the CHRIS records search results, soil mapping, and extent of previous ground disturbance. However, the lack of surface evidence of archaeological materials does not preclude their subsurface existence. With adherence to the following City of Palo Alto Standard Conditions of Approval related to unanticipated discovery of archaeological resources, potential impact that could result from unanticipated discovery of cultural resources would be less than significant.

STANDARD CONDITION OF APPROVAL – UNANTICIPATED DISCOVERY OF BURIED ARCHAEOLOGICAL, PALEONTOLOGICAL, AND TRIBAL CULTURAL RESOURCES

No known archeological or paleontological resources are present on or within the immediate vicinity of the site. However, in the unlikely event that an archeological resource or paleontological resource is unearthed during ground disturbing activities, work in the immediate area must be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archeology (National Park Service 1983) shall be contacted immediately to evaluate the find. If the find is Native American in origin, then a Native American representative must also be contacted to participate in the evaluation of the find. The qualified archaeologist, and, if applicable, the Native American representative, shall examine the find and make recommendations regarding additional work necessary to evaluate the significance of the find and the appropriate treatment of the resource. Recommendations could include, but are not limited to, invasive or non-invasive testing, sampling, laboratory analysis, preservation in place, or data recovery. A report of findings documenting any data recovered during monitoring shall be prepared by a qualified archaeologist and submitted to the Director of Planning prior to final planning inspection.

5 SUMMARY

Based on the analysis in this report, the proposed 3950 Fabian Way School Project meets all criteria for a Class 32 Categorical Exemption pursuant to Section 15332 of the State CEQA Guidelines. Further, none of the exceptions to the Categorical Exemption listed in CEQA Guidelines Section 15300.2 apply to the proposed project.

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Appendix A

Local Transportation Analysis

Local Transportation Analysis for the Girls Middle School Project at 3950 Fabian Way



Prepared for the City of Palo Alto

Submitted by
W-Trans

April 23, 2025

TRAFFIC ENGINEERING
TRANSPORTATION PLANNING
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Executive Summary

The project consists of converting the existing 32,500-square-foot office building into a private middle school for a maximum of 240 students, including partial demolition and the addition of an approximately 4,200-square-foot gymnasium. There are currently 184 students enrolled at the school located at 3400 West Bayshore Road which would relocate operations to 3950 Fabian Way as part of the project. The project represents a net increase in trips over the existing entitled land use of 483 trips per day, including 208 additional vehicle trips during the a.m. peak hour, 126 during the school p.m. peak hour, and 23 during the p.m. peak hour. A Transportation Demand Management Program is required since the project would generate more than 50 peak hour trips.

Access for pedestrians, bicyclists and transit users between the project site and surrounding streets would be adequate and the project would not conflict with any City policies, resulting in a less-than-significant impact on these facilities.

This project is presumed to have a less-than-significant transportation impact on vehicle miles traveled (VMT) since the relocation of the school would shift where students within the same Palo Alto community would travel and would generate fewer new trips than would be expected of a local retail project.

The project site would be accessed via two driveways on Fabian Way. Sight distances at these access points would be adequate for vehicles traveling 35 mph. A left-turn lane is warranted at the project's southern driveway on Fabian Way based on Near-Term plus Project peak hour volumes. However, in consideration of the roadway configuration and planned future improvements, as well as the lack of turn lanes at other driveways along this segment so that drivers are used to seeing left turns made from the inside through lane, installation of a turn lane at this time is not recommended and no further action is needed since a center turn lane is programmed as part of the *South Palo Alto Bikeways Demonstration Project*. Vehicle access to the site is expected to function acceptably for emergency vehicles. The project's impact on emergency access would therefore be less than significant.

It is recommended that class schedules between The Girls Middle School and the Kehillah School be staggered by at least 15 to 20 minutes and a crossing guard be positioned at the midblock crossing on Fabian Way to manage any potential conflicts between vehicles and pedestrians during the morning and school pick-up peak hours.

The drop-off and pick-up lanes are expected to operate adequately based on the estimated arrival rate and service rates, if the drop-off lane discharges at least one vehicle every 14 and 30 seconds for the drop-off and pick-up periods respectively. The maximum queue lengths at the entrance driveway for the northbound left-turn movement are calculated to be 75 feet and 50 feet during the a.m. and school p.m. peak hours, respectively.

No further enhancements are warranted at the existing midblock crosswalk on Fabian Way just north of the project site according to the recommendations detailed by the National Cooperative Highway Research Program (NCHRP).

Five intersections were evaluated for this study. It was determined that each intersection would continue operating acceptably under all volume scenarios considered, both with and without the project according to the methodologies prescribed by the VTA *Transportation Impact Analysis Guidelines*.

The project is presumed to have an acceptable effect on vehicle queuing and the operation of US 101 since none of the conditions listed in the VTA TIA guidelines apply and less than one percent of the freeway's operating capacity (or 102 new peak hour trips) would be added.

The proposed parking supply would satisfy the City's parking code requirement of 38 spaces for this type of land use.

Introduction

This report presents an analysis of the potential traffic impacts and adverse operational effects that would be associated with the development of a proposed private middle school to be located at 3950 Fabian Way in the City of Palo Alto. The transportation analysis was completed in accordance with the criteria established by the City of Palo Alto and is consistent with standard traffic engineering techniques.

Prelude

The purpose of a traffic impact study is to provide City staff and policy makers with data that they can use to make an informed decision regarding the potential transportation impacts of a proposed project, and any associated improvements that would be required to mitigate these impacts to an acceptable level under CEQA, the City's General Plan, or other policies. This report provides an analysis of those items that are identified as areas of environmental concern under the California Environmental Quality Act (CEQA) and that, if significant, require an EIR. Impacts associated with access for pedestrians, bicyclists, and to transit; the vehicle miles traveled (VMT) generated by the project; potential safety concerns such as increased queuing in dedicated turn lanes, adequacy of sight distance, need for turn lanes, and need for additional right-of-way controls; and emergency access are addressed in the context of the CEQA criteria. While no longer a part of the CEQA review process, vehicular traffic service levels at key intersections were evaluated for consistency with General Plan policies by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the study intersections and need for improvements to maintain acceptable operation. Adequacy of parking is also addressed as a policy issue.

Applied Standards and Criteria

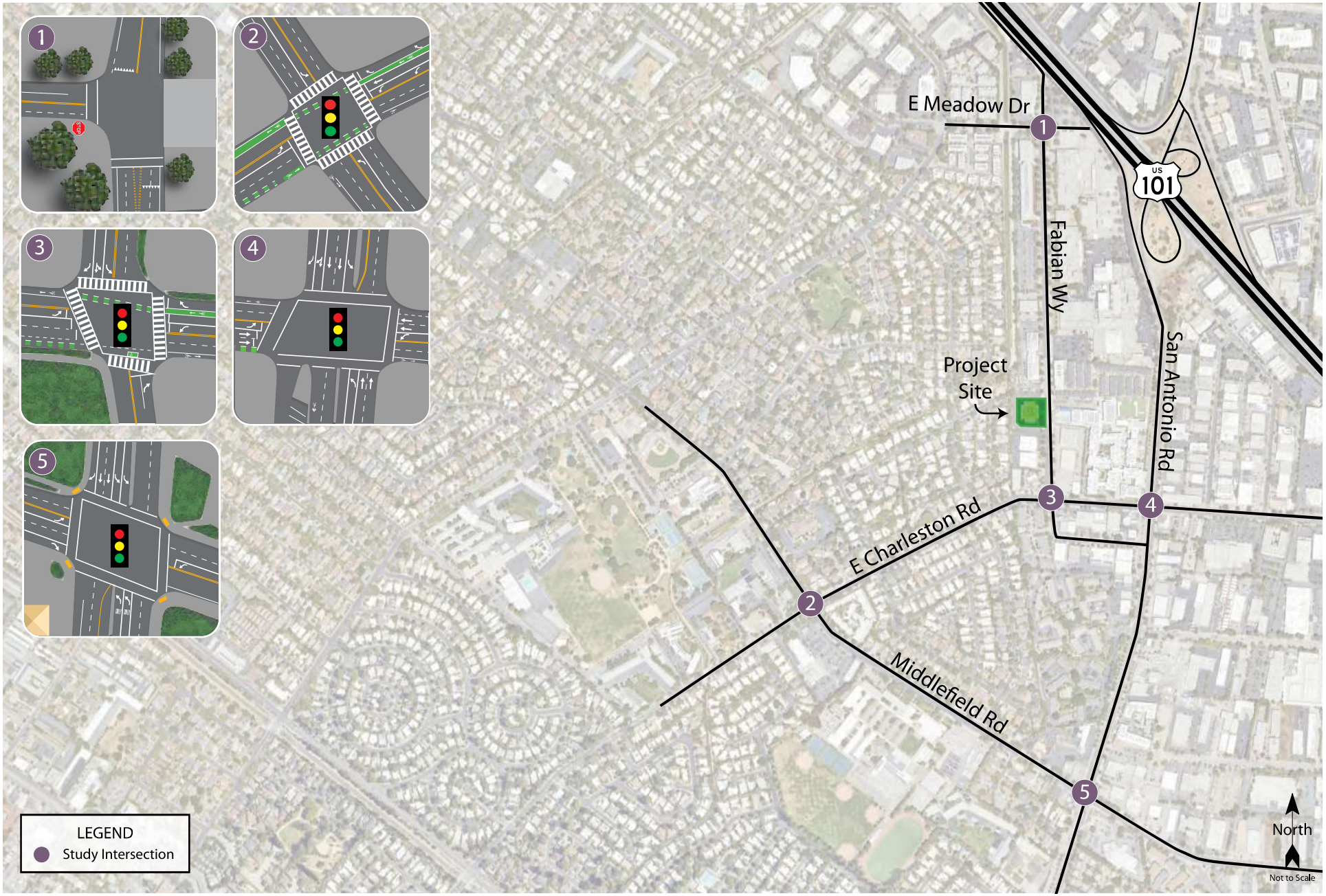
The report is organized to provide background data that supports the various aspects of the analysis, followed by the assessment of CEQA issues and then evaluation of policy-related issues. The CEQA criteria evaluated are as follows.

Would the project:

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
b. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
d. Result in inadequate emergency access?

Project Profile

There are currently 184 students enrolled at the private middle school which is located at 3400 West Bayshore Road. The project as proposed would include an increase in enrollment to a maximum of 240 students. The project would also include modifying the existing 32,500-square-foot office building at the project site, including partial demolition of the two-story northern wing and addition of a new approximately 4,200-square-foot gymnasium to support the relocation of school operations from 3400 West Bayshore Road to 3950 Fabian Way. The location of the project site is shown in Figure 1.



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Local Transportation Analysis for The Girls Middle School Project at 3950 Fabian Way

Figure 1 – Study Area and Existing Lane Configurations

W-Trans

Transportation Setting

Study Area and Periods

The study area varies depending on the topic. For pedestrian trips it consists of all streets within a half mile of the project site that would lie along primary routes of pedestrian travel, or those leading to nearby attractors. For bicycle trips it consists of all streets within one mile of the project site that would lie along primary routes of bicycle travel. For the operational analyses, the study area consists of the following intersections: with signalized locations indicated by an asterisk (*). An indication as to whether the location is included in the Santa Clara County Congestion Management Program (CMP) network is also provided.

1. Fabian Way/E. Meadow Drive
2. Middlefield Road/E. Charleston Road*
3. Fabian Way/E. Charleston Road*
4. San Antonio Road/ E. Charleston Road* (CMP)
5. San Antonio Road/Middlefield Road* (CMP)

Operating conditions during the a.m., school p.m. and p.m. peak periods were evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, the school p.m. peak hour occurs between 2:00 p.m. and 4:00 p.m. and reflects mid-afternoon school pick-up conditions, and the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute. Counts were obtained for the study intersections on Wednesday, January 29, 2025, while local schools were in session. Copies of the traffic count data sheets are provided in Appendix A.

Study Intersections

Fabian Way/East Meadow Drive is an unsignalized four-legged intersection with stop control on the eastbound East Meadow Drive approach and an uncontrolled driveway to an adjacent parking lot on the westbound approach. There are marked crosswalks with curb ramps across the south and west legs and bike lanes are available on all three legs of the intersection.

Middlefield Road/East Charleston Road is a signalized four-legged intersection with protected left-turn phasing on all approaches. Marked crosswalks with pedestrian phasing are present across all four legs. There are bike lanes on all four legs of the intersection.

Fabian Way/East Charleston Road is a signalized four-legged intersection with protected left-turn phasing on the eastbound and westbound East Charleston Road approaches as well as split phasing on the northbound and southbound Fabian Way approaches; there is protected right-turn phasing on the westbound approach. Marked crosswalks with pedestrian phasing are available across all four legs. There are bike lanes on the east and west legs of the intersection.

San Antonio Road/East Charleston Road is a signalized four-legged intersection with protected left-turn phasing on each approach. Marked crosswalks with pedestrian phasing are present on all legs of the intersection. Bike lanes are available on the east and west Charleston Road legs. This intersection is part of the Santa Clara County Congestion Management Program (CMP) network.

San Antonio Road/Middlefield Road is a signalized four-legged intersection with protected-left turn phasing on all approaches. Marked crosswalks as well as pedestrian phasing are available on each leg. This intersection is part of the Santa Clara County Congestion Management Program (CMP) network.

The locations of the study intersections and the existing lane configurations and controls are shown in Figure 1.

Transportation Facilities

Existing and Planned Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps provide access for pedestrians in the vicinity of the proposed project site.

Per the *City of Palo Alto Bicycle + Pedestrian Transportation Plan*, Alta Planning + Design, 2012, intersection improvements such as pavement markings, curb extensions and signalization changes are recommended to improve bicyclist and pedestrian visibility in key locations including the following.

- Fabian Way/Meadow Drive
- Charleston Road/Middlefield Road
- San Antonio Road-San Antonio Avenue/Mackay Drive-Nita Avenue

Existing and Planned Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2020, classifies bikeways into the following four categories.

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

Along the project frontage on Fabian Way-West Bayshore Road, Class II bike lanes exist on either side of the roadway between 3160 West Bayshore Road and 3960 Fabian Way. It should be noted that the bike lane on the west side of Fabian Way is restricted to bicycle use only between 7 a.m. and 7 p.m. daily; parking is permitted in this area outside of this period. Planned improvements to Fabian Way, including along the project frontage, include temporary quick-build treatments such as protected and/or buffered bike lanes as part of the *South Palo Alto Bikeways Demonstration Project*. Additionally, temporary protected and/or buffered bike lanes would be installed along Meadow Drive within a half mile of the project site.

In the project area a Class I multi-use path and Class II bike lanes as exist as detailed in Table 1. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. Table 1 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the *Bike Ped Plan Update Existing Bicycle Facilities Map*, City of Palo Alto, 2024, *Proposed Bicycle Facility Map*, City of Palo Alto, 2025 and the *City of Palo Alto Bicycle + Pedestrian Transportation Plan*, Alta Planning + Design, 2012.

Table 1 – Bicycle Facility Summary				
Status **Location**	**Class**	**Length (miles)**	**Begin Point**	**End Point**
Existing				
JLS and Hoover School Path	I	0.40	Meadow Dr	Charleston Rd
Charleston Rd	II	2.40	Foothill Expy	El Camino Real
Fabian Wy-W Bayshore Rd	II	1.30	3160 W Bayshore Rd	3960 Fabian Wy
Louis Rd	II	2.30	Embarcadero Rd	Charleston Rd
Meadow Dr	II	1.60	Fabian Wy	El Camino Real
Middlefield Rd	II	1.30	Loma Verde Ave	Keats Ct
Nelson Dr-Mackay Dr	III	0.50	Adobe Creek	San Antonio Rd
Redwood Cir-Duncan Pl	III	0.40	Bryant St	Adobe Creek
San Antonio Rd	III	0.50	Byron St	Alma St
Planned				
Greendell School Path	I	0.29	Nelson Dr	Middlefield Rd
San Antonio Rd	I	0.90	Charleston Rd	Baylands Trail
Redwood Cir-Mackay Dr	III	1.04	Bryant St	San Antonio Rd
Middlefield Rd	III	0.11	Keats Ct	San Antonio Rd
Charleston-Arastradero Rd	IV	1.92	City Limit	Clemo Ave
Fabian Wy	IV	0.50	Charleston Rd	Meadow Dr
Meadow Dr	IV	1.40	Fabian Wy	Alma St
Middlefield Rd	IV	4.25	E City Limit	W City Limit
San Antonio Rd	IV	1.00	Charleston Rd	Alma St

Source: *Bike Ped Plan Update Existing Bicycle Facilities Map*, City of Palo Alto, 2024; *Proposed Bicycle Facility Map*, City of Palo Alto, 2025; *City of Palo Alto Bicycle + Pedestrian Transportation Plan*, Alta Planning + Design, 2012; *South Palo Alto Bikeways Demonstration Project*, City of Palo Alto, 2025

Existing Transit Facilities

The Santa Clara Valley Transportation Authority (VTA) provides fixed route bus service and light-rail train throughout Santa Clara County. Two bicycles can be carried on VTA light rail trains and most VTA buses. Bike rack space is on a first come, first served basis. Additional bicycles are allowed on VTA buses at the discretion of the driver. VTA provides and bus service to the immediate study area via the routes described in Table 2.

Table 2 – Transit Routes					
Transit Agency Route	**Distance to Stop (mi)[1]**	**Service**			**Connection**
		Days of Operation	**Time**	**Frequency**	
Santa Clara Valley Transportation Authority (VTA)					
ACE Orange	0.0	Mon-Fri	6:00 AM – 10:00 AM, 1:30 PM – 5:40 PM	1 hr – 1.5 hr	Great America ACE Amtrak Station
Route 21	0.5	Mon-Fri Sat Sun	5:30 AM – 9:45 PM 7:45 AM – 9:20 PM 8:20 AM – 8:00 PM	30 min – 1 hr 45 min 1 hr	San Antonio Caltrain, Sunnyvale Transit Center, Santa Clara Transit Center
School 288	0.0	Mon-Fri	8:10 AM – 8:45 AM 3:40 PM – 4:50 PM	20 min	Gunn High School, Palo Alto Veteran's Hospital

Note: [1] Defined as the shortest walking distance between the project site and the nearest bus stop
Source: Santa Clara Valley Transportation Authority, http://www.vta.org/

Caltrain is the commuter rail line serving the San Francisco Peninsula. It connects Palo Alto with San Francisco to the north and San Jose and Gilroy to the south. The San Antonio Caltrain Station is located approximately 1.5 miles south of the project site. Both bicycle racks and lockers are provided at the train station. Bicycle racks are available on a first-come, first-served basis, while lockers must be reserved. Weekday train service is provided at this station with both northbound and southbound trains on approximately 30-minute to one-hour headways from roughly 5:00 a.m. to 11:00 a.m.

Project Data

The project consists of converting the existing 32,500-square-foot office building into a private middle school for a maximum of 240 students, including partial demolition and the addition of an approximately 4,200-square-foot gymnasium. There are currently 184 students enrolled at the school located at 3400 West Bayshore Road which would relocate operations to 3950 Fabian Way as part of the project. It is noted that the office building is currently partially occupied. The site is accessed via two driveways on Fabian Way, the southernmost driveway for entering vehicles and the northernmost for exiting vehicles. The proposed parking supply includes 52 vehicle parking spaces and 48 bicycle parking spaces. The proposed project site plan is shown in Figure 2.

Trip Generation

Trip generation estimates are typically developed using standard rates published by the Institute of Transportation Engineers (ITE) in the most recent edition of the *Trip Generation Manual*. However, standard rates may not be applicable for the proposed project (a private middle school with an existing Transportation Demand Management (TDM) Plan). Thus, to calculate the school's trip generation rate, count data was collected at the existing school driveways at 3400 West Bayshore Road while TDM Plan measures were in place during a typical school day on Wednesday, January 29, 2025.

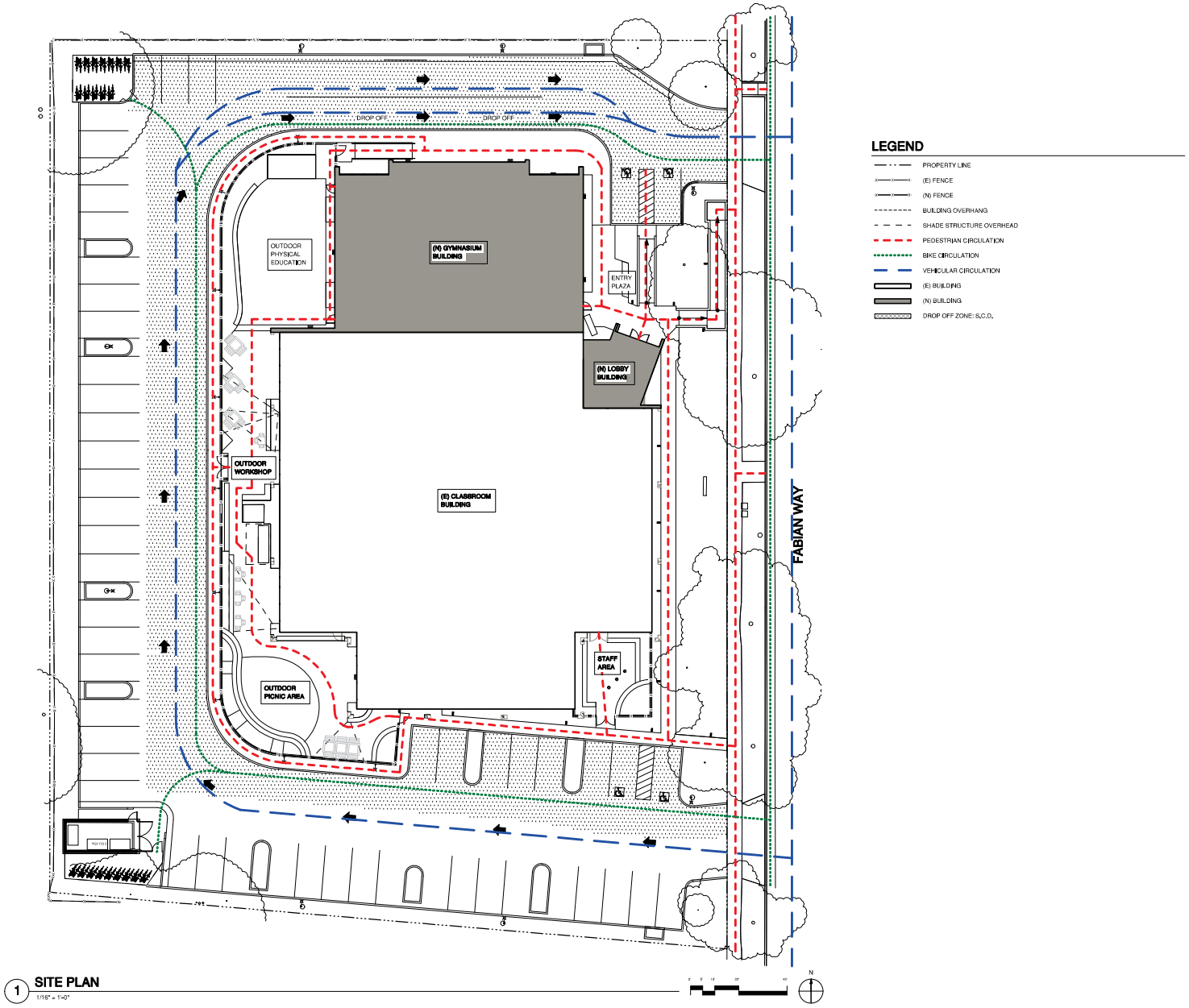
At the time the intersection, roadway and driveway count data were collected, enrollment at The Girls Middle School was 184 students. Site-specific trip generation rates for the a.m., school p.m., and p.m. peak hours were developed based on the driveway counts. The school site generated 196 vehicle trips during the a.m. peak hour, 117 vehicle trips during the school p.m. peak hour, and 53 vehicle trips during the p.m. peak hour. Based on the current enrollment and derived observed trip generation it was determined that the school's actual trip generation rate is comparable, though slightly higher than, those published by ITE in the *Trip Generation Manual*, 11th Edition, 2021 for "Private School (K-8)" (ITE LU #530). A summary showing the derivation of site-specific rates as well as results using ITE rates for informational purposes only is provided in Table 3.

Table 3 – Trip Generation Rate Derivation

Land Use	Units (stu)	Daily		AM Peak Hour				School PM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing															
School	184	3.48*	641	1.07*	196	105	91	0.64*	117	52	65	0.29*	53	15	38
Informational Use Only, Based on ITE Rates															
Private School (K-8)	*184*	*4.11*	*756*	*1.01*	*186*	*104*	*82*	*0.60*	*110*	*52*	*58*	*0.26*	*48*	*23*	*25*

Note: *Derived from counts at 3400 W. Bayshore Rd Campus; stu = students

Since the observed rates are generally higher, and more conservative than standard ITE rates, these were used to calculate the expected trip potential for the project. Applying these trip generation rates to the maximum projected enrollment of 240 students would result in 835 trips daily, including 257 trips during the a.m. peak hour, 154 trips during the school p.m. peak hour and 70 trips during the p.m. peak hour at the 3950 Fabian Way site. Trip reductions attributable to carpooling and alternative transportation modes (walking, biking, or using transit) are assumed to be included for the daily, a.m., school p.m. and p.m. peak hours since the trip generation estimate is based on observations conducted at the West Bayshore Road campus. According to the *Transportation Impact Analysis Guidelines* published by the VTA and most recently adopted in 2009, this project does not qualify



Source: CAW Architects 2/24

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Local Transportation Analysis for The Girls Middle School Project at 3950 Fabian Way

Figure 2 – Site Plan

for any additional trip reductions since it would be located beyond a 2,000-foot walk of either a Caltrain Station, LRT, BRT line or qualified major bus stop.

Although the existing office building is not fully occupied at the time of this analysis, trip credits related to this building at 3950 Fabian Way were applied using ITE rates for "General Office Use" (ITE LU #710) since a similar office use remains permitted on the subject property; the project site has certain development rights that could be exercised should the proposed project not proceed. The project represents a net increase in trips over the existing entitled land use of 483 trips per day including 208 additional vehicle trips during the a.m. peak hour, 126 during the school p.m. peak hour, and 23 during the p.m. peak hour. The expected trip generation potential for the proposed project is indicated in Table 4.

Table 4 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				School PM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out	Rate	Trips	In	Out
Entitled															
Office	32.5 ksf	10.84	352	1.52	49	43	6	**	28	13	15	1.44	47	8	39
Proposed															
School	240 stu	3.48*	835	1.07*	257	139	118	0.64*	154	68	86	0.29*	70	20	50
Difference			**483**		**208**	**96**	**112**		**126**	**55**	**71**		**23**	**12**	**11**

Note: *Estimated using observations at 3400 W. Bayshore Rd Campus; **Trips calculated using Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use per ITE *Trip Generation Manual*, 11th Edition; stu = students; ksf = 1,000 square feet

Trip Distribution

The pattern used to allocate project trips associated with the 3950 Fabian Way site to the street network was based on local knowledge of travel behavior and a review of prevailing peak hour travel at each study intersection and at the nearby Kehillah School driveway (3900 Fabian Way) with manual adjustments applied for rounding. It is noted that an expected shift in travel behavior would occur since the school is proposed to move to a location closer to the San Antonio Road corridor which is anticipated to attract a higher portion of project trips than occurs with the current location. The applied distribution assumptions and resulting trips are shown in Table 5.

Table 5 – Trip Distribution Assumptions

Route	Percent	Daily Trips	AM Trips	School PM Trips	PM Trips
To/from the North via Fabian Wy	14%	68	29	18	3
To/from the West via Meadow Dr	6%	29	12	8	1
To/from the North via Middlefield Rd	12%	58	25	15	3
To/from the West via Charleston Rd	10%	48	21	13	2
To/from the South via San Antonio Rd	15%	72	31	19	3
To/from the East via Middlefield Rd	15%	72	31	19	3
To/from the East via Charleston Rd	11%	53	23	14	3
To/from the North via San Antonio Rd	17%	83	36	20	5
TOTAL	**100%**	**483**	**208**	**126**	**23**

Transportation Demand Management (TDM)

The Municipal Code Section 18.52.050 states that a Transportation Demand Management (TDM) program is required for any project generating 50 or more net-new weekday (a.m. or p.m. peak hour) or weekend peak hour trips.

According to the trip generation estimates, this project would generate 257 trips during the a.m. peak hour, 154 trips during the school p.m. peak hour and 70 trips during the p.m. peak hour. Therefore, a TDM program is required.

Finding – The preparation and implementation of a TDM program is required by City Code.

Circulation System

This section addresses the first transportation bullet point on the CEQA checklist, which relates to the potential for a project to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Pedestrian Facilities

Relevant Policies

The *2030 Palo Alto Comprehensive Plan*, 2017, includes the following relevant pedestrian policies.

- T-1.19 Provide facilities that encourage and support bicycling and walking.
- T-1.20 Regularly maintain off-roadway bicycle and pedestrian paths, including sweeping, weed abatement and surface maintenance.
- T-3.2 Enhance connections to, from and between parks, community centers, recreation facilities, libraries and schools for all users.
- T-3.7 Encourage pedestrian-friendly design features such as sidewalks, street trees, on-street parking, gathering spaces, gardens, outdoor furniture, art and interesting architectural details.
- T-3.8 Add planting pockets with street trees to provide shade, calm traffic and enhance the pedestrian realm.

Site Design

Per the site plan, a pedestrian path is proposed to connect the existing sidewalk along the project frontage on Fabian Way to the site and provide continuous pedestrian access along the northern and western sides of the building. Additionally, curb ramps would be provided near loading zones, including the designated drop-off area and on either side of a marked crosswalk between the accessible parking spaces and pedestrian path in the northwestern corner of the site.

Project Impacts on Pedestrian Facilities

Given the proximity of existing residential uses to the west of the site and proposed residential uses to the east, it is reasonable to assume that some students and staff will want to walk, bicycle, and/or use transit to reach the school. As part of the project, a pedestrian path providing connectivity between the existing sidewalk on Fabian Way and the building's entry points, along with the provision of curb ramps, would allow adequate pedestrian access within the redesigned parking lot.

Finding – Pedestrian facilities serving the project site are adequate, and the project would not conflict with any policies for pedestrian access.

Bicycle Facilities

Relevant Policies

The *Palo Alto Municipal Code Section 18.54.060* provides guidance on bicycle parking. The Code states that bicycle parking facilities shall be provided for additions to an existing building and the type (either short-term or long-term) depends on the use. Long-term bicycle parking is intended for bicyclists who need to park for extended periods during the day, such as students. A school bicycle enclosure, i.e., a locked area containing bicycle racks, is long-term bicycle parking intended for use at a school and must be located on the ground-floor level and situated

near a vehicle parking area. Further, Section 18.52.040 of the Code requires that one bicycle parking space for every five students be provided. As there are 240 students proposed, 48 bicycle parking spaces are required.

The *2030 Palo Alto Comprehensive Plan*, 2017, also includes the following relevant policies.

- T-1.16 Promote personal transportation vehicles an alternative to cars (e.g. bicycles, skateboards, roller blades) to get to work, school, shopping, recreational facilities and transit stops.
- T-1.19 Provide facilities that encourage and support bicycling and walking.
- T-1.20 Regularly maintain off-roadway bicycle and pedestrian paths, including sweeping, weed abatement and surface maintenance.
- T-3.6 Consider pedestrians, bicyclists, e-bikes and motorcycles when designing road surfaces, curbs, crossings, signage, landscaping and sight lines.
- T-5.12 To promote bicycle use, increase the number of safe, attractive and well-designed bicycle parking spaces available in the city, including spots for diverse types of bicycle and associated equipment, including bicycle trailers, prioritizing heavily travelled areas such as commercial and retail centers, employment districts, recreational/cultural facilities, multi-modal transit facilities and ride share stops for bicycle parking infrastructure.

Site Design

Bicycle parking is proposed via racks located in an enclosed area at the southwest corner of the site as indicated in the proposed site plan. Per the circulation diagram, bicyclists would be expected to ride alongside vehicle traffic in the parking lot.

Project Impacts on Bicycle Facilities

Existing bicycle facilities, including Class II bike lanes along the project frontage on Fabian Way, as well as on Charleston Road and Meadow Drive, together with shared use of minor streets provide adequate access for bicyclists.

Bicycle Storage

Long-term bicycle parking is provided on-site by a school bicycle enclosure which includes 48 racks, each with a single-bicycle capacity. Therefore, the proposed number of bicycle parking spaces would meet the Municipal Code requirement.

Finding – Existing bicycle facilities provide adequate access for bicyclist, and the project would not conflict with any policies for bicycle facilities.

Transit Facilities

The *2030 Palo Alto Comprehensive Plan*, 2017, includes the following relevant transit policies.

- T-1.8 Work to ensure public and private school commute patterns are accommodated in the local transit system, including through schedule and route coordination.
- T-1.9 Continue to encourage the provision of amenities such as seating, lighting and signage, including real-time arrival information, at bus and shuttle stops and train stations to increase rider comfort, safety and convenience

Site Design

An existing bus stop served by VTA ACE Orange and School 288 routes is located on the project frontage approximately 100 feet from each project driveway. The proposed site plan does not include any changes to the existing sidewalk, including the bus stop on the project frontage.

Impact on Transit Facilities

Transit facilities, i.e., bus stops and train stations, are located proximate to the project site, as noted in Table 2. Transit demand generated by students and staff would be spread out across several lines and headways, and therefore the proposed project would have a nominal effect on local transit service. Existing transit routes are adequate to accommodate project-generated transit trips. Existing stops are within an acceptable walking distance of the site.

Finding – The project site is adequately served by transit as it is located within a half-mile walk of bus stops serving multiple routes. The project would not conflict with any policies for transit access.

Significance Finding – The proposed project would not conflict with any plans or policies for transportation facilities and would therefore have a less-than-significant impact on these facilities.

Vehicle Miles Traveled (VMT)

The potential for the project to conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) was evaluated based on the project's anticipated Vehicle Miles Traveled (VMT).

Senate Bill (SB) 743 established the potential increase in VMT associated with a project as the basis for determining transportation impacts of development projects. Guidance provided by both the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018, and the *City of Palo Alto VMT Transportation Analysis Methodology Under CEQA*, 2020, were used. Neither publication specifically addresses school land uses, indicating that a VMT assessment on a case-by-case basis is allowed.

For land uses not addressed in the OPR Technical Advisory, it is common practice to consider whether the land use of interest has travel characteristics that are similar to the residential, employment-based, or retail land use types that are addressed in the OPR Technical Advisory. If so, similar VMT assessment methodologies can often be used. Since the school is expected to draw students from the same community, relocation of the school would primarily redistribute where the students travel within Palo Alto as the new location is less than one mile south of the existing school with a frontage along the same roadway. This shift in travel patterns and VMT is similar to how OPR considers retail uses, in which many types of retail projects may generally be presumed to have a less-than-significant VMT impact since the total amount of shopping that occurs in a given geographic area tends to remain unchanged.

The OPR *Technical Advisory* indicates that retail development over 50,000 square feet is typically regional serving and subject to quantitative VMT analysis. Retail development under 50,000 square feet can generally be considered local-serving and screened from further VMT analysis per the *Technical Advisory*. The City of Palo Alto has established a more stringent threshold which states that retail projects consisting of up to 10,000 square feet can be classified as being local and therefore can be presumed to have a less-than-significant VMT impact.

Based on formulas contained in the ITE *Trip Generation Manual*, a 10,000-square-foot retail development would be expected to generate 545 daily vehicle trips. A retail project, or project exhibiting travel characteristics similar to retail such as a school, could therefore be considered to have a less-than-significant VMT impact if it generates fewer than this number of vehicle trips per day.

As discussed previously, this project would include the relocation of the school and an additional 56 students, which is expected to generate approximately 194 new daily vehicle trips. Further, the relocation of the school would not directly increase the total number of students in the region but would shift where the students would travel. Since the school would be relocated less than one-half mile south on the same street (West Bayshore Road-Fabian Way), the distance traveled to and from the school would only slightly increase or decrease based on the individual origin and destination of each student or staff member. Therefore, the total vehicle miles traveled by students or staff would be unlikely to change. Because the project would generate fewer new vehicle trips than would be generated by 10,000 square feet of retail, and would shift existing student trips, it would be exempt from further VMT analysis and may be presumed to have a less-than-significant VMT impact.

Significance Finding – The relocation of the school would shift where students within the same Palo Alto community would travel and would generate fewer new trips than would be expected of a local retail project that would be screened out of further VMT analysis. Therefore, the project would be expected to have a less-than-significant impact on VMT.

Safety Issues

The potential for the project to impact safety was evaluated in terms of the adequacy of sight distance and need for turn lanes at the project access points. This section addresses the third transportation bullet on the CEQA checklist which is whether or not the project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Site Access

Per the proposed site plan, vehicle access is provided by two existing driveways on Fabian Way; the south driveway would be designated for entering vehicles only and the north for exiting vehicles only. Left and right turn movements are permitted at each driveway.

Sight Distance

At unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time should be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed.

Sight distance along Fabian Way at the project driveways was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance at intersections of public streets, private streets, and rural driveways is based on corner sight distances with the approach travel speeds used as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street.

Although sight distance requirements are not applicable to urban driveways, sight distances from the proposed driveways were field measured and, for evaluation purposes, the stopping sight distance criterion was applied. This criterion uses the approach travel speed as the basis for determining the recommended sight distance. Based on a design speed of 35 miles per hour (mph), the minimum stopping sight distance required on Fabian Way is 250 feet. The field review showed that sight distances at both proposed project driveways would exceed 250 feet in both directions. Therefore, the sight lines at both driveways are adequate.

To maintain these sight distances, it is suggested that, in accordance with the Federal Highway Administration's guide on *Vegetation Control for Safety*, 2008, any vegetation planted near the project's driveways should be trimmed to an appropriate height of three feet or less and trees should be trimmed so that nothing hangs below a height of seven feet from the surface of the roadway. This provides a gap in vegetation for drivers to observe oncoming traffic and safely maneuver from a driveway.

For a motorist traveling northbound on Fabian Way intending to turn left into the south project driveway, the stopping sight distance is also greater than 250 feet, providing adequate visibility to allow the following driver to observe and react to a vehicle that may stop in the roadway before making a left turn into the south project driveway.

Finding – Adequate sight distance is available at both proposed driveway locations for all turning movements entering and exiting the site, though vegetation or structures have the potential to obstruct these sight lines.

Recommendation – To maintain adequate sight lines, it is recommended that vegetation along the project frontage on Fabian Way be designed and maintained to ensure that all landscaping lies below three feet in height or above seven feet.

Access Analysis

Left-Turn Lane Warrants

The need for a left-turn lane on Fabian Way at the project entrance driveway was evaluated based on criteria contained in the *Intersection Channelization Design Guide*, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as an update of the methodology developed by the Washington State Department of Transportation and published in the *Method For Prioritizing Intersection Improvements*, 1997. The NCHRP report references a methodology developed by M. D. Harmelink that includes equations that can be applied to expected or actual traffic volumes to determine the potential need for a left-turn pocket.

Under Near-Term plus Project volumes a left-turn lane is warranted according to the NCHRP methodology during the a.m. and school p.m. peak hours based solely on volumes. However, given the preponderance of driveways along Fabian Way that do not have turn pockets, coupled with the presence of multiple northbound travel lanes which provide space for approaching drivers to avoid a rear-end crash and pass to the right of a left-turning vehicle, the driver turning left does not present a safety concern as this movement is consistent with driver expectation. Left-turn pockets therefore do not appear to be warranted despite the volume criteria being met. The impact would therefore be less than significant.

Additionally, it is noted that the City's "*South Palo Alto Bikeways Demonstration Project*" would result in the installation of protected bikeways on Fabian Way, and such lanes require additional width to accommodate a buffer. Based on the volume of traffic on Fabian Way it appears that a three-lane configuration with a two-way left-turn lane would be adequate to accommodate vehicular traffic and also provide the extra width needed for the buffered bike lanes. Therefore, if the City implements these planned changes, the left-turn pocket is already programmed as part of the project and the project would continue to have a less-than-significant impact. Copies of the turn lane warrant spreadsheets are provided in Appendix B.

Finding – A left-turn lane is warranted at the project driveway on Fabian Way based on Near-Term plus Project volumes during the a.m. and school p.m. peak hours. However, in consideration of the roadway configuration and planned future improvements as well as the lack of turn pockets at numerous other nearby driveways, installation of a turn lane at this time is not recommended.

Site Circulation

The Kehillah School (a private high school) is located just north of the project site at 3900 Fabian Way. Vehicles exiting from the school would primarily use a driveway located approximately 70 feet north of the north project driveway. The peak hour of vehicle activity for the Kehillah School would coincide with the peak hour for the proposed project since both are schools.

There is the potential for conflicting movements between vehicles turning left from the project driveway and turning right from the Kehillah School driveway, as well as through traffic and pedestrians crossing Fabian Way in the midblock crosswalk between the driveways. To facilitate the movement of vehicles and pedestrians at this location, it is recommended that the school coordinate with the Palo Alto Police Department to gain the services of a qualified crossing guard to be positioned at the midblock crossing during the school morning drop off and afternoon pick up periods typically on weekdays from 8:00-9:00 a.m. and from 3:00-4:00 p.m. It is noted that a monetary fee may be required for the police department to provide a crossing guard. Sight lines from the project driveway to the Kehillah school driveway and crosswalk are unobstructed.

Additionally, The Girls Middle School should coordinate with the Kehillah School and establish a daily schedule so that the start of their classes and school dismissal times are staggered between each school by at least 15 to 20 minutes to minimize the potential for conflicting vehicle movements on Fabian Way.

Finding – Potential conflicts between vehicles turning and through movements as well as pedestrian crossings could occur during a.m. and school p.m. peak hours due to coinciding peak activity periods, the proximity of exit driveways, and the midblock crossing on Fabian Way.

Recommendation – It is recommended that a crossing guard guide vehicles and pedestrians at the midblock crossing on Fabian Way during the morning and afternoon peak hours. The Girls Middle School should stagger their class schedule so that start and dismissal times are staggered with the Kehillah School by at least 15 to 20 minutes.

Queuing

Drop-Off Lane Queuing

The proposed project includes a 460-foot-long drop-off area with storage capacity for 18 vehicles. The drop-off area is positioned in such a way that any vehicles in the queue beyond the 18-vehicle capacity may extend out of the site and onto Fabian Way.

The drop-off lane queuing was analyzed for both the morning drop-off and afternoon pick-up periods. As school traffic generally experiences short periods within the peak hour with concentrated arrivals and departures before and after the school bells, a peak hour factor adjustment was used to estimate the actual (design) flow rate of vehicles in the drop-off lane. The use of a peak hour factor adjusts the number of estimated vehicles arrivals to appropriately account for concentrated peaking that is typical for schools. A peak hour factor of 1.0 means traffic levels are evenly spread out over the whole hour, and a lower number of 0.80 or less means traffic spikes for a short period during the hour.

Based on the school's trip generation forecast there would be 118 vehicles per hour arriving and departing during the morning peak hour. Vehicle surveys conducted in February 2025 showed that the peak hour factor for The Girls Middle School during the morning drop-off is 0.474, meaning there is a concentrated peak of traffic just before the school bell. This is equivalent to a design flow rate of 249 vehicles per hour. Similarly, there would be 68 vehicles using the pick-up lane during the school p.m. peak hour which is equivalent to 120 vehicles per hour once the observed peak hour factor of 0.565 is applied.

A sensitivity test was conducted to determine the slowest service rate that could accommodate the expected demand considering the vehicle stacking area. Through this sensitivity test, it was determined that a service rate of approximately one vehicle discharged every 14 seconds would result in an average of 8.5 vehicles in the queue during the morning drop-off period and one vehicle discharged every 30 seconds would result in an average of 9.2 vehicles in the queue during the afternoon pick-up period. Both conditions would have a low probability (about 4 percent) of exceeding 18 vehicles in the queue at any point. Probabilities of 5 percent or less are generally considered to be acceptable. Through this process, it was determined that the successful operation of this lane would rely on the quick discharge of vehicles at a rate of about 14 seconds per vehicle during the morning peak periods, or about four vehicles per minute, and about 30 seconds per vehicle, or two vehicles per minute, during the afternoon pick-up period. Given that students can be exiting multiple vehicles simultaneously, these discharge rates appear reasonable to achieve. Discharge rates which are slower than this would increase the probability that the queue would exceed the available queue length of the drop-off/pick-up lane during the peak periods. To ensure that the service rate is adequate to avoid excessive queuing, staff should be stationed in the drop-off/pick-up area to assist students and drivers and keep traffic moving.

It is also worth noting that this analysis assumes that the egress from the drop-off/pick-up lane to Fabian Way is uninterrupted and clear of congestion. If a queue exists on the egress route for any reason, the discharge at this lane may be compromised and the queue length would be extended.

The actual operations of the drop off/pick-up lane should be monitored to confirm that spillover onto Fabian Way does not occur. If the queue does regularly exceed the allotted space and spills over onto Fabian Way then the

number of peak hour vehicle trips should be reduced by implementing an enhanced TDM program, staggered schedules by grade or other strategies that would decrease vehicle trips or otherwise spread out the number of peak hour vehicle trips accessing the school site. The school should emphasize in their TDM plan the importance of an efficient and safe student drop-off/pick-up operation to prevent excessive on-site queuing.

Finding – Based on the estimated arrival rate and service rates, the available storage capacity of the drop-off/pick-up lanes is expected to be adequate to serve the demand if the drop-off lane operation can discharge at least one car every 14 seconds during the morning drop-off and 30 seconds during the afternoon pick-up periods.

Recommendation – Staff should be deployed during drop off and pick up to guide students and drivers and ensure that no drivers are holding up the process. Drop off/pick-up lane operations should be monitored to confirm that the queue does not extend beyond the site boundaries.

Vehicle Queuing at Northbound Project Entrance

Vehicle queuing analyses were conducted using the Existing plus Project volumes to determine the queuing conditions at the northbound Fabian Way approach to the entrance driveway during the a.m. and school p.m. peak hours. Though there is no dedicated northbound left-turn lane serving the project entrance driveway, two through lanes exist on Fabian way; the left through lane may be used as storage for left-turning movements and the right through lane may be used for through traffic. Consideration was given to the potential for the northbound left-turn queue to extend into the midblock crosswalk on Fabian Way south of the project site or into the intersection of Fabian Way/E. Charleston Road.

The Oregon Department of Transportation (ODOT) developed a methodology for estimating queue lengths at uncontrolled intersections using a mathematical model that considers vehicle volumes on every approach for the subject location. Using this methodology, it was determined that the northbound left-turn queue at the project entrance driveway on Fabian Way is expected to be 75 feet during the a.m. peak hour and 50 feet during the school p.m. peak hour under project-generated traffic. It should be noted that PHFs of 0.474 and 0.565 were applied to the northbound left-turning project trips to account for the concentrated peak of traffic during morning drop-off and afternoon pick-up, respectively. A summary of estimated queue lengths using this methodology is included in Appendix C.

Since the existing crosswalk is 150 feet south of the project driveway on Fabian Way and the intersection of Fabian Way/E Charleston Road is 450 feet south of the project driveway, the anticipated maximum northbound left-turn queue would not extend into either the crosswalk or the intersection.

Finding – The maximum left-turn vehicle queuing at the entrance driveway is calculated to be 75 feet long, which occurs during the a.m. peak hour.

Pedestrian Crossing Warrants

As a preliminary step to evaluate the potential use of enhancements at crossings for pedestrians, warrant analyses were conducted for the existing midblock crossing on Fabian Way north of the project exit driveway to assess the need for a High Intensity Activated Crosswalk (HAWK), Rectangular Rapid Flash Beacons (RRFBs), or other geometric crossing enhancements. The midblock crosswalk was selected based on its proximity to both exit driveways of the Kehillah School and the project site. It is noted that a high visibility crosswalk with signage and activated flashing beacons exists at this location so it was assessed to determine whether further enhancements would be recommended. Traffic counts, including pedestrian crossing counts, were conducted at this location on Wednesday, January 29, 2025, during the a.m. (7:00-9:00 a.m.), school p.m. (2:00-4:00 p.m.) and p.m. (4:00-6:00 p.m.) peak periods.

The crossing location was analyzed using the HAWK warrants from the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) as well as the "*Guidelines for Pedestrian Crossing Treatments*" from *Improving Pedestrian Safety*

at Unsignalized Crossings, National Cooperative Highway Research Program (NCHRP) Report 562, Transportation Research Board, 2006. These methodologies are based on the volume of pedestrians crossing, the volume of vehicle traffic, vehicle travel speeds, and pedestrian crossing distance. It was determined that this crosswalk currently does not meet the warrant for a HAWK, nor for active or enhanced crossing treatments, and only meets the warrant for a striped crosswalk during all peak hours.

Since the number of added pedestrian users at the crosswalk attributable to the project cannot be determined, a sensitivity analysis using existing school p.m. peak traffic volumes was conducted to identify the number of additional pedestrians needed to meet the warrants for further crosswalk enhancements (the greatest number of crossings observed was 32 pedestrians per hour during the school p.m. peak hour). From this analysis it was concluded that with the addition of seven project pedestrians, the crossing would meet the NCHRP warrant for enhanced/high visibility or "active when present" treatments, such as pushbutton flashing beacons, in-street crossing signs and high visibility signs and markings during the school p.m. peak hour, all of which are present at the crossing location. The MUTCD warrant for a HAWK signal would require an increase of over 100 pedestrians per hour to be met. Since the existing crossing treatments are adequate for triple the existing pedestrian volume, no further enhancements are warranted assuming the additional pedestrian crossings due to the project would remain below this threshold. Therefore, no further enhancements are recommended. Copies of the MUTCD HAWK Signal Warrant Output and the NCHRP Pedestrian Crossing Treatment Worksheet are provided in Appendix D.

Finding – No additional enhancements are warranted at the existing midblock crossing just north of the project driveway to accommodate project-generated pedestrian trips.

Significance Finding – The proposed project would not create any new hazards or introduce incompatible uses to the roadway system, so its impact on safety would be less than significant.

Emergency Access

The final transportation bullet on the CEQA checklist requires an evaluation as to whether the project would result in inadequate emergency access or not.

Emergency Vehicle Access

The project's driveways and internal parking lot circulation network would be designed to meet current City standards and so can be expected to accommodate the access requirements for passenger vehicles. Vehicle access would be provided within the internal parking lot via a network of connected 24-foot-wide drive aisles. These aisles have sufficient width to accommodate traffic operations for circulating vehicles, as well as parking maneuvers to/from perpendicular parking spaces; this will be confirmed during the City plan check process.

The *California Fire Code, Section 503.1.1,* states that all portions of the facility and all portions of the exterior walls on the first story of the building shall be within 150 feet of a public street or qualified fire apparatus access road. The proposed building would satisfy this requirement since it would be located within 150 feet of Fabian Way. Emergency response vehicles would be able to service the site via the use of ladder trucks parked on the street. It is noted that the Palo Alto Fire Department has sole responsibility for determining the suitability of the project site for adequate fire apparatus vehicle access.

Off-Site Impacts

The proposed project would be expected to result in nominal increases in delay for traffic in the surrounding vicinity. However, emergency response vehicles can claim the right-of-way by using their lights and sirens and therefore the project would be expected to have a nominal effect on emergency response times.

Significance Finding – The proposed project would be designed to accommodate emergency response vehicles and would have a nominal impact on emergency response times, resulting in a less-than-significant impact on emergency access.

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The Levels of Service for the intersections with side street stop controls, or those which are unsignalized and have one or two approaches stop controlled, were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the HCM. This methodology determines a Level of Service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

The study intersections that are currently controlled by a traffic signal, or may be in the future, were evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. VTA has adopted modified default values for HCM analysis as well as modified LOS thresholds. These modified default values were applied to all signalized study intersections. The City of Palo Alto employs the CMP default values for the analysis parameters. The VTA approved LOS thresholds are indicated in Table 6.

Table 6 – Santa Clara VTA Level of Service Criteria

LOS	Control Delay (seconds per vehicle)	Description
A	delay ≤ 10.0	Free Flow; minimal to no delay.
B+	10.0 < delay ≤ 12.0	Stable flow, but speeds are beginning to be restricted by traffic conditions; slight delays.
B	12.0 < delay ≤ 18.0	
B-	18.0 < delay ≤ 20.0	
C+	20.0 < delay ≤ 23.0	Stable flow, but most drivers cannot select their own speeds and feel somewhat restricted; acceptable delays.
C	23.0 < delay ≤ 32.0	
C-	32.0 < delay ≤ 35.0	
D+	35.0 < delay ≤ 39.0	Approaching unstable flow, and drivers have difficulty maneuvering; tolerable delays.
D	39.0 < delay ≤ 51.0	
D-	51.0 < delay ≤ 55.0	
E+	55.0 < delay ≤ 60.0	Unstable flow with stop and go; delays.
E	60.0 < delay ≤ 75.0	
E-	75.0 < delay ≤ 80.0	
F	delay > 80.0	Total breakdown; congested conditions with excessive delays.

Reference: *Traffic Level of Service Analysis Guidelines*, Santa Clara Valley Transportation Authority, 2003

Traffic Operation Standards

Vehicular traffic service levels at the study intersections were evaluated for consistency with the *2021 Congestion Management Program* (CMP) and the City's General Plan by determining the change in intersection Level of Service upon the addition of project-related new trips.

Signalized Intersections

County Facilities

The City of Palo Alto has established criteria to evaluate traffic impacts based on standards set by the CMP in the *Transportation Impact Analysis Guidelines* (TIA), Santa Clara Valley Transportation Authority, 2014. For signalized intersections in the CMP network, an adverse condition exists if:

- The addition of project-generated traffic causes operation of an intersection to deteriorate from an acceptable Level of Service (LOS E or better) to LOS F, or
- For intersections operating at LOS F under background conditions, the project condition increases the average control delay for critical movements by four seconds or more and project traffic increases the critical volume-capacity (v/c) ratio by 0.01 or more.

City Facilities

For local signalized intersections that are not on the CMP network, the change in operation is considered to be inconsistent with the City of Palo Alto's Level of Service (LOS) standard and therefore unacceptable if:

- The addition of project-generated traffic causes operation of an intersection to deteriorate from an acceptable level of service (LOS D or better) to LOS E or LOS F, or
- The addition of project-generated traffic causes intersections operating at LOS E or F without project-generated traffic to have an increase in average control delay for critical movements by four seconds or more, or an increase in critical volume-capacity (v/c) ratio by 0.01 or more.

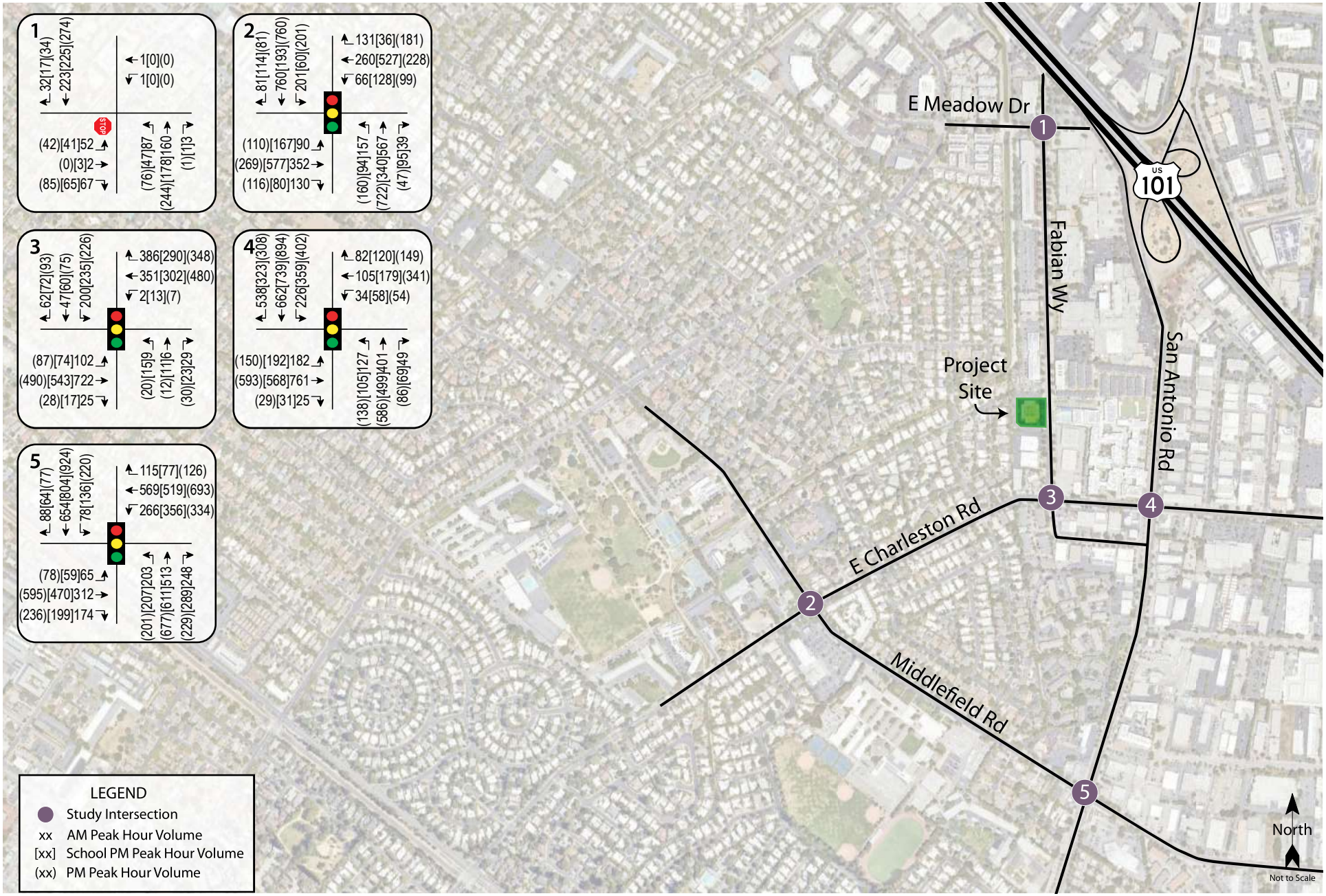
Unsignalized Intersections

The City of Palo Alto does not have a formally adopted minimum threshold for unsignalized intersections. Thus, for the purposes of this report, the following criteria were applied for defining conditions considered to be inconsistent with the City's Level of Service standard at unsignalized intersections.

- LOS D was used as the minimum acceptable service level for unsignalized intersections. A project-generated increase in traffic is considered to have an adverse effect if the intersection operations degrade to LOS E or F from acceptable operations and the intersection satisfies a peak hour signal warrant from the *California Manual on Uniform Traffic Control Devices* (CA MUTCD).
- No criterion is suggested if an unsignalized intersection operates at LOS E or F prior to the addition of project trips.

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the a.m., school p.m. and p.m. peak periods. This condition does not include project-generated traffic volumes. Under existing volumes all study intersections are operating acceptably during each peak hour evaluated. The existing traffic volumes are shown in Figure 3. A summary of the intersection Level of Service calculations is contained in Table 7, and copies of the calculations are provided in Appendix E.



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Local Transportation Analysis for The Girls Middle School Project at 3950 Fabian Way

Figure 3 – Existing Traffic Volumes

Table 7 – Existing Peak Hour Intersection Levels of Service						
Study Intersection ***Approach***	**AM Peak**		**School PM**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Fabian Wy/E. Meadow Dr	3.5	A	2.7	A	2.9	A
Eastbound (Meadow) Approach	*14.7*	*B*	*11.2*	*B*	*12.2*	*B*
2. Middlefield Rd/E. Charleston Rd	42.2	D	33.9	C-	35.7	D+
3. Fabian Wy/E. Charleston Rd	17.4	B	20.3	C+	20.0	B-
4. San Antonio Rd/E. Charleston Rd	39.7	D	34.3	C-	36.5	D+
5. San Antonio Rd/Middlefield Rd	43.7	D	37.1	D+	39.8	D

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

Near-Term Conditions

The Near-Term Conditions scenario includes existing traffic volumes plus the forecasted traffic demand due to local and regional growth in the near-term, defined to occur by the year 2030 (or existing plus five years).

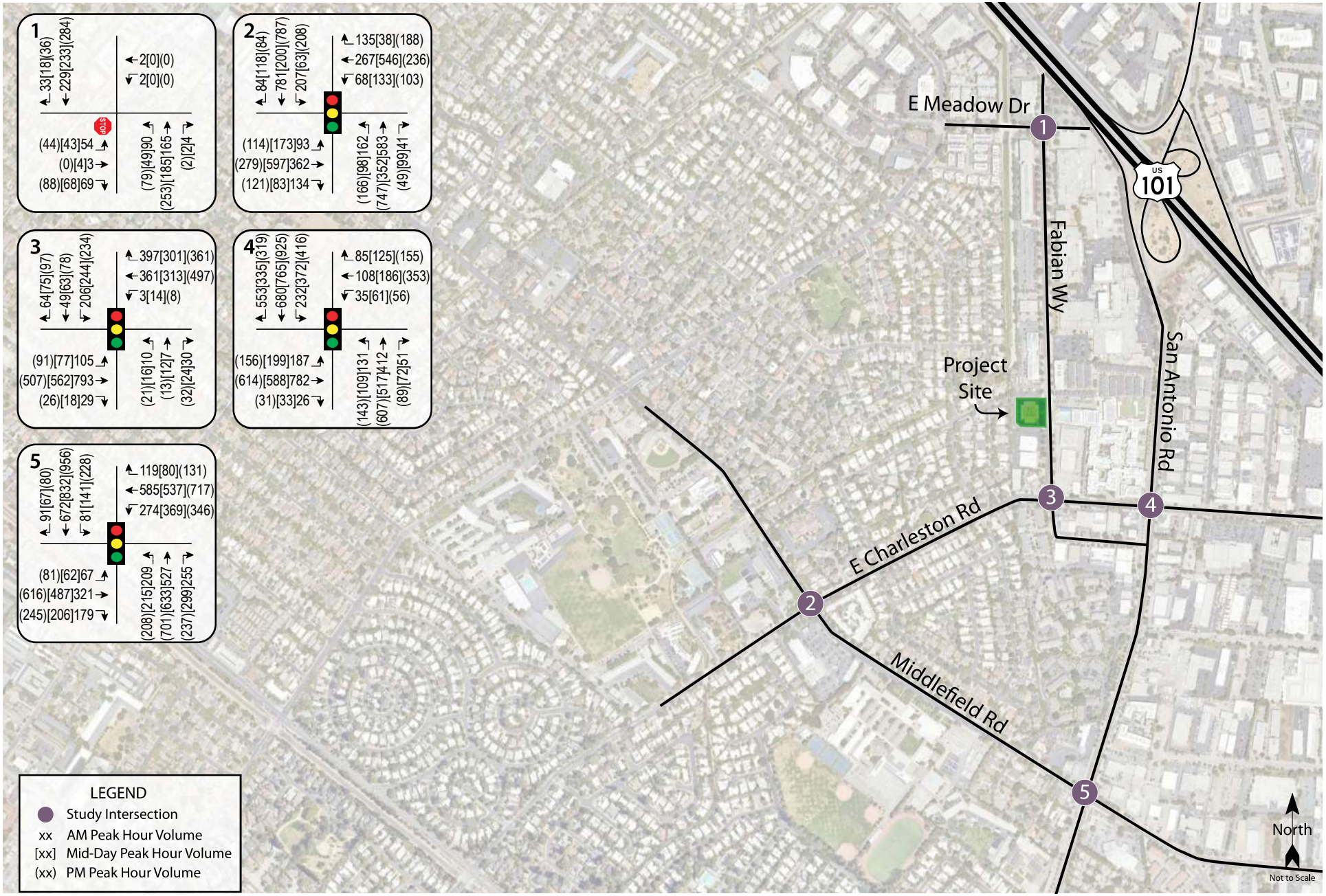
A review of data from the City of Palo Alto's *Comprehensive Plan 2030* Update, 2017, indicates that an annual growth rate of 0.53 percent for the a.m. and 0.69 percent for the p.m. peak hours is appropriate to estimate the future year demand. The *Comprehensive Plan 2030* Update did not include modeling for the school p.m. peak period, therefore the p.m. peak hour growth rate was used for both the school p.m. and p.m. peak hours. These growth rates were applied uniformly to all existing traffic volumes for the weekday a.m., school p.m. and p.m. peak hours to forecast the Near-Term Condition traffic volumes. In general, changes in future traffic volumes are reflected in these growth rates as they are derived from the City's travel demand model that incorporates land use and future development assumptions across the City and in the surrounding region.

It was assumed that the transportation network would be the same under Near-Term Conditions as under Existing Conditions; in other words, it was assumed that no capacity enhancements or operational improvements would be made at any of the study intersections within this five-year horizon.

Under these conditions, all study intersections are expected to continue operating at acceptable service levels. These results are summarized in Table 8, and Near-Term volumes are shown in Figure 4.

Table 8 – Near-Term Peak Hour Intersection Levels of Service						
Study Intersection ***Approach***	**AM Peak**		**School PM**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Fabian Wy/E. Meadow Dr	3.7	A	2.8	A	2.9	A
Eastbound (Meadow) Approach	*15.0*	*C*	*11.4*	*B*	*12.5*	*B*
2. Middlefield Rd/E. Charleston Rd	43.2	D	34.5	C-	36.1	D+
3. Fabian Wy/E. Charleston Rd	17.7	B	20.5	C+	20.1	C+
4. San Antonio Rd/E. Charleston Rd	39.9	D	35.1	D+	37.1	D+
3. Fabian Wy/E. Charleston Rd	44.6	D	39.0	D+	41.0	D

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*



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Figure 4 – Near-Term Traffic Volumes

Project Conditions

Existing plus Project Conditions

Project and Existing plus Project traffic volumes are shown in Figures 5 and 6, respectively. Upon the addition of project-related traffic to the existing volumes, each of the study intersections are expected to continue operating at acceptable Levels of Service. These results are summarized in Table 9.

Table 9 – Existing and Existing plus Project Peak Hour Intersection Levels of Service

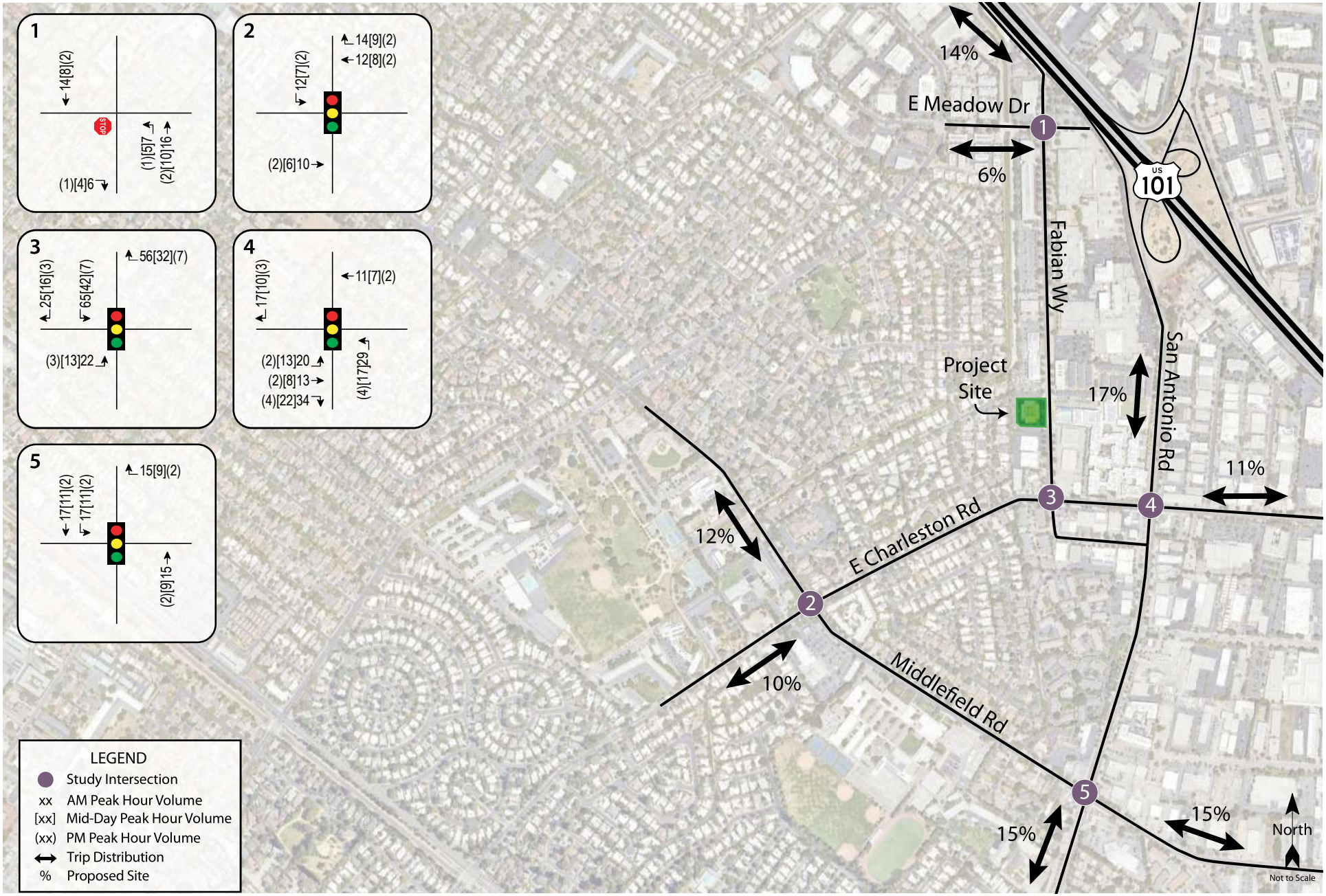
Study Intersection *Approach*	Existing Conditions						Existing plus Project					
	AM Peak		School PM		PM Peak		AM Peak		School PM		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Fabian Wy/E. Meadow Dr	3.5	A	2.7	A	2.9	A	3.6	A	2.8	A	2.9	A
EB (Meadow) Approach	*14.7*	*B*	*11.2*	*B*	*12.2*	*B*	*15.5*	*C*	*11.3*	*B*	*12.3*	*B*
2. Middlefield Rd/E. Charleston Rd	42.2	D	33.9	C-	35.7	D+	43.2	D	34.3	C-	35.7	D+
3. Fabian Wy/E. Charleston Rd	17.4	B	20.3	C+	20.0	B-	18.2	B-	20.7	C+	20.1	C+
4. San Antonio Rd/E. Charleston Rd	39.7	D	34.3	C-	36.5	D+	40.5	D	35.0	C-	36.6	D+
5. San Antonio Rd/ Middlefield Rd	43.7	D	37.1	D+	39.8	D	44.5	D	38.3	D+	39.9	D

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

Finding – The study intersections are expected to continue operating at acceptable service levels with the addition of project-generated traffic to existing volumes.

Near-Term plus Project Conditions

Near-Term plus Project traffic volumes are shown in Figure 7. With project-related traffic added to near-term volumes, the study intersections are all expected to continue operating at acceptable service levels. These results are summarized in Table 10.

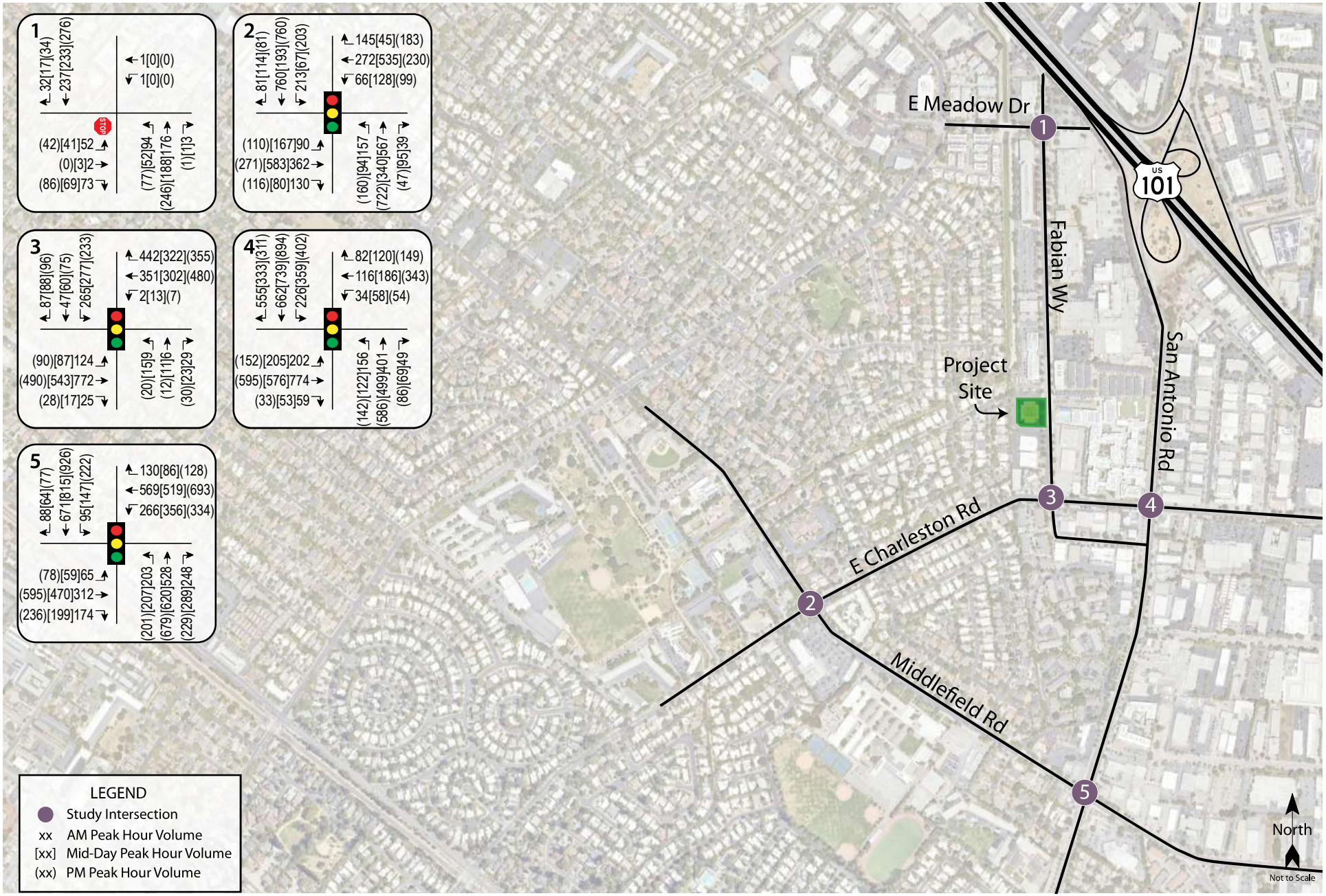


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Figure 5 – Project Traffic Volumes and Trip Distribution

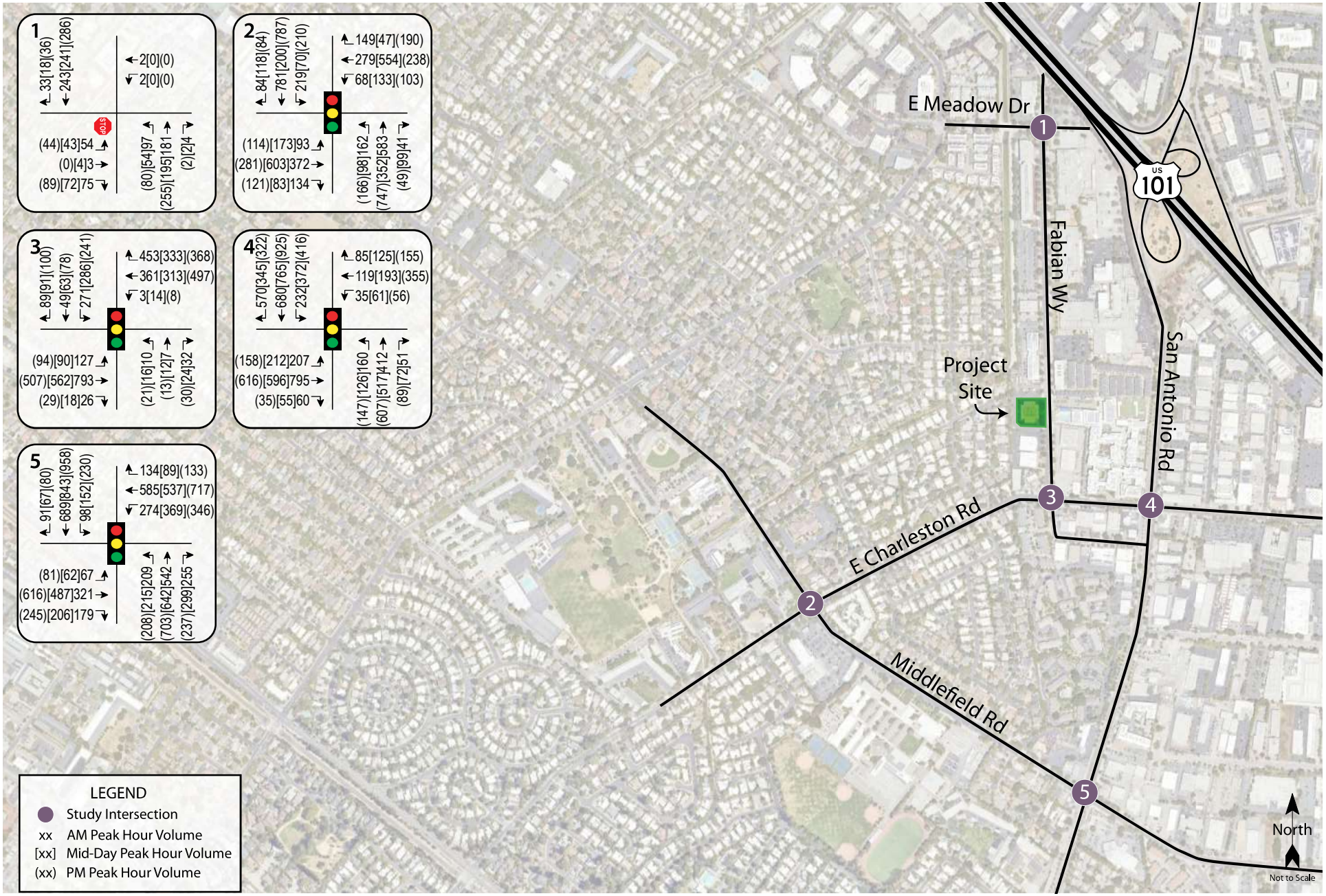
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Figure 6 – Existing plus Project Traffic Volumes



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Local Transportation Analysis for The Girls Middle School Project at 3950 Fabian Way

Figure 7 – Near-Term plus Project Traffic Volumes

Table 10 – Near-Term and Near-Term plus Project Peak Hour Intersection Levels of Service												
Study Intersection ***Approach***	**Near-Term Conditions**						**Near-Term plus Project**					
	AM Peak		**School PM**		**PM Peak**		**AM Peak**		**School PM**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Fabian Wy/E. Meadow Dr	3.7	A	2.8	A	2.9	A	3.7	A	2.9	A	2.9	A
EB (Meadow) Approach	*15.0*	*C*	*11.4*	*B*	*12.5*	*B*	*15.8*	*C*	*11.6*	*B*	*12.6*	*B*
2. Middlefield Rd/E. Charleston Rd	43.2	D	34.5	C-	36.1	D+	43.5	D	*34.6*	*C-*	36.1	D+
3. Fabian Wy/E. Charleston Rd	17.7	B	20.5	C+	20.1	C+	18.4	B-	20.8	C+	20.2	C+
4. San Antonio Rd/E. Charleston Rd	39.9	D	35.1	D+	37.1	D+	40.7	D	35.5	D+	37.2	D+
5. San Antonio Rd/Middlefield Rd	44.6	D	39.0	D+	41.0	D	44.8	D	39.2	D	41.1	D

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

Finding – The study intersections would continue operating acceptably upon the addition of project-generated traffic to near-term volumes.

Traffic Signal Warrants

The unsignalized study intersection of Fabian Way/East Meadow Drive was determined to operate at an acceptable service level; therefore, it was not analyzed to assess whether a traffic signal would be warranted at this location.

Freeway Mainline Analysis

According to TIA Guidelines, a freeway mainline segment analysis shall be included if a project meets any one of the following conditions.

- The proposed development project is expected to add traffic equal to or greater than one percent of the freeway segment's capacity;
- The proposed development project is adjacent to one of the freeway segment's access or egress points; or
- Based on engineering judgment, Lead Agency staff determines that the freeway segment should be included in the analysis.

The nearest freeway mainline facility to the project site is US 101. This facility has three general purpose lanes and two Express Lanes in each direction which represents a total capacity of 10,200 vehicles per hour (vph) since each general-purpose lane has a capacity of 2,300 vehicles per hour per lane (vphpl) and each express lane has a capacity of 1,650 vehicles per hour per lane (vphpl). According to the trip distribution estimates, a maximum of 17 percent of all project trips are expected to use US 101. This represents a maximum of 36 peak hour trips to US 101 during any of the weekday peak hours. Since 36 additional peak hour trips would be less than one percent of the freeway mainline segment's capacity of 10,200 vph, (or 102 peak hour trips) the analysis of freeway mainline segments is not required per TIA Guidelines.

Finding – The project is presumed to have an acceptable effect on the operation of US 101 since less than one percent of the freeway's operating capacity (or 102 new peak hour trips) would be added, which is consistent with TIA Guidelines.

Queuing Analysis

According to TIA Guidelines, a queuing analysis shall be included if the following conditions apply.

- At CMP intersections where Auto Level of Service (LOS) analysis indicates that there will be a significant impact according to the CMP LOS Standard;
- At on-ramps with existing or planning operational ramp meters;
- At off-ramps controlled by signals at junctions with local streets;
- At any other intersection or freeway on-ramp, based on engineering judgement, proximity of the project to a freeway interchange, existing queuing situations (such as spillback onto local streets from on-ramps), or localized conditions along the project's frontage.

Each of the CMP intersections within the study area would operate with acceptable Levels of Service for each condition evaluated. The nearest freeway interchange to the project site is the US 101 interchange at San Antonio Road. The on-ramps at this interchange are not equipped with a ramp metering system. Vehicle queuing has not been documented as being a concern at the northbound off-ramp where the terminus with San Antonio Road is signalized. Therefore, a queuing analysis is not necessary for this study since none of the listed conditions listed in the TIA Guidelines apply.

Finding – The project is presumed to have an acceptable effect on the vehicle queuing since none of the conditions listed in the TIA Guidelines apply.

Parking

The project was analyzed to determine whether the proposed parking supply would be sufficient for the anticipated parking demand. The project site as proposed would provide a total of 52 parking spaces, including four accessible parking spaces and one van accessible parking space.

Jurisdiction parking supply requirements are based on the Municipal Code Section 18.52.040 which requires that two spaces per teaching station be provided on-site. According to the site plan, 19 teaching stations are proposed, translating to a requirement for 38 vehicle parking spaces. Per Section 18.54.030 of the Code, for a total supply of 52 parking spaces, three parking spaces must be accessible and one in every eight accessible, but not less than one, must be van accessible.

Finding – The proposed parking supply for the school would satisfy the City's Code requirements.

Conclusions and Recommendations

Conclusions

- Applying site-specific trip generation rates from the existing school at 3400 West Bayshore Road toward the maximum projected enrollment of 240 students would result in 835 trips daily, including 257 trips during the a.m. peak hour, 154 trips during the school p.m. peak hour and 70 trips during the p.m. peak hour at the 3950 Fabian Way site. This represents an increase of 483 trips per day, 257 trips during the morning peak hour, 154 trips during the school p.m. peak hour and 70 trips during the p.m. peak hour compared to the existing entitled land use.

- The preparation and implementation of a Transportation Demand Management program is required by City Code since the project would generate more than 50 peak hour trips.

- The proposed project would not conflict with any plans or policies for pedestrian, bicycle or transit facilities, therefore the impact on these facilities would be less than significant.

- Relocating the school would shift where students within the same Palo Alto community would travel and would generate fewer new trips than a local retail project that would be screened out of further VMT analysis. Therefore, the project would be expected to have less-than-significant VMT impacts.

- Sight distances are adequate for vehicles turning at both project driveways, though vegetation has the potential to obstruct sight lines.

- Under Near-Term plus Project conditions, a left-turn lane is warranted on Fabian Way at the project entrance driveway during the a.m. and school p.m. peak hours based on volumes. However, as there are numerous other driveways along this segment that do not have turn pockets, use of the inside through lane for left turns into driveways is common, so a left-turn lane is not needed to retain acceptable operation.

- Due to the proximity of the Kehillah School exit driveway, the project exit driveway and the midblock crossing on Fabian Way, there is potential for conflicts between vehicles and pedestrians during the a.m. and school p.m. peak hours.

- The available storage capacity of the drop-off and pick-up lanes is expected to be adequate based on the estimated arrival rate and service rates, if the lane discharges at least one car every 14 and 30 seconds for the drop-off and pick-up periods respectively.

- The calculated queue length for the northbound left-turn movement at the entrance driveway is a maximum of 75 feet, which occurs during the a.m. peak hour.

- Additional crossing enhancements are not warranted at the existing midblock crossing just north of the project driveway according to the NCHRP methodology.

- Emergency vehicles are able to access the site from Fabian Way and can claim right-of-way using lights and sirens. Additionally, the proposed project would be expected to result in nominal increases in delay for traffic at the study intersections. Therefore, the project would result in a less-than-significant impact regarding adequacy of emergency access and response.

- Under Existing and Near-Term Conditions, all study intersections are or are expected to operate acceptably during each peak hour evaluated.

- The study intersections are expected to continue operating at acceptable service levels with the addition of project-generated traffic to both the existing and near-term volumes.
- The project is expected to have an acceptable effect on the operation of US 101 as less than one percent of the freeway's operating capacity (or 102 new peak hour trips) would be added, which is consistent with Santa Clara County Transportation Authority (VTA) TIA guidelines.
- The project is presumed to have an acceptable effect on the vehicle queuing at facilities within the study area since none of the conditions listed in the VTA TIA Guidelines apply.
- The parking supply is adequate to meet the City's requirements for this type of land use.

Recommendations

- It is recommended that vegetation along the project frontage on Fabian Way be designed and maintained to ensure that all landscaping lies below three feet in height or above seven feet to maintain adequate site lines.
- Staff should be deployed during drop-off and pick-up to ensure that the process is orderly and efficient to avoid the potential for excessive queuing. Drop off lane operations should be monitored to confirm that the queue does not extend beyond the site boundaries.
- To address potential conflicts between turning movements out of the project and nearby school driveways as well as crossing pedestrians, it is recommended that a crossing guard be present to direct vehicles and pedestrians at the midblock crossing on Fabian Way during the morning and afternoon peak hours. The Girls Middle School should stagger their class schedule so that start and dismissal times are staggered with the Kehillah School by at least 15 to 20 minutes.

Study Participants and References

Study Participants

Principal in Charge	Mark E. Spencer, PE (Traffic)
Senior Traffic Engineer	Kenny Jeong, PE (Traffic)
Assistant Engineer	Alyssa Labrador, EIT
Graphics	Jessica Bender
Editing/Formatting	Rebecca Mansour, Jessica Bender
Quality Control	Dalene J. Whitlock, PE (Civil, Traffic), PTOE

References

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PAL035



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Appendix A

Traffic Count Data

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Prepared by National Data & Surveying Services

Fabian Way & E Meadow Dr

Peak Hour Turning Movement Count

ID: 25-080028-001
City: Palo Alto

Day: Wednesday
Date: 1/29/2025

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	03:00 PM - 04:00 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	2:00 PM - 04:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Fabian Way)

AM	32	223	0	0	212	AM
NOON	17	225	0	0	219	NOON
PM	34	274	0	0	286	PM

EASTBOUND (E Meadow Dr)

AM	NOON	PM	
120	64	110	⇦
0	0	0	↰ 0
52	41	42	↱ 0
2	3	0	→ 0
67	65	85	↱ 0
AM	NOON	PM	

WESTBOUND (E Meadow Dr)

PM	NOON	AM	
0	0	0	↰ 0
0	0	1	← 0
0	0	1	↱ 0
0	0	0	↱ 0
1	4	5	⇨
PM	NOON	AM	

NORTHBOUND (Fabian Way)

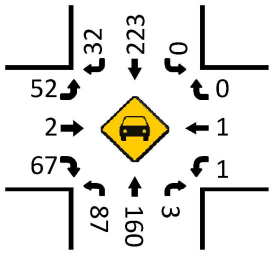
PM	359	0	76	244	1	PM
NOON	290	0	47	178	1	NOON
AM	291	0	87	160	3	AM

CONTROL

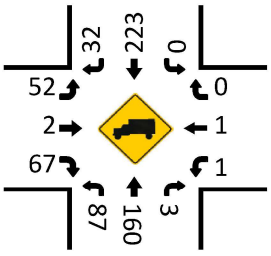
Signalized Pedestrian

		AM	NOON	PM
TEV	628	577	756	
PHF	0.77	0.92	0.96	

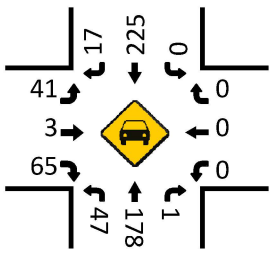
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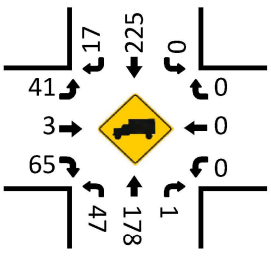
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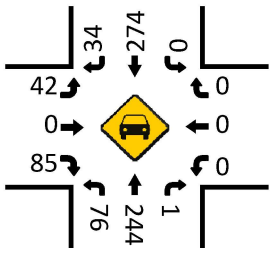
Total (NOON)



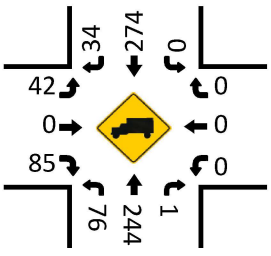
Total (NOON)



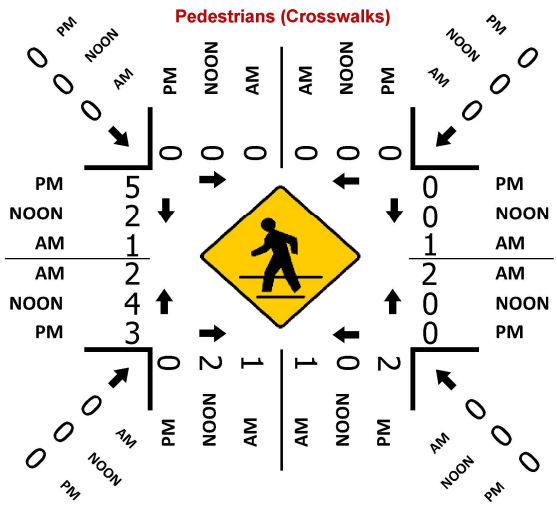
Total (PM)



Total (PM)



Pedestrians (Crosswalks)



Prepared by National Data & Surveying Services

Middlefield Rd & E Charleston Rd

Peak Hour Turning Movement Count

ID: 25-080028-002
City: Palo Alto

Day: Wednesday
Date: 1/29/2025

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	03:00 PM - 04:00 PM
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	2:00 PM - 04:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Middlefield Rd)

AM	127	553	213	0	788	AM
NOON	114	193	60	0	543	NOON
PM	81	760	201	0	1013	PM

EASTBOUND (E Charleston Rd)

AM	NOON	PM		
544	735	469		
0	0	0	0	
90	167	110	0	
352	577	269	0	
130	80	116	0	
AM	NOON	PM		

WESTBOUND (E Charleston Rd)

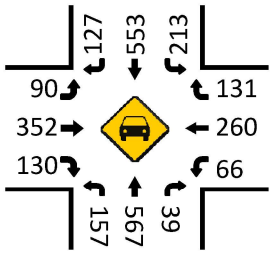
PM	NOON	AM		
181	36	131	0	
228	527	260	0	
99	128	66	0	
0	0	0	0	
PM	NOON	AM		
517	732	604		

NORTHBOUND (Middlefield Rd)

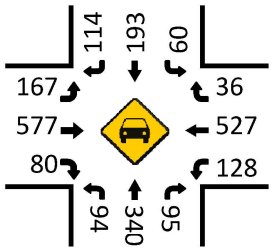
PM	975	0	160	722	47	PM
NOON	401	0	94	340	95	NOON
AM	749	0	157	567	39	AM

CONTROL			
Signalized			
TEV	2685 AM	2411 NOON	2974 PM
PHF	0.92	0.93	0.98

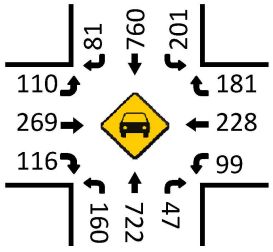
Total (AM)



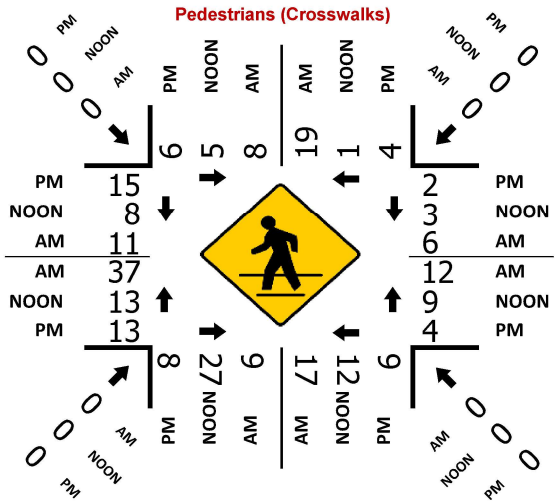
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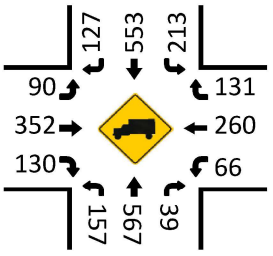
Total (PM)



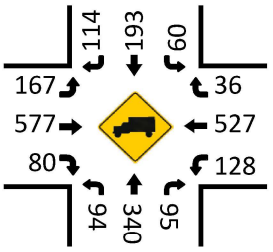
Pedestrians (Crosswalks)



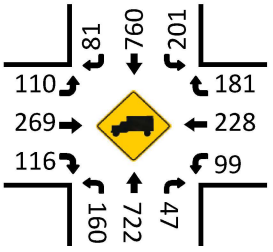
Total (AM)



Total (NOON)



Total (PM)



Prepared by National Data & Surveying Services

Fabian Way & E Charleston Rd

Peak Hour Turning Movement Count

ID: 25-080028-003
City: Palo Alto

Day: Wednesday
Date: 1/29/2025

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	03:00 PM - 04:00 PM
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	2:00 PM - 04:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND — Fabian Way

	Left	Thru	Right	U-Turn	Total	
AM	62	47	200	0	494	AM
NOON	72	60	235	0	375	NOON
PM	93	75	226	0	447	PM

EASTBOUND — E Charleston Rd

	Left	Thru	Right	U-Turn	
AM	0	102	772	25	AM
NOON	0	74	543	17	NOON
PM	0	87	490	28	PM
	0	0	0	0	

	AM	NOON	PM
	422	389	593

WESTBOUND — E Charleston Rd

	Left	Thru	Right	U-Turn	
AM	386	351	2	0	AM
NOON	290	302	12	0	NOON
PM	348	480	6	0	PM
	1	1	0	0	

	AM	NOON	PM
	747	802	1001

NORTHBOUND — Fabian Way

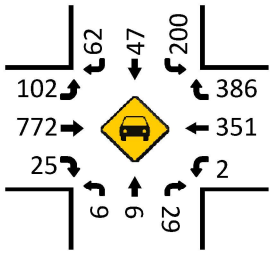
	Left	Thru	Right	U-Turn	Total	
AM	74	0	9	6	29	AM
NOON	89	0	15	11	23	NOON
PM	109	0	20	12	30	PM

CONTROL

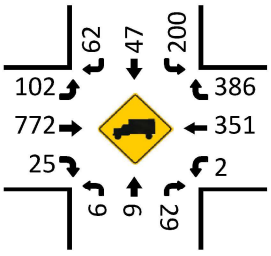
Signalized

	AM	NOON	PM
TEV	1991	1655	1896
PHF	0.94	0.94	0.97

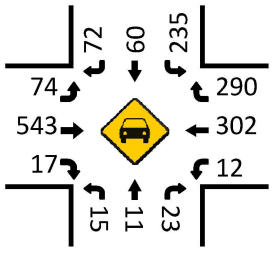
Total (AM)



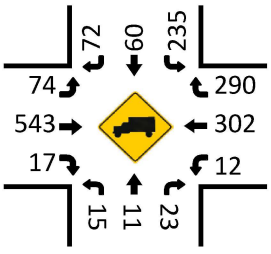
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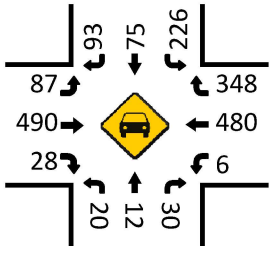
Total (NOON)



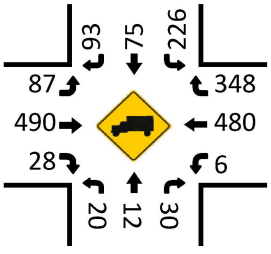
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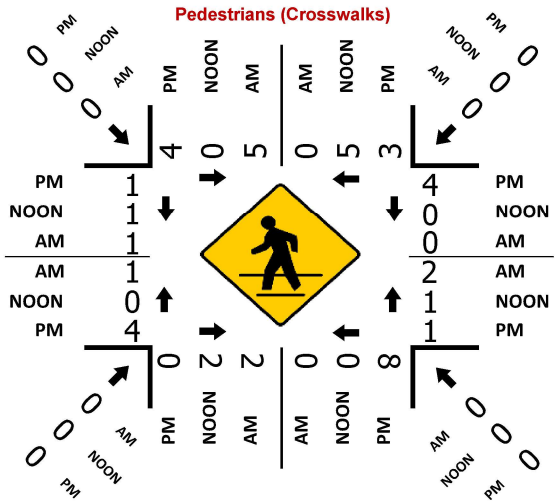
Total (PM)



Total (PM)



Pedestrians (Crosswalks)



Prepared by National Data & Surveying Services

San Antonio Rd & E Charleston Rd

Peak Hour Turning Movement Count

ID: 25-080028-004
City: Palo Alto

Day: Wednesday
Date: 1/29/2025

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	03:00 PM - 04:00 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	2:00 PM - 04:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (San Antonio Rd)

AM	538	662	197	29	694	AM
NOON	323	739	333	26	837	NOON
PM	308	894	386	16	901	PM

EASTBOUND (E Charleston Rd)

AM	NOON	PM		
759	605	779	⇦	
0	0	0	↶	0
182	192	150	↱	0
761	568	593	→	0
25	31	29	↴	0
AM	NOON	PM		

WESTBOUND (E Charleston Rd)

PM	NOON	AM		
149	120	82	↰	0
341	179	105	←	0
54	58	34	↲	0
0	0	0	↷	0
1065	970	1007	⇨	
PM	NOON	AM		

NORTHBOUND (San Antonio Rd)

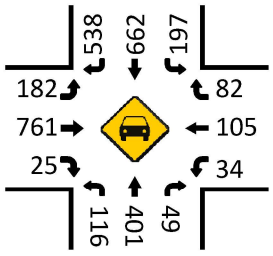
PM	985	8	130	586	86	PM
NOON	830	2	103	499	69	NOON
AM	732	11	116	401	49	AM

CONTROL

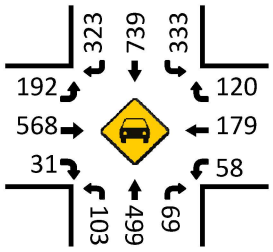
Signalized

	3192	3242	3730
TEV	AM	NOON	PM
PHF	0.98	0.95	0.96

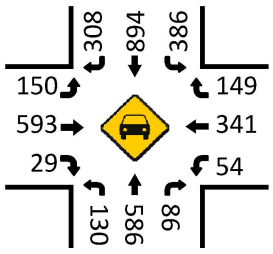
Total (AM)



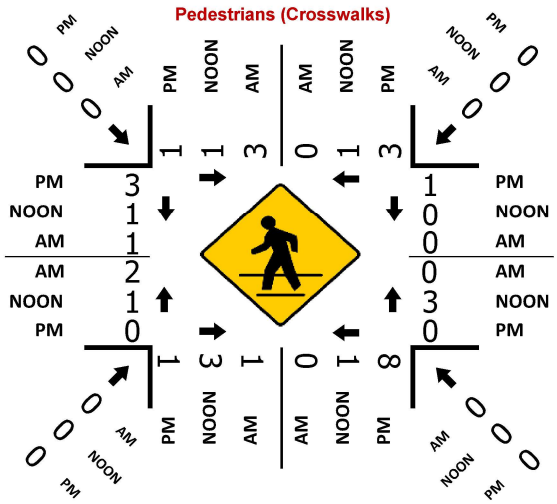
Total (NOON)



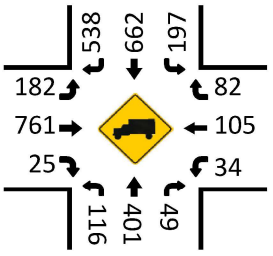
Total (PM)



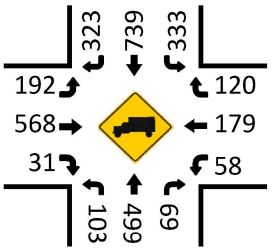
Pedestrians (Crosswalks)



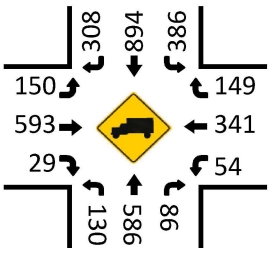
Total (AM)



Total (NOON)



Total (PM)



Prepared by National Data & Surveying Services

San Antonio Rd & W Middlefield Rd/Middlefield Rd

Peak Hour Turning Movement Count

ID: 25-080028-005
City: Palo Alto

Day: Wednesday
Date: 1/29/2025

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	03:00 PM - 04:00 PM
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	2:00 PM - 04:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND — San Antonio Rd

AM	88	654	66	12	705	AM
NOON	64	804	129	7	754	NOON
PM	77	924	211	9	889	PM

EASTBOUND — W Middlefield Rd/Middlefield Rd

AM	NOON	PM	
815	744	937	⇦
0	0	1	↶ 0
65	59	77	↱ 0
312	470	595	→ 0
174	199	236	↴ 0
AM	NOON	PM	

WESTBOUND — W Middlefield Rd/Middlefield Rd

PM	NOON	AM	
126	77	115	↰ 0
693	519	569	← 0
334	356	266	↲ 0
0	0	0	↷ 0
1035	888	626	⇨
PM	NOON	AM	

NORTHBOUND — San Antonio Rd

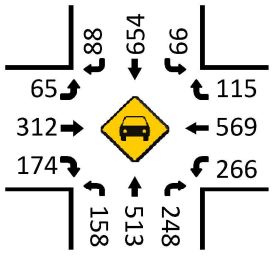
PM	1529	35	166	677	229	PM
NOON	1405	46	161	611	289	NOON
AM	1139	45	158	513	248	AM

CONTROL

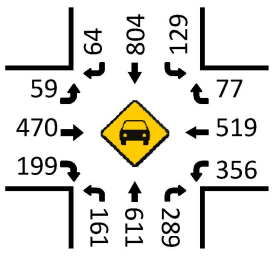
Signalized

	AM	NOON	PM
TEV	3285	3791	4390
PHF	0.92	0.95	0.98

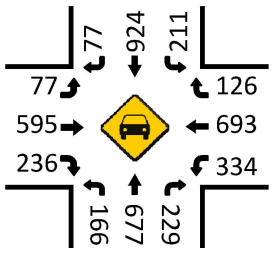
Total (AM)



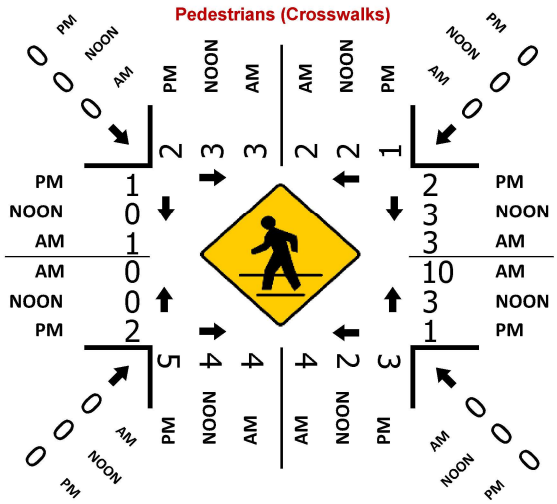
Total (NOON)



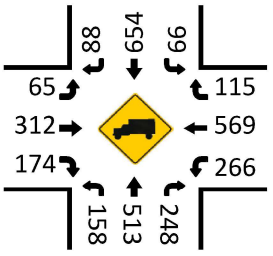
Total (PM)



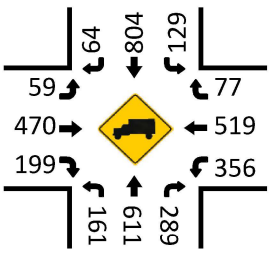
Pedestrians (Crosswalks)



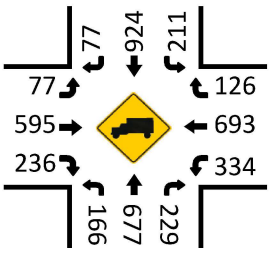
Total (AM)



Total (NOON)



Total (PM)



Prepared by National Data & Surveying Services

3400 West Bayshore Rd/The Girls' Middle School Exit Dwy & W Bayshore Rd

Peak Hour Turning Movement Count

ID: 25-080028-006
City: Palo Alto

Day: Wednesday
Date: 1/29/2025

PEAK HOURS
08:00 AM - 09:00 AM
02:45 PM - 03:45 PM
04:45 PM - 05:45 PM

COUNT PERIODS
7:00 AM - 09:00 AM
2:00 PM - 04:00 PM
4:00 PM - 06:00 PM

SOUTHBOUND — 3400 West Bayshore Rd/The Girls' Middle School Exit Dwy

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

EASTBOUND — W Bayshore Rd

	AM	NOON	PM
	196	234	307
	0	1	0
	0	0	0
	284	233	272
	0	0	0

WESTBOUND — W Bayshore Rd

	PM	NOON	AM
	0	0	0
	291	201	156
	0	0	0
	0	0	0
	294	266	335

NORTHBOUND — 3400 West Bayshore Rd/The Girls' Middle School Exit Dwy

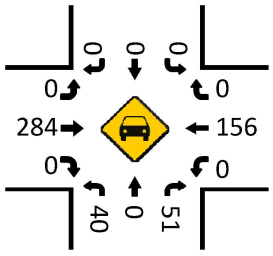
PM	0	0	16	0	22	PM
NOON	0	0	32	0	33	NOON
AM	0	0	40	0	51	AM

CONTROL

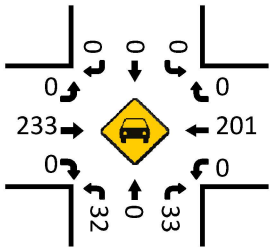
1-Way Stop(NB)

TEV	531 AM	500 NOON	601 PM
PHF	0.72	0.93	0.91

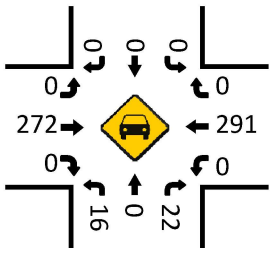
Total (AM)



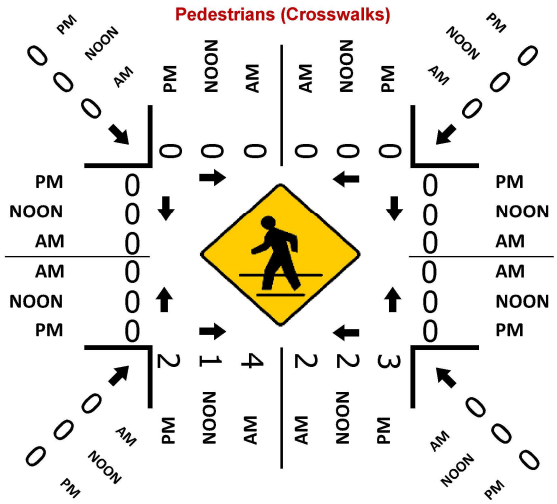
Total (NOON)



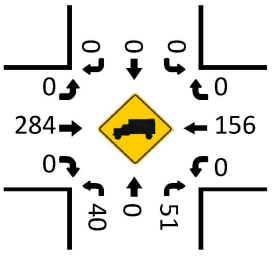
Total (PM)



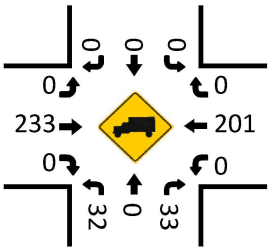
Pedestrians (Crosswalks)



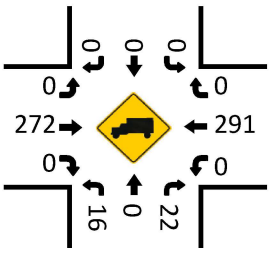
Total (AM)



Total (NOON)



Total (PM)



Prepared by National Data & Surveying Services

3400 West Bayshore Rd/The Girls' Middle School Entrance Dwy & W Bayshore Rd

Peak Hour Turning Movement Count

ID: 25-080028-007
City: Palo Alto

Day: Wednesday
Date: 1/29/2025

PEAK HOURS
08:00 AM - 09:00 AM
02:45 PM - 03:45 PM
04:45 PM - 05:45 PM

COUNT PERIODS
7:00 AM - 09:00 AM
2:00 PM - 04:00 PM
4:00 PM - 06:00 PM

SOUTHBOUND — 3400 West Bayshore Rd/The Girls' Middle School Entrance Dwy

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

EASTBOUND — W Bayshore Rd

AM	NOON	PM	
157	200	290	⇦
0	0	0	↶ 0
0	0	0	↱ 0
274	239	286	→ 0
60	35	9	↷ 0
AM	NOON	PM	

WESTBOUND — W Bayshore Rd

PM	NOON	AM	
0	0	0	↶ 0
290	200	157	← 0
6	17	45	↱ 0
0	0	0	↷ 0
286	239	274	⇨
PM	NOON	AM	

CONTROL

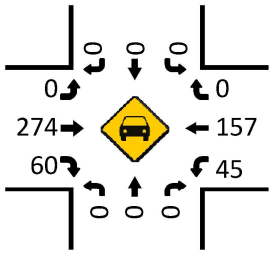
No Control

	AM	NOON	PM
TEV	536	491	591
PHF	0.69	0.96	0.90

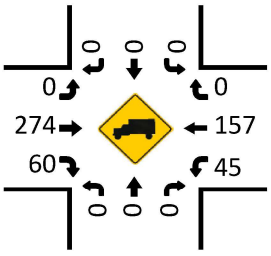
NORTHBOUND — 3400 West Bayshore Rd/The Girls' Middle School Entrance Dwy

PM	15	0	0	0	0	PM
NOON	52	0	0	0	0	NOON
AM	105	0	0	0	0	AM

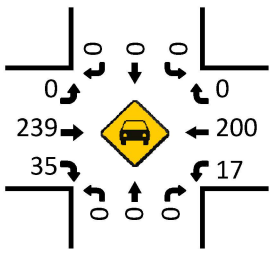
Total (AM)



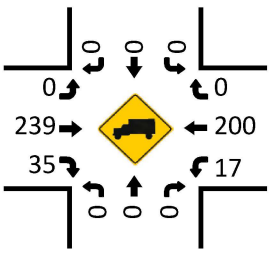
Total (AM)



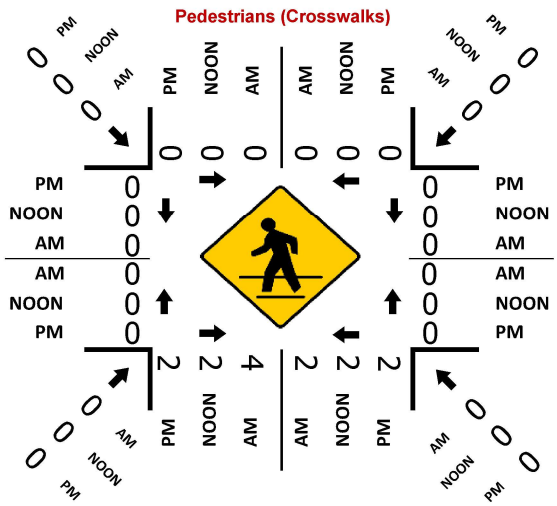
Total (NOON)



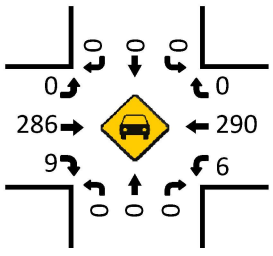
Total (NOON)



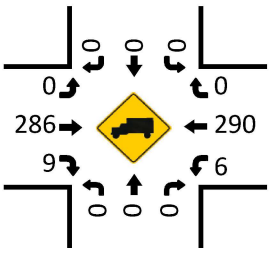
Pedestrians (Crosswalks)



Total (PM)



Total (PM)



Prepared by National Data & Surveying Services

Fabian Way & 3900 Fabian Wy/The Kehillah School

Peak Hour Turning Movement Count

ID: 25-080028-008
City: Palo Alto

Day: Wednesday
Date: 1/29/2025

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	03:00 PM - 04:00 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	2:00 PM - 04:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Fabian Way)

AM	0	287	1	0	355	AM
NOON	0	329	0	1	247	NOON
PM	0	363	0	0	348	PM

EASTBOUND (3900 Fabian Wy/The Kehillah School)

AM	NOON	PM	
0	0	0	
0	0	0	0
6	13	5	0
0	0	0	0
41	57	16	0
AM	NOON	PM	

WESTBOUND (3900 Fabian Wy/The Kehillah School)

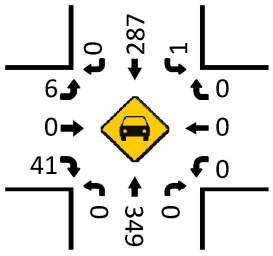
PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	
PM	NOON	AM	

NORTHBOUND (Fabian Way)

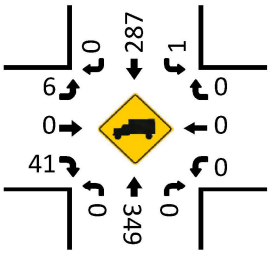
PM	380	1	0	343	0	PM
NOON	386	0	0	233	0	NOON
AM	330	2	0	349	0	AM

CONTROL			
1-Way Stop(EB)			
TEV	686 AM	633 NOON	728 PM
PHF	0.91	0.85	0.92

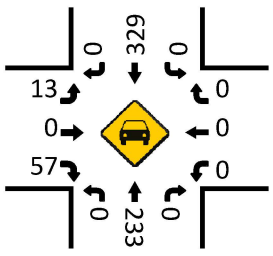
Total (AM)



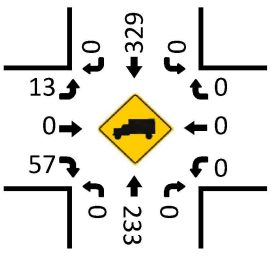
Total (AM)



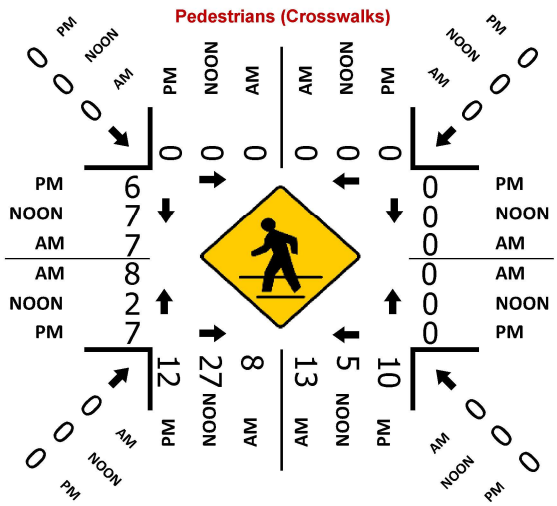
Total (NOON)



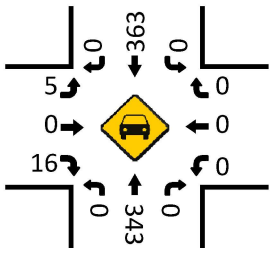
Total (NOON)



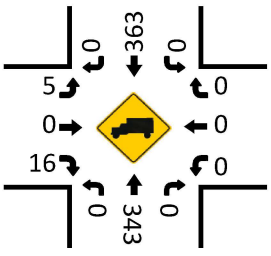
Pedestrians (Crosswalks)



Total (PM)



Total (PM)



Appendix B

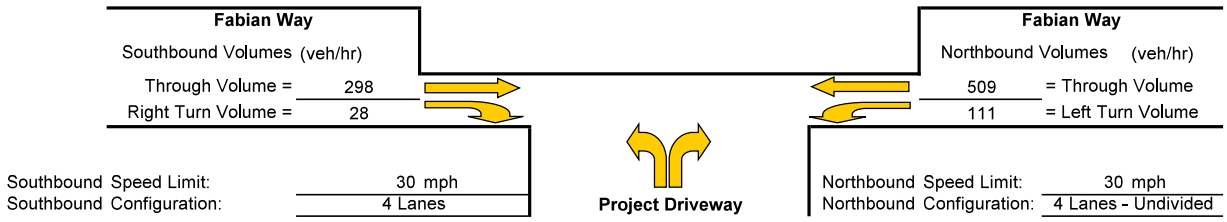
Left-Turn Warrant Worksheet

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Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Project Driveway
Study Scenario: Near-Term plus Project AM

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Speed Limit: 30 mph
Southbound Configuration: 4 Lanes

Northbound Speed Limit: 30 mph
Northbound Configuration: 4 Lanes - Undivided

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	326
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

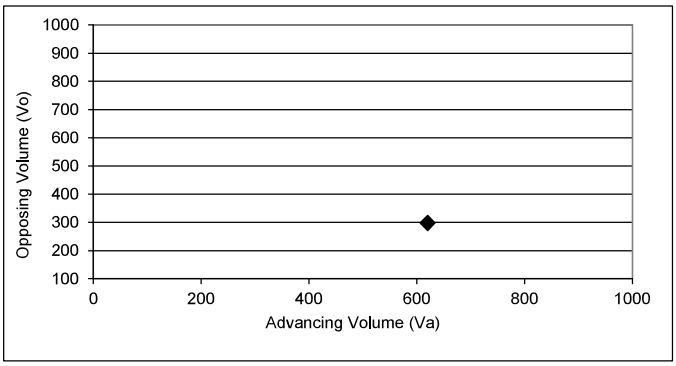
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	400
Advancing Volume	Va =	326
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 22.6 veh/hr
Left Turn Volume Vl = 111 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements* , January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

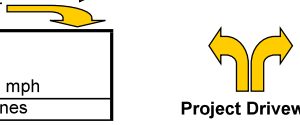
Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Project Driveway
Study Scenario: Near-Term plus Project School PM

Direction of Analysis Street: North/South
Cross Street Intersects: From the West

Fabian Way
Southbound Volumes (veh/hr)
Through Volume = 301
Right Turn Volume = 14

Fabian Way
Northbound Volumes (veh/hr)
390 = Through Volume
54 = Left Turn Volume



Southbound Speed Limit: 30 mph
Southbound Configuration: 4 Lanes

Northbound Speed Limit: 30 mph
Northbound Configuration: 4 Lanes - Undivided

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   Advancing Volume Threshold AV = -
   Advancing Volume Va = 315
   If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

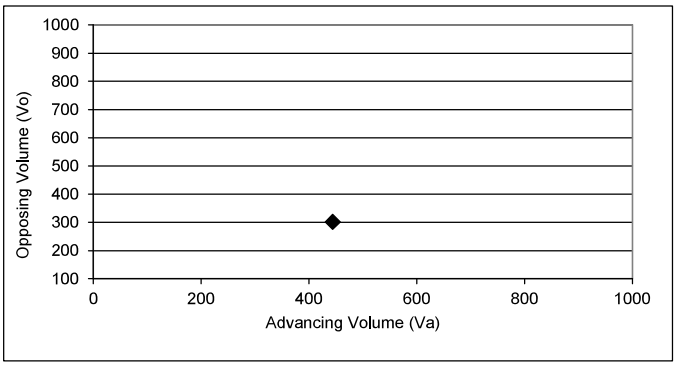
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   Advancing Volume Threshold AV = 866.666667
   Advancing Volume Va = 315
   If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 22.5 veh/hr
Left Turn Volume Vl = 54 veh/hr
If Vl>LtVol then warrant is met



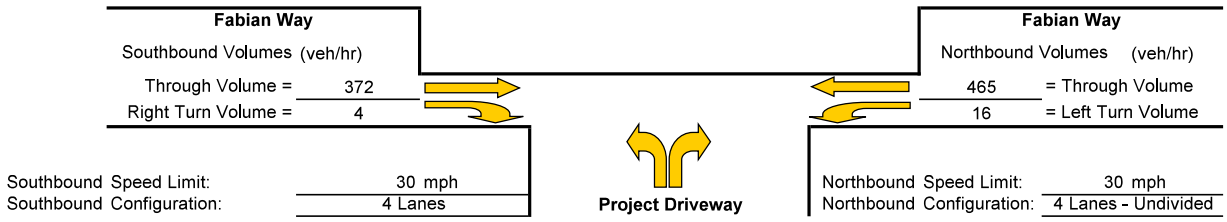
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements* , January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Project Driveway
Study Scenario: Near-Term plus Project PM

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Speed Limit: 30 mph
Southbound Configuration: 4 Lanes

Northbound Speed Limit: 30 mph
Northbound Configuration: 4 Lanes - Undivided

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	376
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

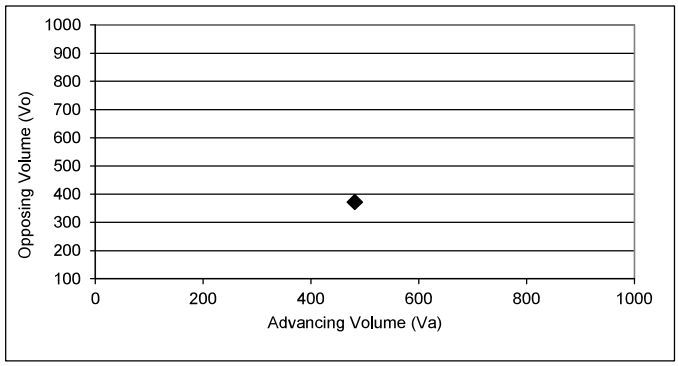
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	376
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 20.5 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements* , January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

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Appendix C

Queue Estimation Worksheets

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Queue Length Estimation at Two-Way STOP Controlled Intersection

Project Information

Analyst:	W-Trans	Agency/Co.:	City of Palo Alto
Analysis Time Period:	AM Existing + Project	Project ID:	PAL035
Date Performed:	4/4/2025	Scenario:	AM Existing + Project
Jurisdiction:	City of Palo Alto		
Intersection:	Fabian Way/Project Entrance Driveway		
East/West Street:	Project Entrance Driveway at 3950 Fabian Way		
North/South Street:	Fabian Way		

Instructions

Step 1 Input Volumes on **Volumes** sheet

Lane Group Code :			
	MJL	1	Major street separate left turn lane / TWLT
	MNLTR	2	Minor street shared left, through and right lane
	MNLR	3	Minor street shared left, and right lane
	MNL	4	Minor street separate left turn lane
	MNR	5	Minor street separate right turn lane

Step 2 Calculate Input Parameters

Calculate Lane Group Volumes, % Heavy Vehicles, and Conflicting Volumes (2.0% default)

Identify the presence of an upstream signal within 1/4 mile on major approches (Signal, 0 default)

Identify the presence of a separate LT lane / TWLT on major street approaches (LT, 1 default)

Verify the input ranges to feed into the models (see QueueLengthsModels sheet)

Step 3 **Obtain** queue lengths in feet from **Results** column

Note: ***Round off queue lengths to the next highest 25 feet when reporting***

Input							**Results**
Approach	Lane Group, Code	Volume, veh/hr	% Heavy Vehicles	Conflicting Volume,veh/hr	Signal (0 or 1)	Left Turn Lane (0 or 1)	Queue Length Feet
EB	MNLTR	0					
EB	MNLR	0					
EB	MNL	0					
EB	MNR	0					
WB	MNLTR	0					
WB	MNLR	0					
WB	MNL	0					
WB	MNR	0					
NB	MJL	165	2.0%	399	0	1	**75**
SB	MJL	0					

Queue Length Estimation at Two-Way STOP Controlled Intersection

Project Information

Analyst:	W-Trans	Agency/Co.:	City of Palo Alto
Analysis Time Period:	PM Existing + Project	Project ID:	PAL035
Date Performed:	4/4/2025	Scenario:	PM Existing + Project
Jurisdiction:	City of Palo Alto		
Intersection:	Fabian Way/Project Entrance Driveway		
East/West Street:	Project Entrance Driveway at 3950 Fabian Way		
North/South Street:	Fabian Way		

Instructions

Step 1 Input Volumes on **Volumes** sheet

Lane Group Code :			
	MJL	1	Major street separate left turn lane / TWLT
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	MNL	4	Minor street separate left turn lane
	MNR	5	Minor street separate right turn lane

Step 2 Calculate Input Parameters

Calculate Lane Group Volumes, % Heavy Vehicles, and Conflicting Volumes (2.0% default)

Identify the presence of an upstream signal within 1/4 mile on major approches (Signal, 0 default)

Identify the presence of a separate LT lane / TWLT on major street approaches (LT, 1 default)

Verify the input ranges to feed into the models (see QueueLengthsModels sheet)

Step 3 **Obtain** queue lengths in feet from **Results** column

Note: ***Round off queue lengths to the next highest 25 feet when reporting***

Input							**Results**
Approach	Lane Group, Code	Volume, veh/hr	% Heavy Vehicles	Conflicting Volume,veh/hr	Signal (0 or 1)	Left Turn Lane (0 or 1)	Queue Length Feet
EB	MNLTR	0					
EB	MNLR	0					
EB	MNL	0					
EB	MNR	0					
WB	MNLTR	0					
WB	MNLR	0					
WB	MNL	0					
WB	MNR	0					
NB	MJL	80	2.0%	425	0	1	**50**
SB	MJL	0					

Appendix D

Pedestrian Crossing Treatment Worksheet

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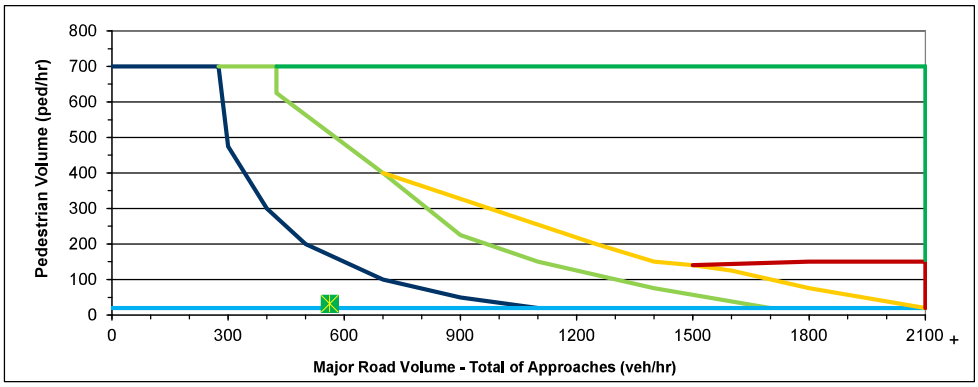
TCRP Report 112 - NCHRP Report 562 - Pedestrian Crossing Treatment Worksheet
Worksheet 1: Peak-Hour, 35 MPH or Less

Analyst and Site Information			
Analyst:	W-Trans	Major Street:	Fabian Way
Analysis Date:	29-Jan-25	Minor Street or Location:	3900 Fabian Way
Data Collection Date:	1/29/2025	Peak Hour:	School PM Existing

Step 1: Select worksheet (speed reflects posted or statutory speed limit or 85th percentile speed on the major street):		
a) Worksheet 1 - 35 mph or less		
b) Worksheet 2- exceeds 35 mph, communities with less than 10,000, or where major transit stop exists		
Step 2: Does the crossing meet minimum pedestrian volumes to be considered for a TCD type of treatment?		
Peak-hour pedestrian volume (ped/h), vp	2a	32
If 2a ≥ 20 ped/h, then go to Step 3.		
If 2a < 20 ped/h, then consider median refuge islands, curb extensions, traffic calming, etc. as feasible.		
0		
Major road volume, total of both approaches during peak hour (veh/h), V maj-s	3a	562
Minimum signal warrant volume for peak hour (use 3a for Vmaj-s), SC SC = 0.00021 Vmaj-s² - 0.74072 Vmaj-s + 734.125)/0.75 OR [(0.00021 3a² - 0.74072 3a + 734.125)/0.75]	3b	512.2234667
If 3b< 133, then enter 133. If 3b ≥ 133, then enter 3b.	3c	512.2234667
If 15th percentile crossing speed of pedestrians is less than 3.5 ft/s (1.1 m/s), then reduce 3c by up to 50 percent; otherwise enter 3c.	3d	512.2234667
If 2a ≥ 3d, then the warrant has been met and a traffic signal should be considered if not within 300 ft of another traffic signal. Otherwise, the warrant has not been met. Go to Step 4.		
Step 4: Estimate pedestrian delay.		
Pedestrian crossing distance, curb to curb (ft), L	4a	60
Pedestrian walking speed (ft.s), Sp	4b	3.5
Pedestrian start-up time and end clearance time (s), ts	4c	3
Critical gap required for crossing pedestrian (s), tc= (L/Sp) + ts OR [(4a/4b) + 4c)]	4d	20.14285714
Major road volume, total of both approaches or approach being crossed if median refuge island is present during peak hour (veh.h), Vmaj-d	4e	562
Major road flow rate (veh/s), v = Vmaj-d/3600 OR [4e/3600]	4f	0.156111111
Average pedestrian delay (s/person), dp = ($e^{v\ tc}$ - v tc - 1) / v OR [($e^{4f\ x\ 4d}$-4f x 4d - 1) / 4f]	4g	122.1187728
Total pedestrian delay (h), Dp=(dp x Vp) / 3600 OR [(4g x 2a) / 3600] (this is estimated delayfor all pedestrians crossing the major roadway without a crossing treatment - assumes 05 compliance). This calculated value can be replaced with the actual total pedestrian delay measured at the site.	4h	1.085500203
Step 5: Select treatment based upon total pedestrian delay and expected motorist compliance.		
Expected motorist compliance at pedestrian crossings in region, Comp = high or low	5a	HIGH

Total Pedestrian Delay, Dp (from 4h) and Motorist Compliance, Comp (from 5a)	**Treatment Category** (see Descriptions of Sample Treatments for examples)
Dp ≥21.3h (Comp = high or low) OR 5.3h≤Dp<21.3 h and Comp = low	DO NOT USE RED
1.3h ≤ Dp < 21.3h and Comp = high or low) OR 5.3 ≤ Dp < 21.3 h and Comp = high	DO NOT USE ACTIVE OR ENHANCED
Dp < 1.3 h (Comp = high or low)	USE CROSSWALK

Roadway Configuration: 34' Wide, <35 mph, Vped = 3.5 ft/s



Legend:
Study Intersection
Striped Crosswalk
Enhanced-High Visibility/Active when Present
Red
Enhanced-High Visibility/Active when Present (if high compliance expected) OR Red (if low compliance expected)
Signal
No Treatment

Description of Treatment Types:		
Red:	Enhanced-High Visibility/Active when Present	
	Active When Present	*Enhanced/High Visibility*
Midblock Signal	In Roadway Warning Lights	In-Street Crossing Signs
Half Signal	Passive/Pushbutton Flashing Beacons	High Visibility Signs/Markings
HAWK	Pedestrian Crossing Flags	Pedestrian Refuge Islands
	Rapid Rectangular Flashing Beacons	Raised Crosswalks
		Curb Extensions
		Advanced Signage
		Advanced Stop/Yield Lines
		Constant Flashing Yellow Beacons

Low-Speed Roadway

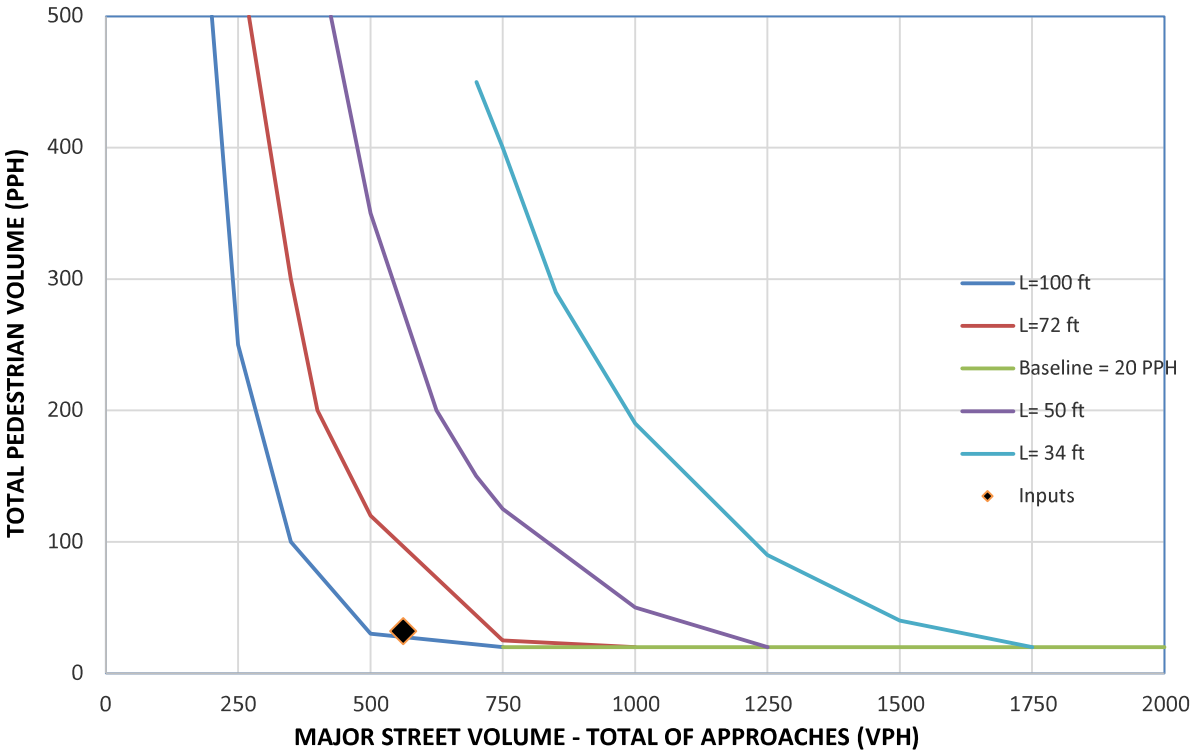
Project Name: PAL035

Scenario: School PM Existing
Street Name: Fabian Way
Date of Count: Wednesday, January 29, 2025

Speed Limit: 30 mph
Crosswalk Length: 60 feet

Major Street Approach Volume: 562 VPH
Pedestrians Crossing: 32 PPH

WARRANT MET? **NO**



Note: Installation of a HAWK Singal is warranted when the plotted point (see graph above) falls above the curve representing the corresponding crosswalk length (L).
If the length (L) of the crosswalk does not match one displayed on the graph, interpolate between existing curves to find the position of the curve representing the crosswalk length being analyzed.

Reference: California Manual on Uniform Traffic Control Devices (MUTCD) 2014 Edition

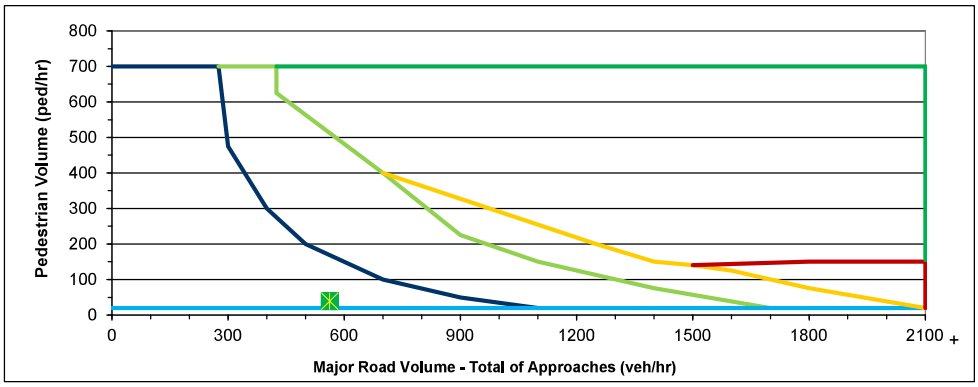
TCRP Report 112 - NCHRP Report 562 - Pedestrian Crossing Treatment Worksheet
Worksheet 1: Peak-Hour, 35 MPH or Less

Analyst and Site Information			
Analyst:	W-Trans	Major Street:	Fabian Way
Analysis Date:	29-Jan-25	Minor Street or Location:	3900 Fabian Way
Data Collection Date:	1/29/2025	Peak Hour:	School PM Ex.Sensitivity Analysis

Step 1: Select worksheet (speed reflects posted or statutory speed limit or 85th percentile speed on the major street):		
a) Worksheet 1 - 35 mph or less		
b) Worksheet 2- exceeds 35 mph, communities with less than 10,000, or where major transit stop exists		
Step 2: Does the crossing meet minimum pedestrian volumes to be considered for a TCD type of treatment?		
Peak-hour pedestrian volume (ped/h), vp	2a	39
If 2a ≥ 20 ped/h, then go to Step 3.		
If 2a < 20 ped/h, then consider median refuge islands, curb extensions, traffic calming, etc. as feasible.		
0		
Major road volume, total of both approaches during peak hour (veh/h), V maj-s	3a	562
Minimum signal warrant volume for peak hour (use 3a for Vmaj-s), SC SC = 0.00021 Vmaj-s² - 0.74072 Vmaj-s + 734.125)/0.75 OR [(0.00021 3a² - 0.74072 3a + 734.125)/0.75]	3b	512.2234667
If 3b< 133, then enter 133. If 3b ≥ 133, then enter 3b.	3c	512.2234667
If 15th percentile crossing speed of pedestrians is less than 3.5 ft/s (1.1 m/s), then reduce 3c by up to 50 percent; otherwise enter 3c.	3d	512.2234667
If 2a ≥ 3d, then the warrant has been met and a traffic signal should be considered if not within 300 ft of another traffic signal. Otherwise, the warrant has not been met. Go to Step 4.		
Step 4: Estimate pedestrian delay.		
Pedestrian crossing distance, curb to curb (ft), L	4a	60
Pedestrian walking speed (ft.s), Sp	4b	3.5
Pedestrian start-up time and end clearance time (s), ts	4c	3
Critical gap required for crossing pedestrian (s), tc= (L/Sp) + ts OR [(4a/4b) + 4c)]	4d	20.14285714
Major road volume, total of both approaches or approach being crossed if median refuge island is present during peak hour (veh.h), Vmaj-d	4e	562
Major road flow rate (veh/s), v = Vmaj-d/3600 OR [4e/3600]	4f	0.156111111
Average pedestrian delay (s/person), dp = ($e^{v\ tc}$ - v tc - 1) / v OR [($e^{4f \times 4d}$-4f x 4d - 1) / 4f]	4g	122.1187728
Total pedestrian delay (h), Dp=(dp x Vp) / 3600 OR [(4g x 2a) / 3600] (this is estimated delayfor all pedestrians crossing the major roadway without a crossing treatment - assumes 05 compliance). This calculated value can be replaced with the actual total pedestrian delay measured at the site.	4h	1.322953372
Step 5: Select treatment based upon total pedestrian delay and expected motorist compliance.		
Expected motorist compliance at pedestrian crossings in region, Comp = high or low	5a	HIGH

Total Pedestrian Delay, Dp (from 4h) and Motorist Compliance, Comp (from 5a)	**Treatment Category** (see Descriptions of Sample Treatments for examples)
Dp ≥21.3h (Comp = high or low) OR 5.3h≤Dp<21.3 h and Comp = low	DO NOT USE RED
1.3h ≤ Dp < 21.3h and Comp = high or low) OR 5.3 ≤ Dp < 21.3 h and Comp = high	USE ACTIVE OR ENHANCED
Dp < 1.3 h (Comp = high or low)	DO NOT USE CROSSWALK

Roadway Configuration: 34' Wide, <35 mph, Vped = 3.5 ft/s



Legend:
Study Intersection
Striped Crosswalk
Enhanced-High Visibility/Active when Present
Red
Enhanced-High Visibility/Active when Present (if high compliance expected) OR Red (if low compliance expected)
Signal
No Treatment

Description of Treatment Types:		
Red:	Enhanced-High Visibility/Active when Present	
	Active When Present	*Enhanced/High Visibility*
Midblock Signal	In Roadway Warning Lights	In-Street Crossing Signs
Half Signal	Passive/Pushbutton Flashing Beacons	High Visibility Signs/Markings
HAWK	Pedestrian Crossing Flags	Pedestrian Refuge Islands
	Rapid Rectangular Flashing Beacons	Raised Crosswalks
		Curb Extensions
		Advanced Signage
		Advanced Stop/Yield Lines
		Constant Flashing Yellow Beacons

Low-Speed Roadway

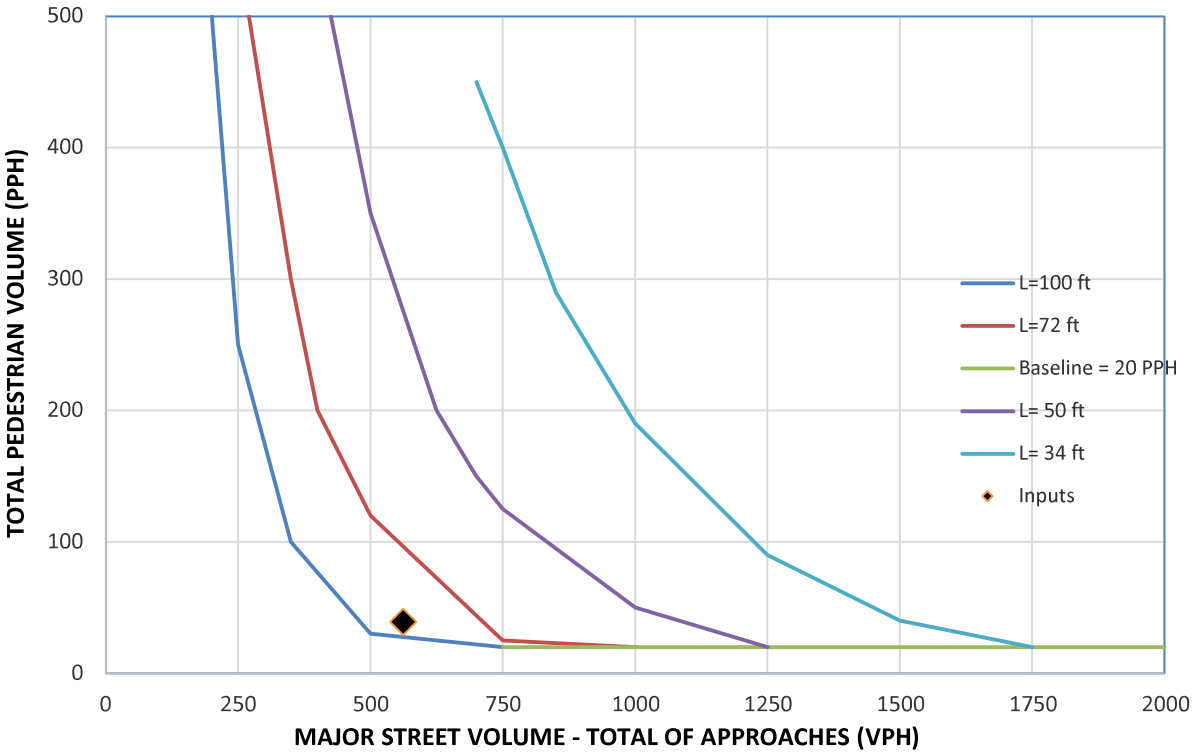
Project Name: PAL035

Scenario: School P.M. Ex. Sensitivity Analysis
Street Name: Fabian Way
Date of Count: Wednesday, January 29, 2025

Speed Limit: 30 mph
Crosswalk Length: 60 feet

Major Street Approach Volume: 562 VPH
Pedestrians Crossing: 39 PPH

WARRANT MET? **NO**



Note: Installation of a HAWK Singal is warranted when the plotted point (see graph above) falls above the curve representing the corresponding crosswalk length (L).
If the length (L) of the crosswalk does not match one displayed on the graph, interpolate between existing curves to find the position of the curve representing the crosswalk length being analyzed.

Reference: California Manual on Uniform Traffic Control Devices (MUTCD) 2014 Edition

Appendix E

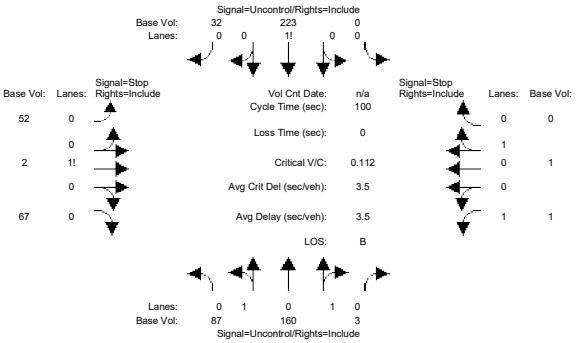
Intersection Level of Service Calculations

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AM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
01 AM Existing

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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:      87  160    3     0  223   32    52    2   67     1    1     0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
Initial Bse:   87  160    3     0  223   32    52    2   67     1    1     0
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00  1.00
PHF Volume:    87  160    3     0  223   32    52    2   67     1    1     0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0     0
FinalVolume:   87  160    3     0  223   32    52    2   67     1    1     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  255 xxxx xxxxx  xxxx xxxx xxxxx   494  576   239   609  591    82
Potent Cap.: 1322 xxxx xxxxx  xxxx xxxx xxxxx   489  431   805   410  423   984
Move Cap.:   1322 xxxx xxxxx  xxxx xxxx xxxxx   462  401   805   355  393   984
Volume/Cap:  0.07 xxxx  xxxx  xxxx xxxx  xxxx  0.11 0.00  0.08  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx
Control Del:  7.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  15.2 xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     C    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  603 xxxxx  xxxx xxxx   393
SharedQueue:  0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.7 xxxxx xxxxx xxxx   0.0
Shrd ConDel:  7.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.5 xxxxx xxxxx xxxx  14.2
Shared LOS:     A    *     *     *    *     *     B    *     *     *    *     B
ApproachDel:    xxxxxx           xxxxxx           12.5           14.7
ApproachLOS:         *                *             B              B
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    1  0  0  1  0
Initial Vol:   87  160     3     0  223    32    52    2    67     1    1     0
ApproachDel:    xxxxxx           xxxxxx             12.5             14.7
------------|--------------||--------------||--------------||--------------|
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=121]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=628]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=2]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=628]
   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).

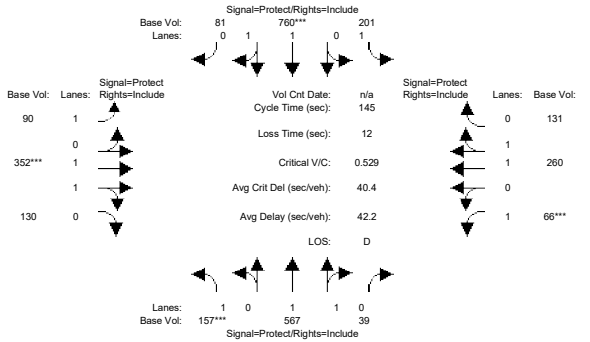
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                  Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    1  0  0  1  0
Initial Vol:   87  160     3     0  223    32    52    2    67     1    1     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             505
Minor Approach Volume:           121
Minor Approach Volume Threshold: 520
--------------------------------------------------------------------------------
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.
```

AM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
01 AM Existing

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	157	567	39	201	760	81	90	352	130	66	260	131
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:	157	567	39	201	760	81	90	352	130	66	260	131
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:	157	567	39	201	760	81	90	352	130	66	260	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	567	39	201	760	81	90	352	130	66	260	131
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:	157	567	39	201	760	81	90	352	130	66	260	131
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	0.98	0.95	0.92	0.99	0.95
Lanes:	1.00	1.87	0.13	1.00	1.80	0.20	1.00	1.45	0.55	1.00	1.31	0.69
Final Sat.:	1750	3462	238	1750	3343	356	1750	2701	998	1750	2459	1239
Capacity Analysis Module:												
Vol/Sat:	0.09	0.16	0.16	0.11	0.23	0.23	0.05	0.13	0.13	0.04	0.11	0.11
Crit Moves:	****				****			****			****	
Green Time:	24.6	51.1	51.1	35.8	62.3	62.3	15.1	35.7	35.7	10.3	31.0	31.0
Volume/Cap:	0.53	0.46	0.46	0.46	0.53	0.53	0.49	0.53	0.53	0.53	0.49	0.49
Delay/Veh:	56.7	36.6	36.6	47.2	30.8	30.8	63.5	47.9	47.9	69.2	50.6	50.6
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:	56.7	36.6	36.6	47.2	30.8	30.8	63.5	47.9	47.9	69.2	50.6	50.6
LOS by Move:	E+	D+	D+	D	C	C	E	D	D	E	D	D
HCM2kAvgQ:	7	11	11	8	14	14	5	10	10	3	8	8

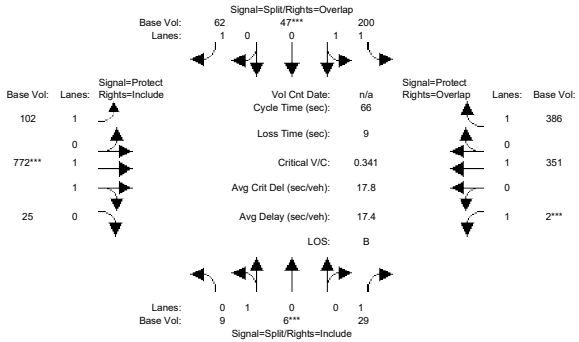
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
01 AM Existing

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	9	6	29	200	47	62	102	772	25	2	351	386
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:	9	6	29	200	47	62	102	772	25	2	351	386
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:	9	6	29	200	47	62	102	772	25	2	351	386
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	6	29	200	47	62	102	772	25	2	351	386
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:	9	6	29	200	47	62	102	772	25	2	351	386
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.92	0.93	0.95	0.92	0.92	0.97	0.95	0.92	1.00	0.92
Lanes:	0.60	0.40	1.00	1.62	0.38	1.00	1.00	1.94	0.06	1.00	1.00	1.00
Final Sat.:	1080	720	1750	2874	675	1750	1750	3584	116	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.02	0.07	0.07	0.04	0.06	0.22	0.22	0.00	0.18	0.22
Crit Moves:		****			****			****			****	
Green Time:	10.0	10.0	10.0	10.0	10.0	26.7	16.7	27.0	27.0	10.0	20.3	30.3
Volume/Cap:	0.06	0.06	0.11	0.46	0.46	0.09	0.23	0.53	0.53	0.01	0.60	0.48
Delay/Veh:	24.0	24.0	24.3	26.2	26.2	12.2	19.8	15.0	15.0	23.8	21.1	12.8
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:	24.0	24.0	24.3	26.2	26.2	12.2	19.8	15.0	15.0	23.8	21.1	12.8
LOS by Move:	C	C	C	C	C	B	B-	B	B	C	C+	B
HCM2kAvgQ:	0	0	1	3	3	1	2	6	6	0	6	6

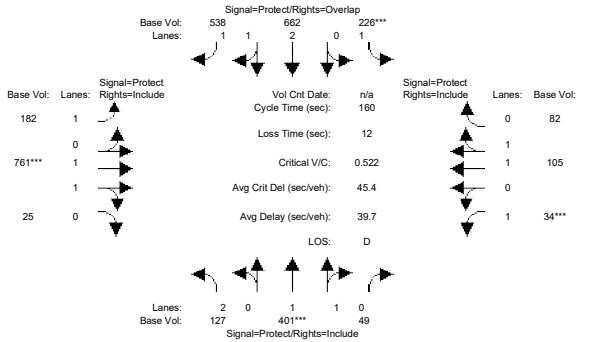
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
01 AM Existing

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	127	401	49	226	662	538	182	761	25	34	105	82
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:	127	401	49	226	662	538	182	761	25	34	105	82
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:	127	401	49	226	662	538	182	761	25	34	105	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	401	49	226	662	538	182	761	25	34	105	82
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:	127	401	49	226	662	538	182	761	25	34	105	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.98	0.95	0.92	1.00	0.92	0.92	0.97	0.95	0.92	0.99	0.95
Lanes:	2.00	1.78	0.22	1.00	2.13	1.87	1.00	1.93	0.07	1.00	1.10	0.90
Final Sat.:	3150	3297	403	1750	4038	3281	1750	3582	118	1750	2076	1622
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.12	0.13	0.16	0.16	0.10	0.21	0.21	0.02	0.05	0.05
Crit Moves:		****		****				****		****		
Green Time:	16.1	37.0	37.0	39.3	60.3	105.0	44.8	64.7	64.7	7.0	26.9	26.9
Volume/Cap:	0.40	0.53	0.53	0.53	0.44	0.25	0.37	0.53	0.53	0.44	0.30	0.30
Delay/Veh:	68.3	54.4	54.4	53.5	37.3	11.3	46.8	36.4	36.4	78.7	58.6	58.6
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:	68.3	54.4	54.4	53.5	37.3	11.3	46.8	36.4	36.4	78.7	58.6	58.6
LOS by Move:	E	D-	D-	D-	D+	B+	D	D+	D+	E-	E+	E+
HCM2kAvgQ:	3	10	10	11	11	6	7	14	14	2	4	4

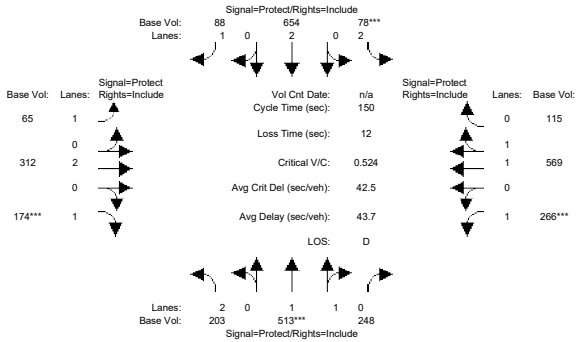
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
01 AM Existing

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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:	203	513	248	78	654	88	65	312	174	266	569	115
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:	203	513	248	78	654	88	65	312	174	266	569	115
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:	203	513	248	78	654	88	65	312	174	266	569	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	513	248	78	654	88	65	312	174	266	569	115
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:	203	513	248	78	654	88	65	312	174	266	569	115
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	0.92	1.00	0.92	0.92	0.98	0.95
Lanes:	2.00	1.33	0.67	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.65	0.35
Final Sat.:	3150	2493	1205	3150	3800	1750	1750	3800	1750	1750	3077	622
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.21	0.02	0.17	0.05	0.04	0.08	0.10	0.15	0.18	0.18
Crit Moves:		****		****					****	****		
Green Time:	18.0	58.9	58.9	7.1	48.0	48.0	14.5	28.5	28.5	43.5	57.5	57.5
Volume/Cap:	0.54	0.52	0.52	0.52	0.54	0.16	0.38	0.43	0.52	0.52	0.48	0.48
Delay/Veh:	63.6	35.2	35.2	73.2	42.4	36.6	65.0	54.1	56.2	45.6	35.3	35.3
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:	63.6	35.2	35.2	73.2	42.4	36.6	65.0	54.1	56.2	45.6	35.3	35.3
LOS by Move:	E	D+	D+	E	D	D+	E	D-	E+	D	D+	D+
HCM2kAvgQ:	6	14	14	3	12	3	3	6	8	11	12	12

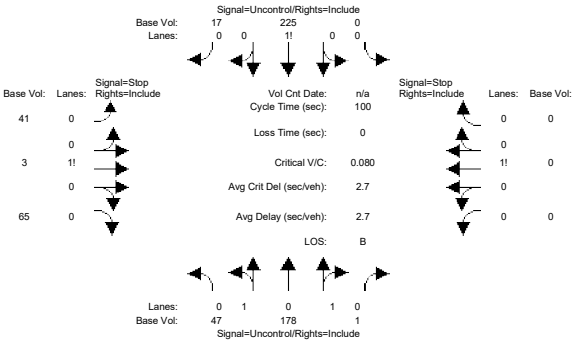
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
02 SchPM Existing

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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  178    1     0  225   17    41    3   65     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:   47  178    1     0  225   17    41    3   65     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:    47  178    1     0  225   17    41    3   65     0    0     0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0     0
FinalVolume:   47  178    1     0  225   17    41    3   65     0    0     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  242 xxxx xxxxx  xxxx xxxx xxxxx   417  507   234   540  515    90
Potent Cap.: 1336 xxxx xxxxx  xxxx xxxx xxxxx   597  472   811   456  467   974
Move Cap.:   1336 xxxx xxxxx  xxxx xxxx xxxxx   580  455   811   406  450   974
Volume/Cap:  0.04 xxxx  xxxx  xxxx xxxx  xxxx  0.07 0.01  0.08  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  692 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.6 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.2 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     B    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           11.2          xxxxxx
ApproachLOS:         *                *             B              *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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
```

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```
------------|--------------||--------------||--------------||--------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:       0  1  0  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:   47  178     1     0  225    17    41    3    65     0    0     0
ApproachDel:    xxxxxx           xxxxxx             11.2           xxxxxx
------------|--------------||--------------||--------------||--------------|
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=109]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=577]
   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 #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:   47  178     1     0  225    17    41    3    65     0    0     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             468
Minor Approach Volume:           109
Minor Approach Volume Threshold: 546
--------------------------------------------------------------------------------
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).

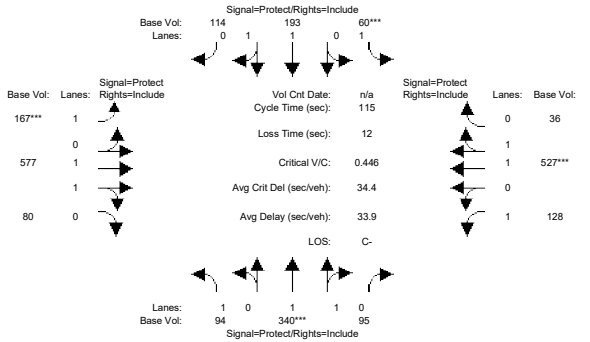
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```

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School PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
02 SchPM Existing

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	94	340	95	60	193	114	167	577	80	128	527	36
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:	94	340	95	60	193	114	167	577	80	128	527	36
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:	94	340	95	60	193	114	167	577	80	128	527	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	340	95	60	193	114	167	577	80	128	527	36
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:	94	340	95	60	193	114	167	577	80	128	527	36
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	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	1.55	0.45	1.00	1.24	0.76	1.00	1.75	0.25	1.00	1.87	0.13
Final Sat.:	1750	2891	808	1750	2325	1373	1750	3249	450	1750	3463	237
Capacity Analysis Module:												
Vol/Sat:	0.05	0.12	0.12	0.03	0.08	0.08	0.10	0.18	0.18	0.07	0.15	0.15
Crit Moves:		****		****			****				****	
Green Time:	16.1	30.3	30.3	8.8	23.0	23.0	24.6	45.2	45.2	18.6	39.2	39.2
Volume/Cap:	0.38	0.45	0.45	0.45	0.41	0.41	0.45	0.45	0.45	0.45	0.45	0.45
Delay/Veh:	45.9	35.7	35.7	53.1	40.5	40.5	40.1	26.0	26.0	44.7	29.7	29.7
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:	45.9	35.7	35.7	53.1	40.5	40.5	40.1	26.0	26.0	44.7	29.7	29.7
LOS by Move:	D	D+	D+	D-	D	D	D	C	C	D	C	C
HCM2kAvgQ:	4	7	7	3	5	5	6	9	9	4	8	8

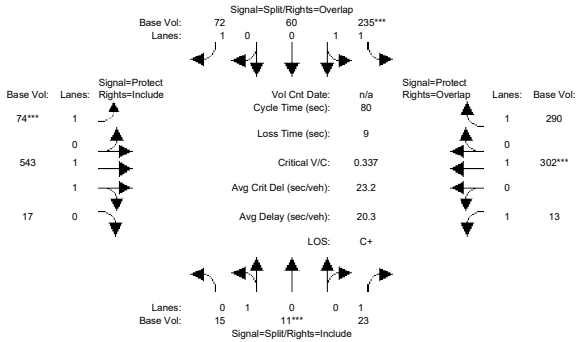
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
02 SchPM Existing

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	15	11	23	235	60	72	74	543	17	13	302	290
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	11	23	235	60	72	74	543	17	13	302	290
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	11	23	235	60	72	74	543	17	13	302	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	11	23	235	60	72	74	543	17	13	302	290
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	11	23	235	60	72	74	543	17	13	302	290
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.92	0.93	0.95	0.92	0.92	0.97	0.95	0.92	1.00	0.92
Lanes:	0.58	0.42	1.00	1.60	0.40	1.00	1.00	1.94	0.06	1.00	1.00	1.00
Final Sat.:	1038	762	1750	2828	722	1750	1750	3588	112	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.08	0.08	0.04	0.04	0.15	0.15	0.01	0.16	0.17
Crit Moves:		****		****			****				****	
Green Time:	10.0	10.0	10.0	17.5	17.5	27.5	10.0	23.8	23.8	19.7	33.5	51.0
Volume/Cap:	0.12	0.12	0.11	0.38	0.38	0.12	0.34	0.51	0.51	0.03	0.38	0.26
Delay/Veh:	31.3	31.3	31.2	26.9	26.9	18.0	32.9	23.6	23.6	22.9	16.4	6.4
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:	31.3	31.3	31.2	26.9	26.9	18.0	32.9	23.6	23.6	22.9	16.4	6.4
LOS by Move:	C	C	C	C	C	B-	C-	C	C	C+	B	A
HCM2kAvgQ:	1	1	1	4	4	1	2	6	6	0	5	3

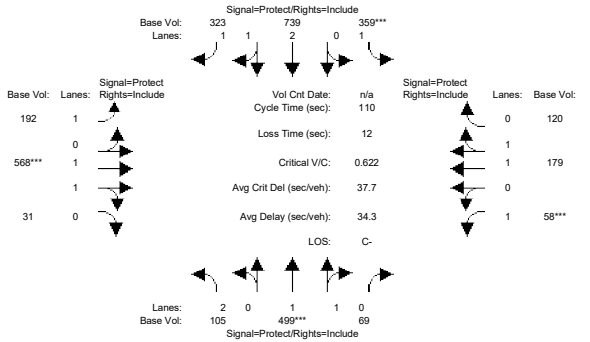
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
02 SchPM Existing

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	105	499	69	359	739	323	192	568	31	58	179	120
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:	105	499	69	359	739	323	192	568	31	58	179	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	105	499	69	359	739	323	192	568	31	58	179	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	499	69	359	739	323	192	568	31	58	179	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	105	499	69	359	739	323	192	568	31	58	179	120
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.98	0.95	0.92	1.00	0.95	0.92	0.98	0.95	0.92	0.99	0.95
Lanes:	2.00	1.75	0.25	1.00	2.74	1.26	1.00	1.89	0.11	1.00	1.18	0.82
Final Sat.:	3150	3250	449	1750	5193	2270	1750	3508	191	1750	2214	1484
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.15	0.21	0.14	0.14	0.11	0.16	0.16	0.03	0.08	0.08
Crit Moves:		****		****				****			****	
Green Time:	19.4	26.8	26.8	35.9	43.3	43.3	19.3	28.3	28.3	7.0	16.0	16.0
Volume/Cap:	0.19	0.63	0.63	0.63	0.36	0.36	0.63	0.63	0.63	0.52	0.56	0.56
Delay/Veh:	38.8	38.6	38.6	33.7	23.6	23.6	46.0	37.6	37.6	54.2	45.0	45.0
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:	38.8	38.6	38.6	33.7	23.6	23.6	46.0	37.6	37.6	54.2	45.0	45.0
LOS by Move:	D+	D+	D+	C-	C	C	D	D+	D+	D-	D	D
HCM2kAvgQ:	2	9	9	12	6	6	6	9	9	3	6	6

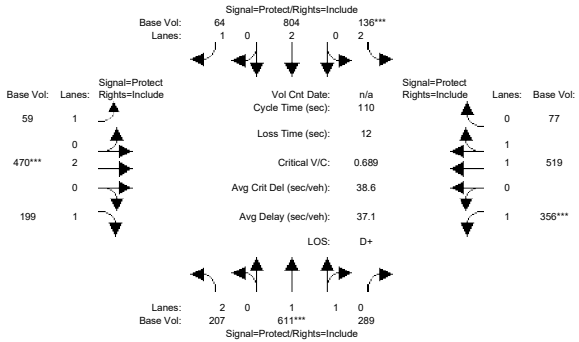
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
02 SchPM Existing

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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:	207	611	289	136	804	64	59	470	199	356	519	77
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:	207	611	289	136	804	64	59	470	199	356	519	77
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:	207	611	289	136	804	64	59	470	199	356	519	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	207	611	289	136	804	64	59	470	199	356	519	77
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:	207	611	289	136	804	64	59	470	199	356	519	77
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	0.92	1.00	0.92	0.92	0.98	0.95
Lanes:	2.00	1.34	0.66	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.73	0.27
Final Sat.:	3150	2511	1188	3150	3800	1750	1750	3800	1750	1750	3222	478
Capacity Analysis Module:												
Vol/Sat:	0.07	0.24	0.24	0.04	0.21	0.04	0.03	0.12	0.11	0.20	0.16	0.16
Crit Moves:		****		****				****			****	
Green Time:	10.9	38.8	38.8	7.0	35.0	35.0	14.8	19.7	19.7	32.5	37.4	37.4
Volume/Cap:	0.67	0.69	0.69	0.68	0.67	0.12	0.25	0.69	0.63	0.69	0.47	0.47
Delay/Veh:	53.2	32.0	32.0	59.4	33.9	26.7	43.2	45.3	46.0	38.3	28.8	28.8
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:	53.2	32.0	32.0	59.4	33.9	26.7	43.2	45.3	46.0	38.3	28.8	28.8
LOS by Move:	D-	C-	C-	E+	C-	C	D	D	D	D+	C	C
HCM2kAvgQ:	5	14	14	4	12	2	2	7	7	12	8	8

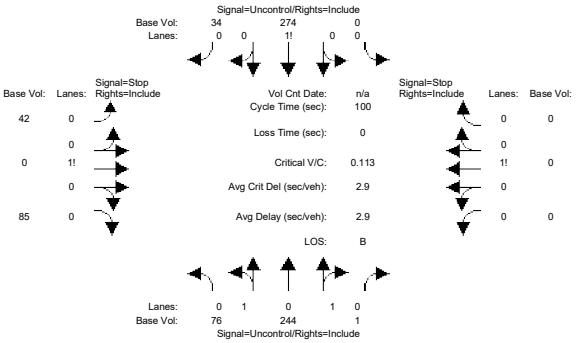
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
03 PM Existing

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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:       76  244     1     0  274    34    42    0    85     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:    76  244     1     0  274    34    42    0    85     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:     76  244     1     0  274    34    42    0    85     0    0     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    76  244     1     0  274    34    42    0    85     0    0     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  308 xxxx xxxxx  xxxx xxxx xxxxx   565  688   291   730  705   123
Potent Cap.: 1264 xxxx xxxxx  xxxx xxxx xxxxx   490  372   753   340  364   934
Move Cap.:   1264 xxxx xxxxx  xxxx xxxx xxxxx   466  348   753   287  341   934
Volume/Cap:  0.06 xxxx  xxxx  xxxx xxxx  xxxx  0.09 0.00  0.11  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  626 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.8 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.2 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     B     *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           12.2          xxxxxx
ApproachLOS:         *                *             B              *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0     0  0  0  1  0     0  0  1! 0  0     0  0  1! 0  0
Initial Vol:    76  244     1     0  274    34    42    0    85     0    0     0
ApproachDel:     xxxxxx           xxxxxx           12.2          xxxxxx
------------|--------------||--------------||--------------||--------------|
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=127]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=756]
   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).

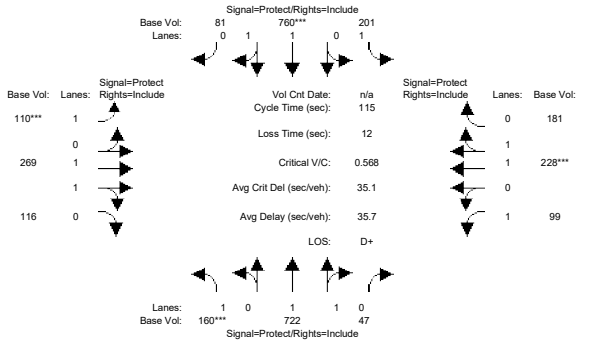
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0     0  0  0  1  0     0  0  1! 0  0     0  0  1! 0  0
Initial Vol:    76  244     1     0  274    34    42    0    85     0    0     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             629
Minor Approach Volume:           127
Minor Approach Volume Threshold: 445
--------------------------------------------------------------------------------
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.
```

PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
03 PM Existing

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	160	722	47	201	760	81	110	269	116	99	228	181
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	722	47	201	760	81	110	269	116	99	228	181
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	722	47	201	760	81	110	269	116	99	228	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	722	47	201	760	81	110	269	116	99	228	181
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:	160	722	47	201	760	81	110	269	116	99	228	181
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.99	0.91	0.88	0.99	0.91	0.88	0.96	0.88	0.88	0.93	0.86
Lanes:	1.00	1.87	0.13	1.00	1.79	0.21	1.00	1.36	0.64	1.00	1.07	0.93
Final Sat.:	1663	3517	229	1663	3358	358	1663	2472	1066	1663	1906	1513
Capacity Analysis Module:												
Vol/Sat:	0.10	0.21	0.21	0.12	0.23	0.23	0.07	0.11	0.11	0.06	0.12	0.12
Crit Moves:	****				****		****				****	
Green Time:	19.5	41.1	41.1	24.2	45.9	45.9	13.4	24.1	24.1	13.5	24.2	24.2
Volume/Cap:	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.52	0.52	0.51	0.57	0.57
Delay/Veh:	46.6	30.5	30.5	43.1	27.4	27.4	52.0	40.9	40.9	49.8	41.8	41.8
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:	46.6	30.5	30.5	43.1	27.4	27.4	52.0	40.9	40.9	49.8	41.8	41.8
LOS by Move:	D	C	C	D	C	C	D-	D	D	D	D	D
HCM2kAvgQ:	6	11	11	8	12	12	5	7	7	3	7	7

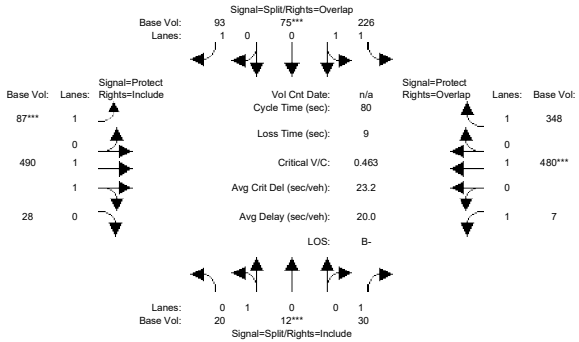
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
03 PM Existing

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	20	12	30	226	75	93	87	490	28	7	480	348
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:	20	12	30	226	75	93	87	490	28	7	480	348
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	12	30	226	75	93	87	490	28	7	480	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	12	30	226	75	93	87	490	28	7	480	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	12	30	226	75	93	87	490	28	7	480	348
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.89	0.96	0.78	0.88	0.99	0.91	0.88	1.00	0.78
Lanes:	0.64	0.36	1.00	1.00	1.53	0.47	1.00	1.88	0.12	1.00	1.00	1.00
Final Sat.:	1093	656	1488	2584	858	1488	1663	3549	203	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.09	0.09	0.06	0.05	0.14	0.14	0.00	0.25	0.23
Crit Moves:		****			****		****				****	
Green Time:	10.0	10.0	10.0	13.1	13.1	23.1	10.0	25.1	25.1	22.8	37.9	51.0
Volume/Cap:	0.15	0.15	0.16	0.53	0.53	0.22	0.42	0.44	0.44	0.01	0.53	0.37
Delay/Veh:	31.5	31.5	31.7	31.6	31.6	21.8	33.7	22.1	22.1	20.6	15.5	7.1
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:	31.5	31.5	31.7	31.6	31.6	21.8	33.7	22.1	22.1	20.6	15.5	7.1
LOS by Move:	C	C	C	C	C	C+	C-	C+	C+	C+	B	A
HCM2kAvgQ:	1	1	1	4	4	2	2	5	5	0	8	4

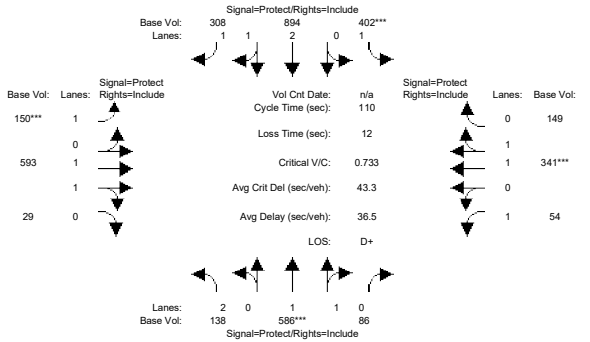
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
03 PM Existing

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	138	586	86	402	894	308	150	593	29	54	341	149
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:	138	586	86	402	894	308	150	593	29	54	341	149
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:	138	586	86	402	894	308	150	593	29	54	341	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	586	86	402	894	308	150	593	29	54	341	149
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:	138	586	86	402	894	308	150	593	29	54	341	149
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.90	0.88	0.96	0.89	0.88	0.99	0.91	0.88	0.95	0.88
Lanes:	2.00	1.73	0.27	1.00	2.91	1.09	1.00	1.90	0.10	1.00	1.36	0.64
Final Sat.:	2992	3215	472	1663	5321	1833	1663	3583	175	1663	2459	1074
Capacity Analysis Module:												
Vol/Sat:	0.05	0.18	0.18	0.24	0.17	0.17	0.09	0.17	0.17	0.03	0.14	0.14
Crit Moves:		****		****			****				****	
Green Time:	17.5	27.4	27.4	36.3	46.2	46.2	13.5	24.8	24.8	9.5	20.8	20.8
Volume/Cap:	0.29	0.73	0.73	0.73	0.40	0.40	0.73	0.73	0.73	0.37	0.73	0.73
Delay/Veh:	41.1	41.0	41.0	37.6	22.4	22.4	59.3	42.9	42.9	49.0	46.2	46.2
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:	41.1	41.0	41.0	37.6	22.4	22.4	59.3	42.9	42.9	49.0	46.2	46.2
LOS by Move:	D	D	D	D+	C+	C+	E+	D	D	D	D	D
HCM2kAvgQ:	2	11	11	14	7	7	6	10	10	2	10	10

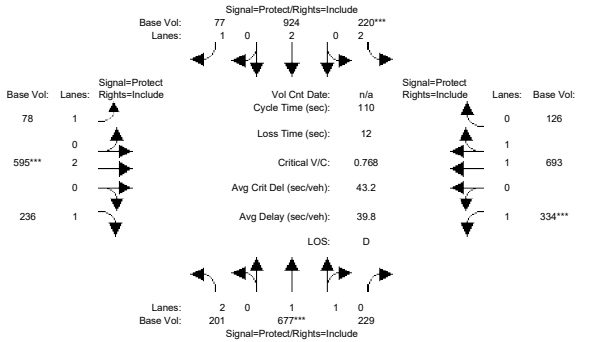
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Existing Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
03 PM Existing

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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:	201	677	229	220	924	77	78	595	236	334	693	126
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:	201	677	229	220	924	77	78	595	236	334	693	126
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	677	229	220	924	77	78	595	236	334	693	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	201	677	229	220	924	77	78	595	236	334	693	126
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	677	229	220	924	77	78	595	236	334	693	126
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.96	0.89	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.98	0.90
Lanes:	2.00	1.46	0.54	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.67	0.33
Final Sat.:	2992	2674	904	2992	3800	1488	1663	3800	1488	1663	3101	564
Capacity Analysis Module:												
Vol/Sat:	0.07	0.25	0.25	0.07	0.24	0.05	0.05	0.16	0.16	0.20	0.22	0.22
Crit Moves:		****		****				****		****		
Green Time:	10.1	36.3	36.3	10.5	36.7	36.7	11.3	22.4	22.4	28.8	39.9	39.9
Volume/Cap:	0.73	0.77	0.77	0.77	0.73	0.16	0.45	0.77	0.78	0.77	0.62	0.62
Delay/Veh:	58.1	36.2	36.2	60.4	34.5	25.9	48.3	46.0	53.5	45.6	29.7	29.7
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:	58.1	36.2	36.2	60.4	34.5	25.9	48.3	46.0	53.5	45.6	29.7	29.7
LOS by Move:	E+	D+	D+	E	C-	C	D	D	D-	D	C	C
HCM2kAvgQ:	6	16	16	6	15	2	3	10	8	13	12	12

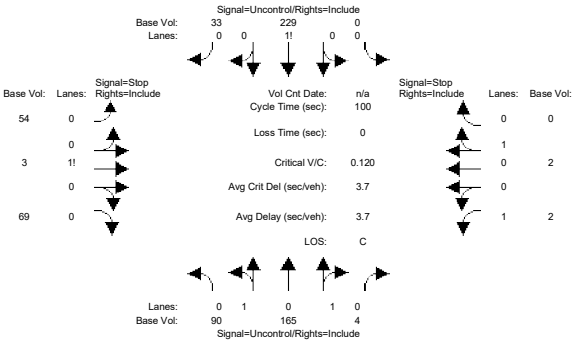
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
04 AM NearTerm

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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:       90  165     4     0  229    33    54    3    69     2    2     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:    90  165     4     0  229    33    54    3    69     2    2     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:     90  165     4     0  229    33    54    3    69     2    2     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    90  165     4     0  229    33    54    3    69     2    2     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  262 xxxx xxxxx  xxxx xxxx xxxxx   509  595   246   629  609    85
Potent Cap.: 1314 xxxx xxxxx  xxxx xxxx xxxxx   478  420   798   398  412   980
Move Cap.:   1314 xxxx xxxxx  xxxx xxxx xxxxx   450  390   798   341  383   980
Volume/Cap:  0.07 xxxx  xxxx  xxxx xxxx  xxxx  0.12 0.01  0.09  0.01 0.01  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx
Control Del:  7.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  15.6 xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     C    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  588 xxxxx  xxxx xxxx   383
SharedQueue:  0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.8 xxxxx xxxxx xxxx   0.0
Shrd ConDel:  7.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.8 xxxxx xxxxx xxxx  14.5
Shared LOS:     A    *     *     *    *     *     B    *     *     *    *     B
ApproachDel:    xxxxxx           xxxxxx           12.8           15.0
ApproachLOS:         *                *             B              C
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0     1  0  0  1  0
Initial Vol:   90  165     4     0  229    33    54    3    69     2    2     0
ApproachDel:    xxxxxx           xxxxxx           12.8             15.0
------------|--------------||--------------||--------------||--------------|
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=126]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=651]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=4]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=651]
   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).

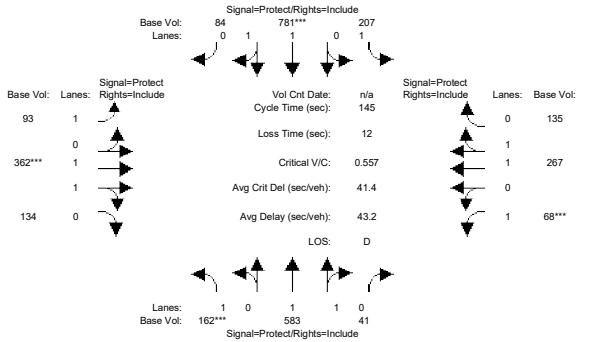
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0     1  0  0  1  0
Initial Vol:   90  165     4     0  229    33    54    3    69     2    2     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             521
Minor Approach Volume:           126
Minor Approach Volume Threshold: 509
--------------------------------------------------------------------------------
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.
```

AM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
04 AM NearTerm

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	162	583	41	207	781	84	93	362	134	68	267	135
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:	162	583	41	207	781	84	93	362	134	68	267	135
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:	162	583	41	207	781	84	93	362	134	68	267	135
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	583	41	207	781	84	93	362	134	68	267	135
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:	162	583	41	207	781	84	93	362	134	68	267	135
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.99	0.91	0.88	0.99	0.91	0.88	0.96	0.88	0.88	0.95	0.88
Lanes:	1.00	1.86	0.14	1.00	1.79	0.21	1.00	1.43	0.57	1.00	1.29	0.71
Final Sat.:	1663	3495	246	1663	3352	360	1663	2602	963	1663	2331	1178
Capacity Analysis Module:												
Vol/Sat:	0.10	0.17	0.17	0.12	0.23	0.23	0.06	0.14	0.14	0.04	0.11	0.11
Crit Moves:	****				****			****			****	
Green Time:	25.4	49.3	49.3	36.8	60.7	60.7	15.4	36.2	36.2	10.7	31.5	31.5
Volume/Cap:	0.56	0.49	0.49	0.49	0.56	0.56	0.53	0.56	0.56	0.56	0.53	0.53
Delay/Veh:	57.0	38.2	38.2	47.0	32.4	32.4	64.3	48.2	48.2	70.5	50.8	50.8
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:	57.0	38.2	38.2	47.0	32.4	32.4	64.3	48.2	48.2	70.5	50.8	50.8
LOS by Move:	E+	D+	D+	D	C-	C-	E	D	D	E	D	D
HCM2kAvgQ:	8	11	11	9	15	15	5	10	10	3	8	8

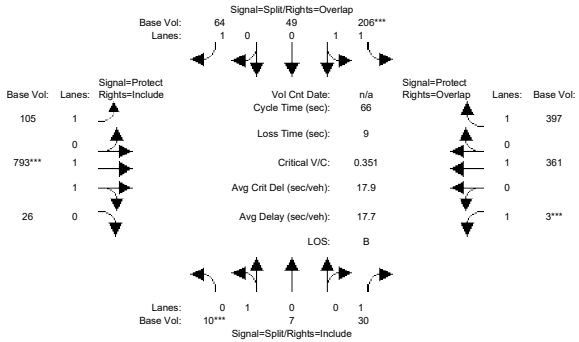
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
04 AM NearTerm

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	10	7	30	206	49	64	105	793	26	3	361	397
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:	10	7	30	206	49	64	105	793	26	3	361	397
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:	10	7	30	206	49	64	105	793	26	3	361	397
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	7	30	206	49	64	105	793	26	3	361	397
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:	10	7	30	206	49	64	105	793	26	3	361	397
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.89	0.96	0.78	0.88	1.00	0.92	0.88	1.00	0.78
Lanes:	0.61	0.39	1.00	1.64	0.36	1.00	1.00	1.93	0.07	1.00	1.00	1.00
Final Sat.:	1033	723	1488	2759	656	1488	1663	3651	120	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.02	0.07	0.07	0.04	0.06	0.22	0.22	0.00	0.19	0.27
Crit Moves:	****			****				****			****	
Green Time:	10.0	10.0	10.0	10.0	10.0	26.3	16.3	27.0	27.0	10.0	20.7	30.7
Volume/Cap:	0.06	0.06	0.13	0.49	0.49	0.11	0.26	0.53	0.53	0.01	0.61	0.57
Delay/Veh:	24.1	24.1	24.5	26.4	26.4	12.6	20.3	15.1	15.1	23.8	21.0	14.1
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:	24.1	24.1	24.5	26.4	26.4	12.6	20.3	15.1	15.1	23.8	21.0	14.1
LOS by Move:	C	C	C	C	C	B	C+	B	B	C	C+	B
HCM2kAvgQ:	0	0	1	3	3	1	2	6	6	0	6	6

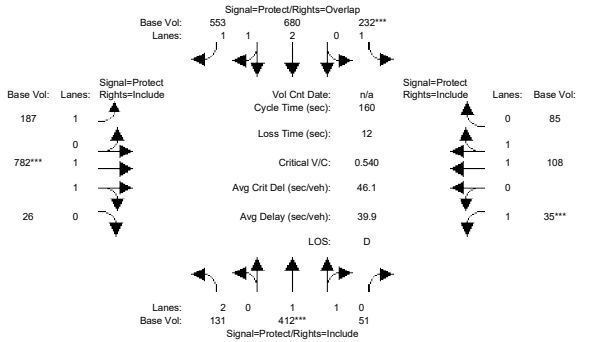
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
04 AM NearTerm

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	131	412	51	232	680	553	187	782	26	35	108	85
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:	131	412	51	232	680	553	187	782	26	35	108	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:	131	412	51	232	680	553	187	782	26	35	108	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	412	51	232	680	553	187	782	26	35	108	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:	131	412	51	232	680	553	187	782	26	35	108	85
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.91	0.88	0.93	0.86	0.88	1.00	0.92	0.88	0.93	0.86
Lanes:	2.00	1.76	0.24	1.00	2.12	1.88	1.00	1.93	0.07	1.00	1.08	0.92
Final Sat.:	2992	3296	408	1663	3766	3062	1663	3649	121	1663	1914	1506
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.12	0.14	0.18	0.18	0.11	0.21	0.21	0.02	0.06	0.06
Crit Moves:		****		****				****		****		
Green Time:	15.2	36.8	36.8	41.1	62.7	107.8	45.1	63.1	63.1	7.0	25.0	25.0
Volume/Cap:	0.46	0.54	0.54	0.54	0.46	0.27	0.40	0.54	0.54	0.48	0.36	0.36
Delay/Veh:	69.7	54.9	54.9	52.8	36.2	10.4	47.1	37.8	37.8	79.7	60.7	60.7
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:	69.7	54.9	54.9	52.8	36.2	10.4	47.1	37.8	37.8	79.7	60.7	60.7
LOS by Move:	E	D-	D-	D-	D+	B+	D	D+	D+	E-	E	E
HCM2kAvgQ:	4	10	10	11	11	6	8	15	15	2	5	5

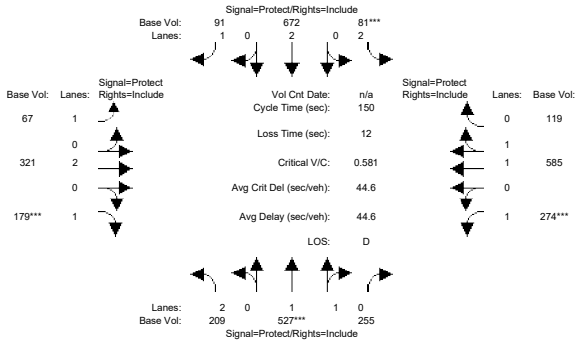
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
04 AM NearTerm

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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	527	255	81	672	91	67	321	179	274	585	119
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	527	255	81	672	91	67	321	179	274	585	119
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	527	255	81	672	91	67	321	179	274	585	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	209	527	255	81	672	91	67	321	179	274	585	119
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	527	255	81	672	91	67	321	179	274	585	119
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.95	0.88	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.98	0.90
Lanes:	2.00	1.31	0.69	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.64	0.36
Final Sat.:	2992	2369	1146	2992	3800	1488	1663	3800	1488	1663	3035	617
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.22	0.03	0.18	0.06	0.04	0.08	0.12	0.16	0.19	0.19
Crit Moves:		****		****					****	****		
Green Time:	18.2	57.4	57.4	7.0	46.2	46.2	14.3	31.1	31.1	42.5	59.2	59.2
Volume/Cap:	0.57	0.58	0.58	0.58	0.57	0.20	0.42	0.41	0.58	0.58	0.49	0.49
Delay/Veh:	64.5	37.4	37.4	76.1	44.4	38.5	65.7	51.9	56.4	47.9	34.3	34.3
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:	64.5	37.4	37.4	76.1	44.4	38.5	65.7	51.9	56.4	47.9	34.3	34.3
LOS by Move:	E	D+	D+	E-	D	D+	E	D-	E+	D	C-	C-
HCM2kAvgQ:	6	15	15	3	13	3	3	6	8	12	12	12

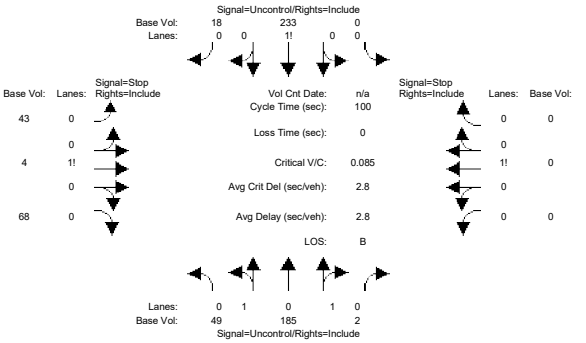
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
05 SchPM NearTerm

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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  185    2     0  233   18    43    4   68     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:    49  185    2     0  233   18    43    4   68     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:     49  185    2     0  233   18    43    4   68     0    0     0
Reduct Vol:      0    0    0     0    0    0     0    0    0     0    0     0
FinalVolume:    49  185    2     0  233   18    43    4   68     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  251 xxxx xxxxx  xxxx xxxx xxxxx   433  527   242   562  535    94
Potent Cap.: 1326 xxxx xxxxx  xxxx xxxx xxxxx   584  459   802   441  454   969
Move Cap.:   1326 xxxx xxxxx  xxxx xxxx xxxxx   567  442   802   389  437   969
Volume/Cap:  0.04 xxxx  xxxx  xxxx xxxx  xxxx  0.08 0.01  0.08  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  678 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.6 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.4 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     B     *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           11.4          xxxxxx
ApproachLOS:         *                *             B              *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0     0  0  0  1  0     0  0  1! 0  0     0  0  1! 0  0
Initial Vol:    49  185    2     0  233   18    43    4   68     0    0     0
ApproachDel:     xxxxxx           xxxxxx           11.4          xxxxxx
------------|---------------||---------------||---------------||---------------|
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=115]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=602]
   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).

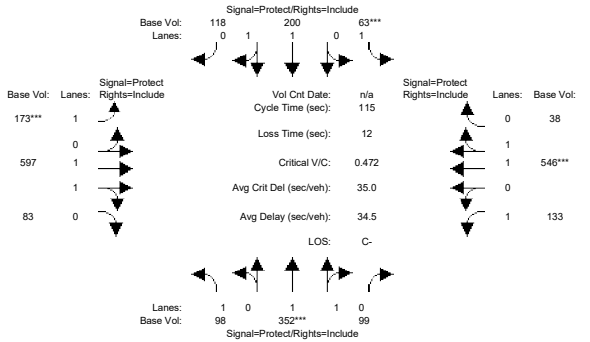
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0     0  0  0  1  0     0  0  1! 0  0     0  0  1! 0  0
Initial Vol:    49  185    2     0  233   18    43    4   68     0    0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             487
Minor Approach Volume:           115
Minor Approach Volume Threshold: 533
--------------------------------------------------------------------------------
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.
```

School PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
05 SchPM NearTerm

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	98	352	99	63	200	118	173	597	83	133	546	38
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:	98	352	99	63	200	118	173	597	83	133	546	38
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:	98	352	99	63	200	118	173	597	83	133	546	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	352	99	63	200	118	173	597	83	133	546	38
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:	98	352	99	63	200	118	173	597	83	133	546	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.97	0.89	0.88	0.94	0.87	0.88	0.98	0.90	0.88	0.99	0.91
Lanes:	1.00	1.53	0.47	1.00	1.22	0.78	1.00	1.74	0.26	1.00	1.86	0.14
Final Sat.:	1663	2815	792	1663	2187	1290	1663	3242	451	1663	3498	243
Capacity Analysis Module:												
Vol/Sat:	0.06	0.13	0.13	0.04	0.09	0.09	0.10	0.18	0.18	0.08	0.16	0.16
Crit Moves:		****		****			****				****	
Green Time:	15.8	30.4	30.4	9.2	23.8	23.8	25.3	44.2	44.2	19.2	38.0	38.0
Volume/Cap:	0.43	0.47	0.47	0.47	0.44	0.44	0.47	0.48	0.48	0.48	0.47	0.47
Delay/Veh:	46.7	35.9	35.9	53.2	40.2	40.2	40.0	27.0	27.0	44.7	30.8	30.8
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:	46.7	35.9	35.9	53.2	40.2	40.2	40.0	27.0	27.0	44.7	30.8	30.8
LOS by Move:	D	D+	D+	D-	D	D	D	C	C	D	C	C
HCM2kAvgQ:	4	7	7	3	5	5	6	9	9	5	8	8

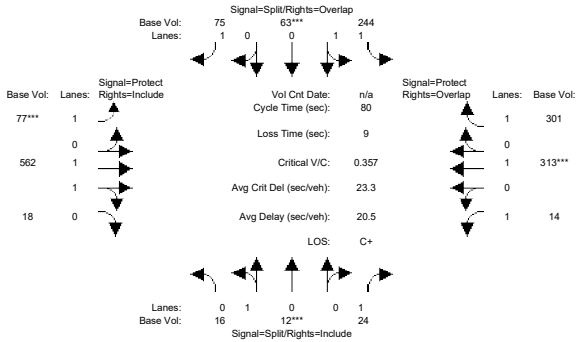
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
05 SchPM NearTerm

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	16	12	24	244	63	75	77	562	18	14	313	301
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:	16	12	24	244	63	75	77	562	18	14	313	301
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:	16	12	24	244	63	75	77	562	18	14	313	301
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	12	24	244	63	75	77	562	18	14	313	301
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:	16	12	24	244	63	75	77	562	18	14	313	301
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.97	0.78	0.89	0.96	0.78	0.88	1.00	0.92	0.88	1.00	0.78
Lanes:	0.59	0.41	1.00	1.62	0.38	1.00	1.00	1.93	0.07	1.00	1.00	1.00
Final Sat.:	1006	755	1488	2720	702	1488	1663	3654	117	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.09	0.09	0.05	0.05	0.15	0.15	0.01	0.16	0.20
Crit Moves:		****			****		****				****	
Green Time:	10.0	10.0	10.0	18.0	18.0	28.0	10.0	23.7	23.7	19.3	33.0	51.0
Volume/Cap:	0.13	0.13	0.13	0.40	0.40	0.14	0.37	0.52	0.52	0.03	0.40	0.32
Delay/Veh:	31.4	31.4	31.4	26.8	26.8	17.9	33.2	23.8	23.8	23.3	16.9	6.8
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:	31.4	31.4	31.4	26.8	26.8	17.9	33.2	23.8	23.8	23.3	16.9	6.8
LOS by Move:	C	C	C	C	C	B	C-	C	C	C	B	A
HCM2kAvgQ:	1	1	1	4	4	1	2	6	6	0	5	4

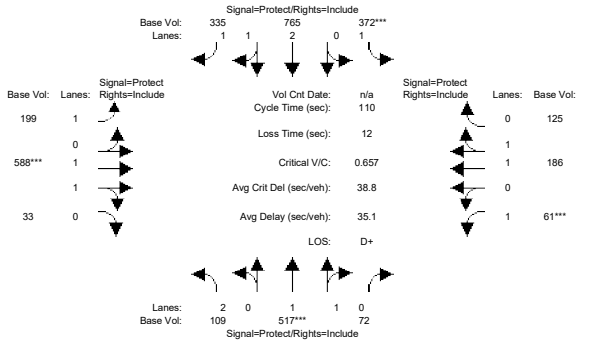
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
05 SchPM NearTerm

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	109	517	72	372	765	335	199	588	33	61	186	125
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:	109	517	72	372	765	335	199	588	33	61	186	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	109	517	72	372	765	335	199	588	33	61	186	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	517	72	372	765	335	199	588	33	61	186	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	109	517	72	372	765	335	199	588	33	61	186	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.90	0.88	0.95	0.88	0.88	0.99	0.91	0.88	0.94	0.87
Lanes:	2.00	1.74	0.26	1.00	2.71	1.29	1.00	1.89	0.11	1.00	1.16	0.84
Final Sat.:	2992	3241	451	1663	4914	2152	1663	3553	199	1663	2065	1388
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.16	0.22	0.16	0.16	0.12	0.17	0.17	0.04	0.09	0.09
Crit Moves:		****		****				****			****	
Green Time:	18.4	26.4	26.4	37.1	45.1	45.1	19.6	27.4	27.4	7.0	14.9	14.9
Volume/Cap:	0.22	0.66	0.66	0.66	0.38	0.38	0.67	0.66	0.66	0.58	0.67	0.67
Delay/Veh:	39.8	39.6	39.6	34.1	22.7	22.7	48.2	38.9	38.9	57.7	48.9	48.9
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:	39.8	39.6	39.6	34.1	22.7	22.7	48.2	38.9	38.9	57.7	48.9	48.9
LOS by Move:	D	D	D	C-	C+	C+	D	D+	D+	E+	D	D
HCM2kAvgQ:	2	9	9	12	7	7	7	9	9	3	6	6

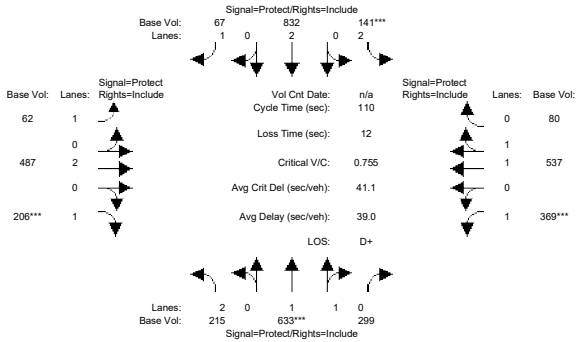
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
05 SchPM NearTerm

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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:	215	633	299	141	832	67	62	487	206	369	537	80
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:	215	633	299	141	832	67	62	487	206	369	537	80
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:	215	633	299	141	832	67	62	487	206	369	537	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	633	299	141	832	67	62	487	206	369	537	80
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:	215	633	299	141	832	67	62	487	206	369	537	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.95	0.88	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.98	0.90
Lanes:	2.00	1.32	0.68	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.72	0.28
Final Sat.:	2992	2391	1130	2992	3800	1488	1663	3800	1488	1663	3209	478
Capacity Analysis Module:												
Vol/Sat:	0.07	0.26	0.26	0.05	0.22	0.05	0.04	0.13	0.14	0.22	0.17	0.17
Crit Moves:		****		****					****	****		
Green Time:	11.2	38.5	38.5	7.0	34.3	34.3	14.5	20.2	20.2	32.3	38.0	38.0
Volume/Cap:	0.70	0.76	0.76	0.74	0.70	0.14	0.28	0.70	0.76	0.76	0.48	0.48
Delay/Veh:	54.9	34.3	34.3	64.9	35.3	27.4	43.8	45.2	54.0	41.9	28.6	28.6
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:	54.9	34.3	34.3	64.9	35.3	27.4	43.8	45.2	54.0	41.9	28.6	28.6
LOS by Move:	D-	C-	C-	E	D+	C	D	D	D-	D	C	C
HCM2kAvgQ:	6	16	16	4	13	2	2	8	7	14	8	8

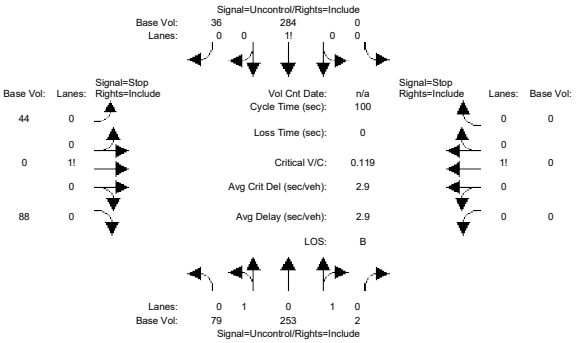
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
06 PM NearTerm

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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:      79  253    2     0  284   36    44    0   88     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:   79  253    2     0  284   36    44    0   88     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:    79  253    2     0  284   36    44    0   88     0    0     0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0     0
FinalVolume:   79  253    2     0  284   36    44    0   88     0    0     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  320 xxxx xxxxx  xxxx xxxx xxxxx   587  715   302   758  732   128
Potent Cap.: 1251 xxxx xxxxx  xxxx xxxx xxxxx   476  359   742   326  351   928
Move Cap.:   1251 xxxx xxxxx  xxxx xxxx xxxxx   452  335   742   273  328   928
Volume/Cap:  0.06 xxxx  xxxx  xxxx xxxx  xxxx  0.10 0.00  0.12  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  611 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.8 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  8.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.5 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     B     *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           12.5          xxxxxx
ApproachLOS:         *                *             B              *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:   79  253     2     0  284    36    44    0    88     0    0     0
ApproachDel:    xxxxxx           xxxxxx             12.5           xxxxxx
------------|--------------||--------------||--------------||--------------|
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=132]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=786]
   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).

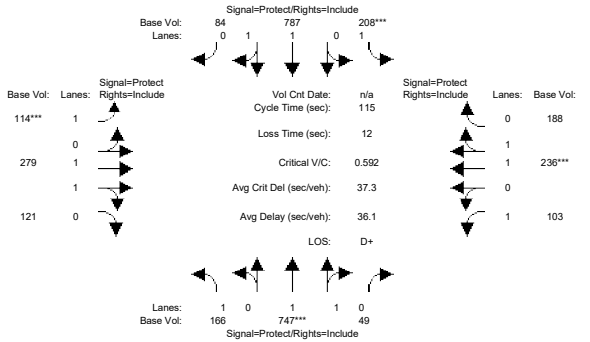
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:   79  253     2     0  284    36    44    0    88     0    0     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             654
Minor Approach Volume:           132
Minor Approach Volume Threshold: 431
--------------------------------------------------------------------------------
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.
```

PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
06 PM NearTerm

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	166	747	49	208	787	84	114	279	121	103	236	188
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:	166	747	49	208	787	84	114	279	121	103	236	188
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:	166	747	49	208	787	84	114	279	121	103	236	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	166	747	49	208	787	84	114	279	121	103	236	188
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:	166	747	49	208	787	84	114	279	121	103	236	188
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.99	0.91	0.88	0.99	0.91	0.88	0.96	0.88	0.88	0.93	0.86
Lanes:	1.00	1.87	0.13	1.00	1.79	0.21	1.00	1.36	0.64	1.00	1.07	0.93
Final Sat.:	1663	3515	231	1663	3358	358	1663	2467	1070	1663	1903	1516
Capacity Analysis Module:												
Vol/Sat:	0.10	0.21	0.21	0.13	0.23	0.23	0.07	0.11	0.11	0.06	0.12	0.12
Crit Moves:		****			****			****			****	
Green Time:	19.6	41.3	41.3	24.3	46.0	46.0	13.3	24.2	24.2	13.2	24.1	24.1
Volume/Cap:	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.54	0.54	0.54	0.59	0.59
Delay/Veh:	47.1	30.7	30.7	43.6	27.7	27.7	53.1	41.2	41.2	51.0	42.3	42.3
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:	47.1	30.7	30.7	43.6	27.7	27.7	53.1	41.2	41.2	51.0	42.3	42.3
LOS by Move:	D	C	C	D	C	C	D-	D	D	D-	D	D
HCM2kAvgQ:	7	12	12	8	12	12	5	7	7	4	7	7

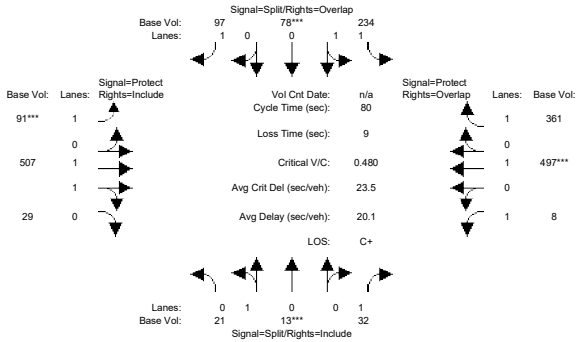
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
06 PM NearTerm

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	21	13	32	234	78	97	91	507	29	8	497	361
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:	21	13	32	234	78	97	91	507	29	8	497	361
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:	21	13	32	234	78	97	91	507	29	8	497	361
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	13	32	234	78	97	91	507	29	8	497	361
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:	21	13	32	234	78	97	91	507	29	8	497	361
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.89	0.96	0.78	0.88	0.99	0.91	0.88	1.00	0.78
Lanes:	0.64	0.36	1.00	1.53	0.47	1.00	1.00	1.88	0.12	1.00	1.00	1.00
Final Sat.:	1081	669	1488	2581	860	1488	1663	3549	203	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.09	0.09	0.07	0.05	0.14	0.14	0.00	0.26	0.24
Crit Moves:		****			****			****			****	
Green Time:	10.0	10.0	10.0	13.1	13.1	23.1	10.0	25.5	25.5	22.3	37.9	51.0
Volume/Cap:	0.16	0.16	0.17	0.55	0.55	0.23	0.44	0.45	0.45	0.02	0.55	0.38
Delay/Veh:	31.6	31.6	31.7	31.9	31.9	21.9	33.9	21.9	21.9	20.9	15.8	7.2
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:	31.6	31.6	31.7	31.9	31.9	21.9	33.9	21.9	21.9	20.9	15.8	7.2
LOS by Move:	C	C	C	C	C	C+	C-	C+	C+	C+	B	A
HCM2kAvgQ:	1	1	1	5	5	2	2	5	5	0	8	4

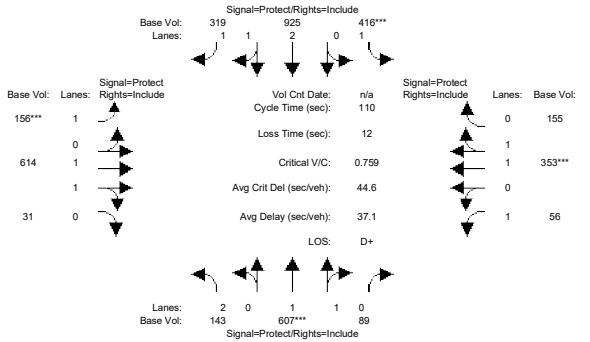
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
06 PM NearTerm

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	143	607	89	416	925	319	156	614	31	56	353	155
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:	143	607	89	416	925	319	156	614	31	56	353	155
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:	143	607	89	416	925	319	156	614	31	56	353	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	607	89	416	925	319	156	614	31	56	353	155
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:	143	607	89	416	925	319	156	614	31	56	353	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.90	0.88	0.96	0.89	0.88	0.99	0.91	0.88	0.95	0.88
Lanes:	2.00	1.73	0.27	1.00	2.91	1.09	1.00	1.90	0.10	1.00	1.35	0.65
Final Sat.:	2992	3216	472	1663	5319	1834	1663	3577	181	1663	2455	1078
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.19	0.25	0.17	0.17	0.09	0.17	0.17	0.03	0.14	0.14
Crit Moves:		****		****			****				****	
Green Time:	17.0	27.3	27.3	36.2	46.5	46.5	13.6	25.1	25.1	9.3	20.8	20.8
Volume/Cap:	0.31	0.76	0.76	0.76	0.41	0.41	0.76	0.75	0.75	0.40	0.76	0.76
Delay/Veh:	41.6	42.0	42.0	39.1	22.2	22.2	61.8	43.3	43.3	49.5	47.3	47.3
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:	41.6	42.0	42.0	39.1	22.2	22.2	61.8	43.3	43.3	49.5	47.3	47.3
LOS by Move:	D	D	D	D	C+	C+	E	D	D	D	D	D
HCM2kAvgQ:	2	11	11	15	7	7	6	10	10	2	10	10

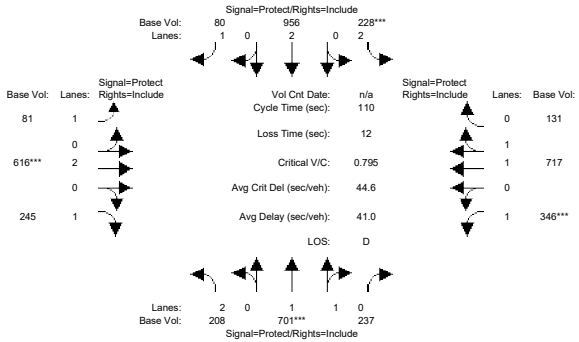
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Near-Term Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
06 PM NearTerm

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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	701	237	228	956	80	81	616	245	346	717	131
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	701	237	228	956	80	81	616	245	346	717	131
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	701	237	228	956	80	81	616	245	346	717	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	701	237	228	956	80	81	616	245	346	717	131
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	701	237	228	956	80	81	616	245	346	717	131
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.96	0.89	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.98	0.90
Lanes:	2.00	1.46	0.54	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.67	0.33
Final Sat.:	2992	2674	904	2992	3800	1488	1663	3800	1488	1663	3098	566
Capacity Analysis Module:												
Vol/Sat:	0.07	0.26	0.26	0.08	0.25	0.05	0.05	0.16	0.16	0.21	0.23	0.23
Crit Moves:		****		****				****		****		
Green Time:	10.1	36.3	36.3	10.5	36.7	36.7	11.0	22.4	22.4	28.8	40.2	40.2
Volume/Cap:	0.75	0.80	0.80	0.80	0.75	0.16	0.49	0.80	0.81	0.80	0.63	0.63
Delay/Veh:	60.0	37.3	37.3	62.9	35.3	26.0	49.0	47.3	56.5	47.6	29.9	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:	60.0	37.3	37.3	62.9	35.3	26.0	49.0	47.3	56.5	47.6	29.9	29.9
LOS by Move:	E+	D+	D+	E	D+	C	D	D	E+	D	C	C
HCM2kAvgQ:	6	17	17	7	16	2	3	10	9	14	12	12

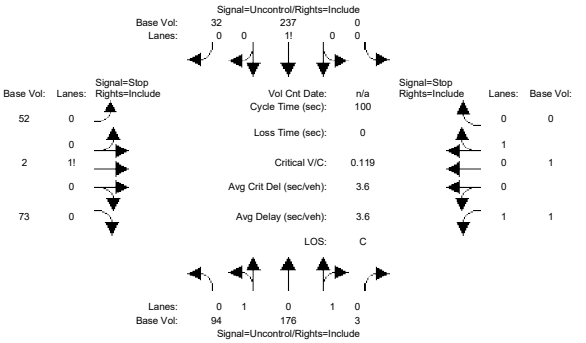
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
07 AM Ex_Proj

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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:       94  176     3     0  237    32    52    2    73     1    1     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    94  176     3     0  237    32    52    2    73     1    1     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     94  176     3     0  237    32    52    2    73     1    1     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    94  176     3     0  237    32    52    2    73     1    1     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  269 xxxx xxxxx  xxxx xxxx xxxxx   530  620   253   656  635    90
Potent Cap.: 1306 xxxx xxxxx  xxxx xxxx xxxxx   463  407   791   382  399   974
Move Cap.:   1306 xxxx xxxxx  xxxx xxxx xxxxx   435  376   791   325  369   974
Volume/Cap:  0.07 xxxx  xxxx  xxxx xxxx  xxxx  0.12 0.01  0.09  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx
Control Del:  8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  16.1 xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     C    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  585 xxxxx  xxxx xxxx   369
SharedQueue:  0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.8 xxxxx xxxxx xxxx   0.0
Shrd ConDel:  8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.9 xxxxx xxxxx xxxx  14.8
Shared LOS:     A    *     *     *    *     *     B     *     *    *     B
ApproachDel:    xxxxxx           xxxxxx           12.9           15.5
ApproachLOS:         *                *             B              C
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    1  0  0  1  0
Initial Vol:   94  176     3     0  237    32    52    2    73     1    1     0
ApproachDel:    xxxxxx           xxxxxx           12.9           15.5
------------|--------------||--------------||--------------||--------------|
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=127]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=671]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=2]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=671]
   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).

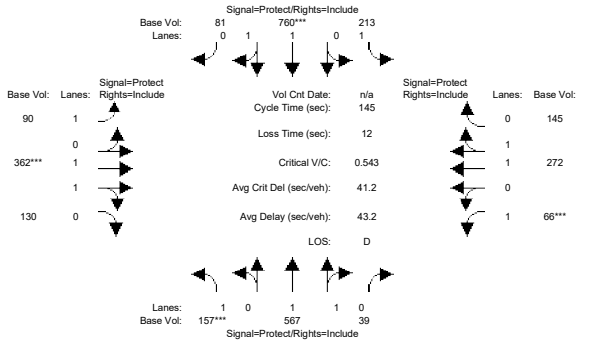
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    1  0  0  1  0
Initial Vol:   94  176     3     0  237    32    52    2    73     1    1     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             542
Minor Approach Volume:           127
Minor Approach Volume Threshold: 496
--------------------------------------------------------------------------------
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.
```

AM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
07 AM Ex_Proj

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	157	567	39	213	760	81	90	362	130	66	272	145
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:	157	567	39	213	760	81	90	362	130	66	272	145
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:	157	567	39	213	760	81	90	362	130	66	272	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	567	39	213	760	81	90	362	130	66	272	145
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:	157	567	39	213	760	81	90	362	130	66	272	145
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.99	0.91	0.88	0.99	0.91	0.88	0.96	0.88	0.88	0.95	0.87
Lanes:	1.00	1.86	0.14	1.00	1.79	0.21	1.00	1.44	0.56	1.00	1.27	0.73
Final Sat.:	1663	3501	241	1663	3358	358	1663	2625	943	1663	2282	1216
Capacity Analysis Module:												
Vol/Sat:	0.09	0.16	0.16	0.13	0.23	0.23	0.05	0.14	0.14	0.04	0.12	0.12
Crit Moves:	****				****			****			****	
Green Time:	25.2	47.8	47.8	37.8	60.4	60.4	14.8	36.8	36.8	10.6	32.6	32.6
Volume/Cap:	0.54	0.49	0.49	0.49	0.54	0.54	0.53	0.54	0.54	0.54	0.53	0.53
Delay/Veh:	56.8	39.2	39.2	46.3	32.3	32.3	65.0	47.5	47.5	69.8	50.2	50.2
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:	56.8	39.2	39.2	46.3	32.3	32.3	65.0	47.5	47.5	69.8	50.2	50.2
LOS by Move:	E+	D	D	D	C-	C-	E	D	D	E	D	D
HCM2kAvgQ:	7	11	11	9	14	14	5	10	10	3	8	8

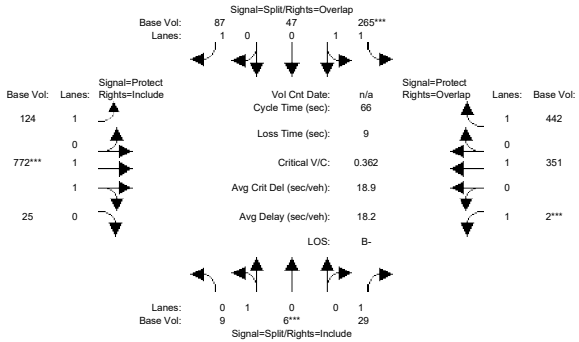
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
07 AM Ex_Proj

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	9	6	29	265	47	87	124	772	25	2	351	442
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:	9	6	29	265	47	87	124	772	25	2	351	442
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:	9	6	29	265	47	87	124	772	25	2	351	442
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	6	29	265	47	87	124	772	25	2	351	442
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:	9	6	29	265	47	87	124	772	25	2	351	442
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.88	0.96	0.78	0.88	1.00	0.92	0.88	1.00	0.78
Lanes:	0.62	0.38	1.00	1.72	0.28	1.00	1.00	1.93	0.07	1.00	1.00	1.00
Final Sat.:	1053	702	1488	2885	512	1488	1663	3653	118	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.02	0.09	0.09	0.06	0.07	0.21	0.21	0.00	0.18	0.30
Crit Moves:		****			****			****			****	
Green Time:	10.0	10.0	10.0	11.2	11.2	26.4	15.2	25.8	25.8	10.0	20.6	31.8
Volume/Cap:	0.06	0.06	0.13	0.54	0.54	0.15	0.32	0.54	0.54	0.01	0.59	0.62
Delay/Veh:	24.1	24.1	24.5	26.1	26.1	12.7	21.6	15.9	15.9	23.8	20.8	14.2
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:	24.1	24.1	24.5	26.1	26.1	12.7	21.6	15.9	15.9	23.8	20.8	14.2
LOS by Move:	C	C	C	C	C	B	C+	B	B	C	C+	B
HCM2kAvgQ:	0	0	1	4	4	1	2	6	6	0	6	7

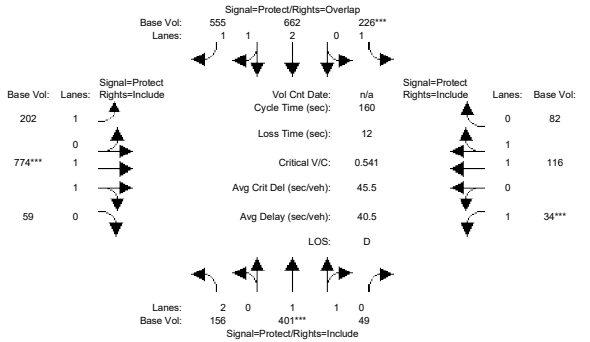
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
07 AM Ex_Proj

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	156	401	49	226	662	555	202	774	59	34	116	82
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:	156	401	49	226	662	555	202	774	59	34	116	82
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:	156	401	49	226	662	555	202	774	59	34	116	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	156	401	49	226	662	555	202	774	59	34	116	82
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:	156	401	49	226	662	555	202	774	59	34	116	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.91	0.88	0.93	0.86	0.88	0.99	0.91	0.88	0.94	0.86
Lanes:	2.00	1.77	0.23	1.00	2.09	1.91	1.00	1.85	0.15	1.00	1.13	0.87
Final Sat.:	2992	3301	403	1663	3708	3109	1663	3471	265	1663	2017	1426
Capacity Analysis Module:												
Vol/Sat:	0.05	0.12	0.12	0.14	0.18	0.18	0.12	0.22	0.22	0.02	0.06	0.06
Crit Moves:		****		****				****		****		
Green Time:	17.1	35.7	35.7	39.9	58.5	106.3	47.8	65.4	65.4	7.0	24.6	24.6
Volume/Cap:	0.49	0.55	0.55	0.55	0.49	0.27	0.41	0.55	0.55	0.47	0.37	0.37
Delay/Veh:	68.5	55.8	55.8	53.7	39.4	11.0	45.3	36.4	36.4	79.4	61.2	61.2
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:	68.5	55.8	55.8	53.7	39.4	11.0	45.3	36.4	36.4	79.4	61.2	61.2
LOS by Move:	E	E+	E+	D-	D	B+	D	D+	D+	E-	E	E
HCM2kAvgQ:	4	10	10	11	12	6	8	15	15	2	5	5

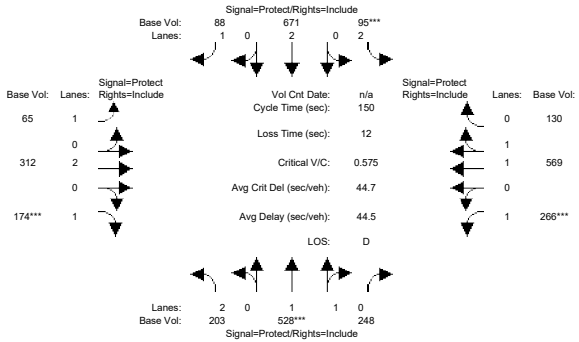
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
07 AM Ex_Proj

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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:	203	528	248	95	671	88	65	312	174	266	569	130
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:	203	528	248	95	671	88	65	312	174	266	569	130
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:	203	528	248	95	671	88	65	312	174	266	569	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	528	248	95	671	88	65	312	174	266	569	130
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:	203	528	248	95	671	88	65	312	174	266	569	130
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.95	0.88	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.97	0.90
Lanes:	2.00	1.32	0.68	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.60	0.40
Final Sat.:	2992	2396	1125	2992	3800	1488	1663	3800	1488	1663	2959	676
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.22	0.03	0.18	0.06	0.04	0.08	0.12	0.16	0.19	0.19
Crit Moves:		****		****					****	****		
Green Time:	18.3	57.5	57.5	8.3	47.5	47.5	14.1	30.5	30.5	41.7	58.1	58.1
Volume/Cap:	0.56	0.58	0.58	0.58	0.56	0.19	0.42	0.40	0.58	0.58	0.50	0.50
Delay/Veh:	64.0	37.2	37.2	74.0	43.1	37.4	65.8	52.2	56.6	48.3	35.1	35.1
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:	64.0	37.2	37.2	74.0	43.1	37.4	65.8	52.2	56.6	48.3	35.1	35.1
LOS by Move:	E	D+	D+	E	D	D+	E	D-	E+	D	D+	D+
HCM2kAvgQ:	6	14	14	3	13	3	3	6	8	12	12	12

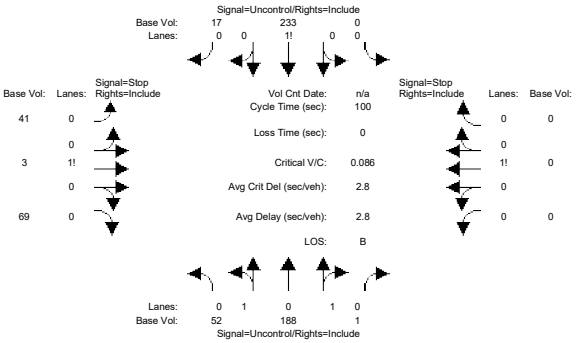
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
08 SchPM Ex_Proj

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:            Fabian Wy                       Meadow Dr
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  188    1     0  233   17    41    3   69     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:    52  188    1     0  233   17    41    3   69     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:     52  188    1     0  233   17    41    3   69     0    0     0
Reduct Vol:      0    0    0     0    0    0     0    0    0     0    0     0
FinalVolume:    52  188    1     0  233   17    41    3   69     0    0     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  250 xxxx xxxxx  xxxx xxxx xxxxx   440  535   242   570  543    95
Potent Cap.: 1327 xxxx xxxxx  xxxx xxxx xxxxx   579  455   802   435  450   968
Move Cap.:   1327 xxxx xxxxx  xxxx xxxx xxxxx   561  436   802   384  432   968
Volume/Cap:  0.04 xxxx  xxxx  xxxx xxxx  xxxx  0.07 0.01  0.09  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  681 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.6 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.3 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     B     *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           11.3          xxxxxx
ApproachLOS:         *                *             B              *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    52  188     1     0  233    17    41    3    69     0    0     0
ApproachDel:     xxxxxx           xxxxxx             11.3           xxxxxx
------------|--------------||--------------||--------------||--------------|
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=113]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=604]
   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).

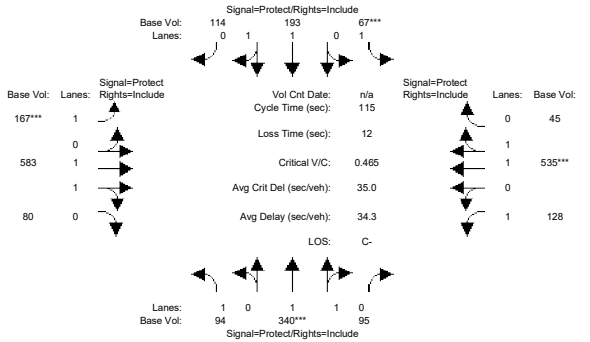
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    52  188     1     0  233    17    41    3    69     0    0     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:              491
Minor Approach Volume:            113
Minor Approach Volume Threshold: 530
--------------------------------------------------------------------------------
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.
```

School PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
08 SchPM Ex_Proj

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	94	340	95	67	193	114	167	583	80	128	535	45
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:	94	340	95	67	193	114	167	583	80	128	535	45
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:	94	340	95	67	193	114	167	583	80	128	535	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	340	95	67	193	114	167	583	80	128	535	45
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:	94	340	95	67	193	114	167	583	80	128	535	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.97	0.89	0.88	0.94	0.87	0.88	0.98	0.90	0.88	0.99	0.91
Lanes:	1.00	1.53	0.47	1.00	1.22	0.78	1.00	1.74	0.26	1.00	1.83	0.17
Final Sat.:	1663	2819	788	1663	2186	1291	1663	3248	446	1663	3440	289
Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.12	0.04	0.09	0.09	0.10	0.18	0.18	0.08	0.16	0.16
Crit Moves:		****		****			****				****	
Green Time:	16.2	29.8	29.8	10.0	23.5	23.5	24.8	44.3	44.3	19.0	38.4	38.4
Volume/Cap:	0.40	0.47	0.47	0.47	0.43	0.43	0.47	0.47	0.47	0.47	0.47	0.47
Delay/Veh:	46.1	36.3	36.3	52.4	40.3	40.3	40.3	26.8	26.8	44.7	30.5	30.5
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:	46.1	36.3	36.3	52.4	40.3	40.3	40.3	26.8	26.8	44.7	30.5	30.5
LOS by Move:	D	D+	D+	D-	D	D	D	C	C	D	C	C
HCM2kAvgQ:	4	7	7	3	5	5	6	9	9	4	8	8

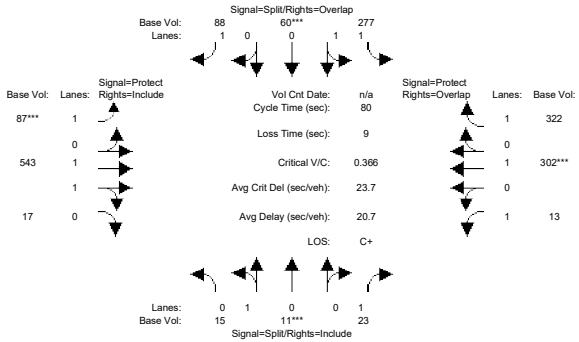
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
08 SchPM Ex_Proj

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	15	11	23	277	60	88	87	543	17	13	302	322
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	11	23	277	60	88	87	543	17	13	302	322
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	11	23	277	60	88	87	543	17	13	302	322
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	11	23	277	60	88	87	543	17	13	302	322
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	11	23	277	60	88	87	543	17	13	302	322
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.97	0.78	0.89	0.96	0.78	0.88	1.00	0.92	0.88	1.00	0.78
Lanes:	0.60	0.40	1.00	1.67	0.33	1.00	1.00	1.93	0.07	1.00	1.00	1.00
Final Sat.:	1015	745	1488	2804	607	1488	1663	3660	115	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.02	0.10	0.10	0.06	0.05	0.15	0.15	0.01	0.16	0.22
Crit Moves:		****			****		****				****	
Green Time:	10.0	10.0	10.0	19.4	19.4	29.7	10.3	22.6	22.6	19.0	31.3	50.7
Volume/Cap:	0.12	0.12	0.12	0.41	0.41	0.16	0.41	0.53	0.53	0.03	0.41	0.34
Delay/Veh:	31.3	31.3	31.4	25.8	25.8	16.9	33.3	24.7	24.7	23.5	18.0	7.1
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:	31.3	31.3	31.4	25.8	25.8	16.9	33.3	24.7	24.7	23.5	18.0	7.1
LOS by Move:	C	C	C	C	C	B	C-	C	C	C	B-	A
HCM2kAvgQ:	1	1	1	4	4	2	2	6	6	0	5	4

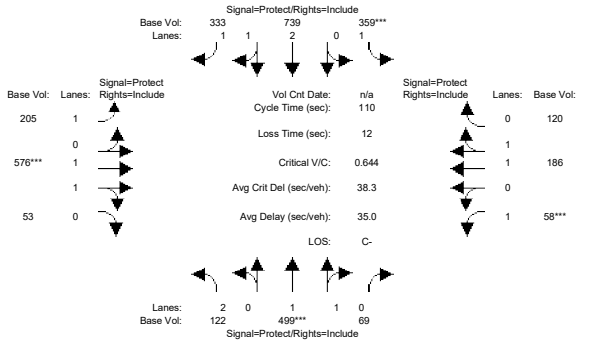
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
08 SchPM Ex_Proj

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	122	499	69	359	739	333	205	576	53	58	186	120
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:	122	499	69	359	739	333	205	576	53	58	186	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	122	499	69	359	739	333	205	576	53	58	186	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	499	69	359	739	333	205	576	53	58	186	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	122	499	69	359	739	333	205	576	53	58	186	120
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.90	0.88	0.95	0.88	0.88	0.99	0.91	0.88	0.94	0.87
Lanes:	2.00	1.74	0.26	1.00	2.69	1.31	1.00	1.82	0.18	1.00	1.18	0.82
Final Sat.:	2992	3245	449	1663	4863	2192	1663	3410	314	1663	2103	1357
Capacity Analysis Module:												
Vol/Sat:	0.04	0.15	0.15	0.22	0.15	0.15	0.12	0.17	0.17	0.03	0.09	0.09
Crit Moves:		****		****				****		****		
Green Time:	18.4	26.0	26.0	36.5	44.0	44.0	20.5	28.5	28.5	7.0	15.1	15.1
Volume/Cap:	0.24	0.65	0.65	0.65	0.38	0.38	0.66	0.65	0.65	0.55	0.65	0.65
Delay/Veh:	40.0	39.7	39.7	34.1	23.4	23.4	46.9	37.9	37.9	55.9	48.0	48.0
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:	40.0	39.7	39.7	34.1	23.4	23.4	46.9	37.9	37.9	55.9	48.0	48.0
LOS by Move:	D	D	D	C-	C	C	D	D+	D+	E+	D	D
HCM2kAvgQ:	2	9	9	12	7	7	7	9	9	3	6	6

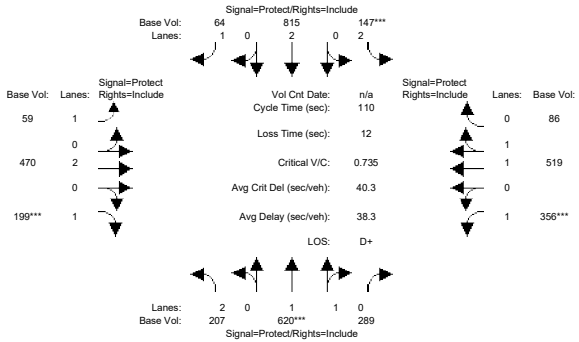
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
08 SchPM Ex_Proj

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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:	207	620	289	147	815	64	59	470	199	356	519	86
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:	207	620	289	147	815	64	59	470	199	356	519	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:	207	620	289	147	815	64	59	470	199	356	519	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	207	620	289	147	815	64	59	470	199	356	519	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:	207	620	289	147	815	64	59	470	199	356	519	86
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.95	0.88	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.98	0.90
Lanes:	2.00	1.33	0.67	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.70	0.30
Final Sat.:	2992	2402	1120	2992	3800	1488	1663	3800	1488	1663	3153	522
Capacity Analysis Module:												
Vol/Sat:	0.07	0.26	0.26	0.05	0.21	0.04	0.04	0.12	0.13	0.21	0.16	0.16
Crit Moves:		****		****					****	****		
Green Time:	11.2	38.6	38.6	7.3	34.8	34.8	14.5	20.0	20.0	32.0	37.5	37.5
Volume/Cap:	0.68	0.74	0.74	0.74	0.68	0.14	0.27	0.68	0.74	0.74	0.48	0.48
Delay/Veh:	53.7	33.6	33.6	63.6	34.4	27.0	43.6	44.8	52.5	41.0	28.9	28.9
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:	53.7	33.6	33.6	63.6	34.4	27.0	43.6	44.8	52.5	41.0	28.9	28.9
LOS by Move:	D-	C-	C-	E	C-	C	D	D	D-	D	C	C
HCM2kAvgQ:	5	15	15	5	13	2	2	7	7	13	8	8

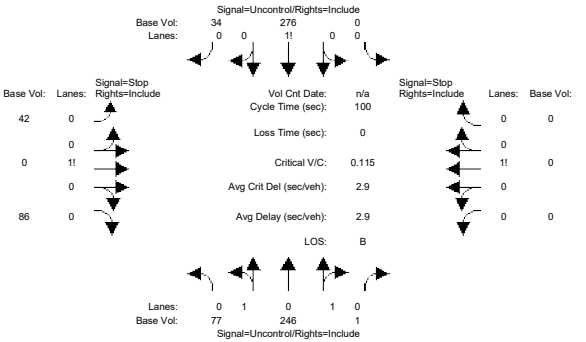
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
09 PM Ex_Proj

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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:       77  246     1     0  276    34    42    0    86     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:    77  246     1     0  276    34    42    0    86     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:     77  246     1     0  276    34    42    0    86     0    0     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    77  246     1     0  276    34    42    0    86     0    0     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  310 xxxx xxxxx  xxxx xxxx xxxxx   570  694   293   737  711   124
Potent Cap.: 1262 xxxx xxxxx  xxxx xxxx xxxxx   486  369   751   337  361   933
Move Cap.:   1262 xxxx xxxxx  xxxx xxxx xxxxx   463  345   751   284  338   933
Volume/Cap:  0.06 xxxx  xxxx  xxxx xxxx  xxxx  0.09 0.00  0.11  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  623 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.8 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.3 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     B     *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           12.3          xxxxxx
ApproachLOS:         *                *             B              *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0     0  0  0  1  0     0  0  1! 0  0     0  0  1! 0  0
Initial Vol:    77  246     1     0  276    34    42    0    86     0    0     0
ApproachDel:     xxxxxx           xxxxxx           12.3          xxxxxx
------------|--------------||--------------||--------------||--------------|
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=128]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=762]
   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).

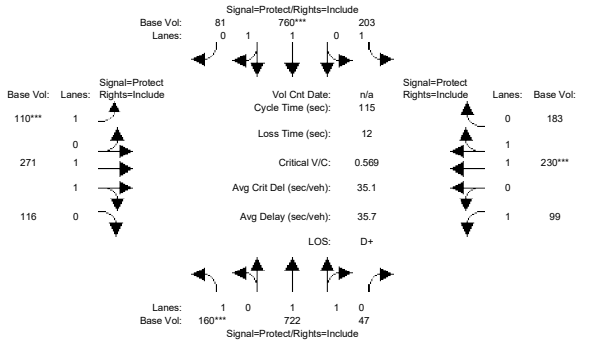
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0     0  0  0  1  0     0  0  1! 0  0     0  0  1! 0  0
Initial Vol:    77  246     1     0  276    34    42    0    86     0    0     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             634
Minor Approach Volume:           128
Minor Approach Volume Threshold: 442
--------------------------------------------------------------------------------
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.
```

PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
09 PM Ex_Proj

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	160	722	47	203	760	81	110	271	116	99	230	183
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	722	47	203	760	81	110	271	116	99	230	183
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	722	47	203	760	81	110	271	116	99	230	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	722	47	203	760	81	110	271	116	99	230	183
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:	160	722	47	203	760	81	110	271	116	99	230	183
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.99	0.91	0.88	0.99	0.91	0.88	0.96	0.88	0.88	0.93	0.86
Lanes:	1.00	1.87	0.13	1.00	1.79	0.21	1.00	1.37	0.63	1.00	1.07	0.93
Final Sat.:	1663	3517	229	1663	3358	358	1663	2478	1061	1663	1904	1515
Capacity Analysis Module:												
Vol/Sat:	0.10	0.21	0.21	0.12	0.23	0.23	0.07	0.11	0.11	0.06	0.12	0.12
Crit Moves:	****				****		****				****	
Green Time:	19.5	40.9	40.9	24.3	45.8	45.8	13.4	24.3	24.3	13.5	24.4	24.4
Volume/Cap:	0.57	0.58	0.58	0.58	0.57	0.57	0.57	0.52	0.52	0.51	0.57	0.57
Delay/Veh:	46.7	30.7	30.7	43.1	27.5	27.5	52.1	40.8	40.8	49.8	41.6	41.6
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:	46.7	30.7	30.7	43.1	27.5	27.5	52.1	40.8	40.8	49.8	41.6	41.6
LOS by Move:	D	C	C	D	C	C	D-	D	D	D	D	D
HCM2kAvgQ:	6	11	11	8	12	12	5	7	7	3	7	7

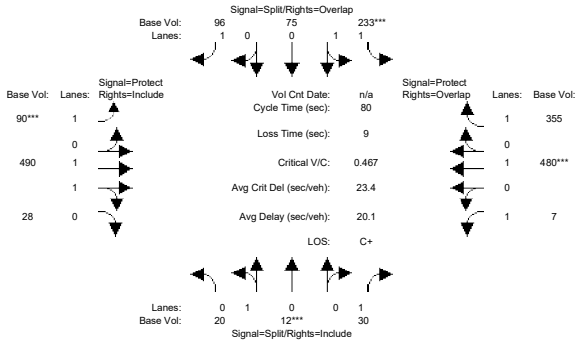
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
09 PM Ex_Proj

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	20	12	30	233	75	96	90	490	28	7	480	355
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:	20	12	30	233	75	96	90	490	28	7	480	355
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	12	30	233	75	96	90	490	28	7	480	355
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	12	30	233	75	96	90	490	28	7	480	355
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	12	30	233	75	96	90	490	28	7	480	355
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.89	0.96	0.78	0.88	0.99	0.91	0.88	1.00	0.78
Lanes:	0.64	0.36	1.00	1.54	0.46	1.00	1.00	1.88	0.12	1.00	1.00	1.00
Final Sat.:	1093	656	1488	2602	838	1488	1663	3549	203	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.09	0.09	0.06	0.05	0.14	0.14	0.00	0.25	0.24
Crit Moves:				****			****				****	
Green Time:	10.0	10.0	10.0	13.3	13.3	23.3	10.0	25.0	25.0	22.6	37.7	51.0
Volume/Cap:	0.15	0.15	0.16	0.54	0.54	0.22	0.43	0.44	0.44	0.01	0.54	0.37
Delay/Veh:	31.5	31.5	31.7	31.5	31.5	21.7	33.8	22.2	22.2	20.7	15.6	7.2
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:	31.5	31.5	31.7	31.5	31.5	21.7	33.8	22.2	22.2	20.7	15.6	7.2
LOS by Move:	C	C	C	C	C	C+	C-	C+	C+	C+	B	A
HCM2kAvgQ:	1	1	1	4	4	2	2	5	5	0	8	4

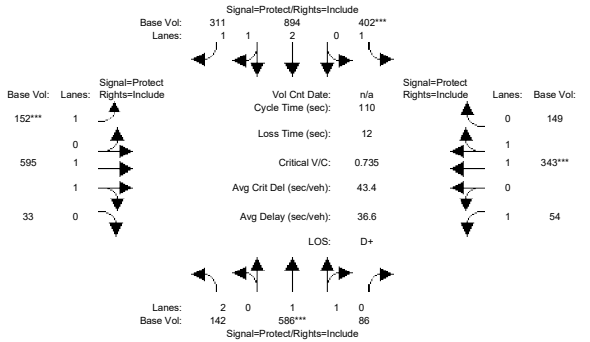
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
09 PM Ex_Proj

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	142	586	86	402	894	311	152	595	33	54	343	149
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:	142	586	86	402	894	311	152	595	33	54	343	149
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:	142	586	86	402	894	311	152	595	33	54	343	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	142	586	86	402	894	311	152	595	33	54	343	149
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:	142	586	86	402	894	311	152	595	33	54	343	149
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.90	0.88	0.96	0.89	0.88	0.99	0.91	0.88	0.96	0.88
Lanes:	2.00	1.73	0.27	1.00	2.90	1.10	1.00	1.89	0.11	1.00	1.36	0.64
Final Sat.:	2992	3215	472	1663	5301	1844	1663	3556	197	1663	2466	1071
Capacity Analysis Module:												
Vol/Sat:	0.05	0.18	0.18	0.24	0.17	0.17	0.09	0.17	0.17	0.03	0.14	0.14
Crit Moves:		****		****			****				****	
Green Time:	17.4	27.3	27.3	36.2	46.1	46.1	13.7	25.0	25.0	9.5	20.8	20.8
Volume/Cap:	0.30	0.73	0.73	0.73	0.40	0.40	0.73	0.74	0.74	0.38	0.73	0.73
Delay/Veh:	41.3	41.2	41.2	37.8	22.4	22.4	59.2	42.8	42.8	49.1	46.2	46.2
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:	41.3	41.2	41.2	37.8	22.4	22.4	59.2	42.8	42.8	49.1	46.2	46.2
LOS by Move:	D	D	D	D+	C+	C+	E+	D	D	D	D	D
HCM2kAvgQ:	2	11	11	14	7	7	6	10	10	2	10	10

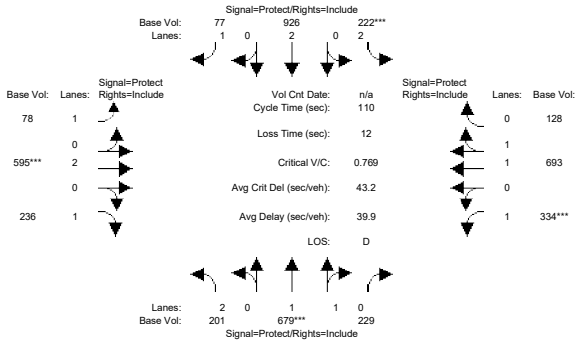
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Existing + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
09 PM Ex_Proj

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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:	201	679	229	222	926	77	78	595	236	334	693	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:	201	679	229	222	926	77	78	595	236	334	693	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:	201	679	229	222	926	77	78	595	236	334	693	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	201	679	229	222	926	77	78	595	236	334	693	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:	201	679	229	222	926	77	78	595	236	334	693	128
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.96	0.89	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.98	0.90
Lanes:	2.00	1.46	0.54	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.67	0.33
Final Sat.:	2992	2676	902	2992	3800	1488	1663	3800	1488	1663	3092	571
Capacity Analysis Module:												
Vol/Sat:	0.07	0.25	0.25	0.07	0.24	0.05	0.05	0.16	0.16	0.20	0.22	0.22
Crit Moves:		****		****				****		****		
Green Time:	10.1	36.3	36.3	10.6	36.8	36.8	11.3	22.4	22.4	28.7	39.8	39.8
Volume/Cap:	0.73	0.77	0.77	0.77	0.73	0.15	0.46	0.77	0.78	0.77	0.62	0.62
Delay/Veh:	58.1	36.2	36.2	60.4	34.4	25.9	48.4	46.1	53.7	45.7	29.8	29.8
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:	58.1	36.2	36.2	60.4	34.4	25.9	48.4	46.1	53.7	45.7	29.8	29.8
LOS by Move:	E+	D+	D+	E	C-	C	D	D	D-	D	C	C
HCM2kAvgQ:	6	16	16	6	15	2	3	10	8	13	12	12

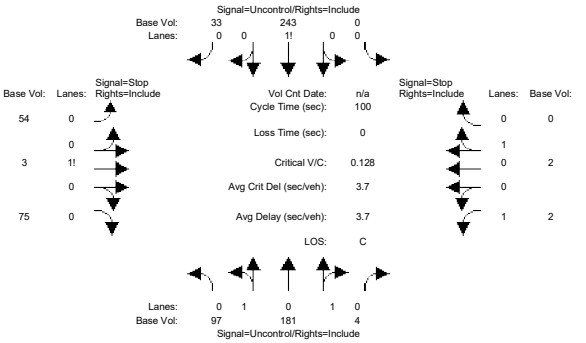
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
10 AM NearTerm_Proj

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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:      97  181    4     0  243   33    54    3   75     2    2     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:   97  181    4     0  243   33    54    3   75     2    2     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:    97  181    4     0  243   33    54    3   75     2    2     0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0     0
FinalVolume:   97  181    4     0  243   33    54    3   75     2    2     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  276 xxxx xxxxx  xxxx xxxx xxxxx   545  639   260   676  653    93
Potent Cap.: 1299 xxxx xxxxx  xxxx xxxx xxxxx   452  397   784   370  389   970
Move Cap.:   1299 xxxx xxxxx  xxxx xxxx xxxxx   423  365   784   313  358   970
Volume/Cap:  0.07 xxxx  xxxx  xxxx xxxx  xxxx  0.13 0.01  0.10  0.01 0.01  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx
Control Del:  8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  16.6 xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     C    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  570 xxxxx  xxxx xxxx   358
SharedQueue:  0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.9 xxxxx xxxxx xxxx   0.0
Shrd ConDel:  8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 13.2 xxxxx xxxxx xxxx  15.1
Shared LOS:     A    *     *     *    *     *     B    *     *     *    *     C
ApproachDel:    xxxxxx           xxxxxx           13.2             15.8
ApproachLOS:         *                *             B                C
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    1  0  0  1  0
Initial Vol:   97  181     4     0  243    33    54    3    75     2    2     0
ApproachDel:    xxxxxx           xxxxxx             13.2             15.8
------------|--------------||--------------||--------------||--------------|
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=132]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=694]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=4]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=694]
   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).

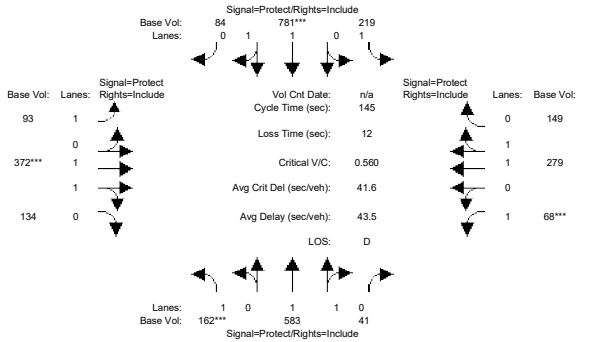
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    1  0  0  1  0
Initial Vol:   97  181     4     0  243    33    54    3    75     2    2     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             558
Minor Approach Volume:           132
Minor Approach Volume Threshold: 486
--------------------------------------------------------------------------------
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.
```

AM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
10 AM NearTerm_Proj

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	162	583	41	219	781	84	93	372	134	68	279	149
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:	162	583	41	219	781	84	93	372	134	68	279	149
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:	162	583	41	219	781	84	93	372	134	68	279	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	583	41	219	781	84	93	372	134	68	279	149
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:	162	583	41	219	781	84	93	372	134	68	279	149
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.99	0.91	0.88	0.99	0.91	0.88	0.96	0.88	0.88	0.95	0.87
Lanes:	1.00	1.86	0.14	1.00	1.79	0.21	1.00	1.44	0.56	1.00	1.27	0.73
Final Sat.:	1663	3495	246	1663	3352	360	1663	2622	945	1663	2280	1218
Capacity Analysis Module:												
Vol/Sat:	0.10	0.17	0.17	0.13	0.23	0.23	0.06	0.14	0.14	0.04	0.12	0.12
Crit Moves:	****				****			****			****	
Green Time:	25.3	47.9	47.9	37.8	60.4	60.4	14.9	36.8	36.8	10.6	32.5	32.5
Volume/Cap:	0.56	0.51	0.51	0.51	0.56	0.56	0.55	0.56	0.56	0.56	0.55	0.55
Delay/Veh:	57.2	39.4	39.4	46.6	32.7	32.7	65.5	47.9	47.9	70.7	50.5	50.5
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:	57.2	39.4	39.4	46.6	32.7	32.7	65.5	47.9	47.9	70.7	50.5	50.5
LOS by Move:	E+	D	D	D	C-	C-	E	D	D	E	D	D
HCM2kAvgQ:	8	11	11	9	15	15	5	10	10	3	8	8

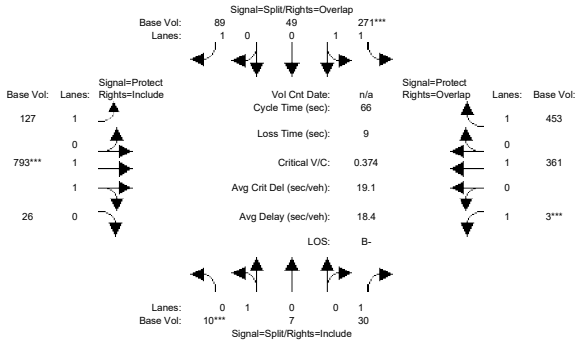
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
10 AM NearTerm_Proj

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	10	7	30	271	49	89	127	793	26	3	361	453
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:	10	7	30	271	49	89	127	793	26	3	361	453
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:	10	7	30	271	49	89	127	793	26	3	361	453
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	7	30	271	49	89	127	793	26	3	361	453
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:	10	7	30	271	49	89	127	793	26	3	361	453
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.88	0.96	0.78	0.88	1.00	0.92	0.88	1.00	0.78
Lanes:	0.61	0.39	1.00	1.71	0.29	1.00	1.00	1.93	0.07	1.00	1.00	1.00
Final Sat.:	1033	723	1488	2877	520	1488	1663	3651	120	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.02	0.09	0.09	0.06	0.08	0.22	0.22	0.00	0.19	0.30
Crit Moves:	****			****				****			****	
Green Time:	10.0	10.0	10.0	11.2	11.2	26.2	15.0	25.8	25.8	10.0	20.8	32.0
Volume/Cap:	0.06	0.06	0.13	0.56	0.56	0.15	0.34	0.56	0.56	0.01	0.60	0.63
Delay/Veh:	24.1	24.1	24.5	26.3	26.3	12.9	21.9	16.1	16.1	23.8	20.8	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:	24.1	24.1	24.5	26.3	26.3	12.9	21.9	16.1	16.1	23.8	20.8	14.4
LOS by Move:	C	C	C	C	C	B	C+	B	B	C	C+	B
HCM2kAvgQ:	0	0	1	4	4	1	2	6	6	0	6	7

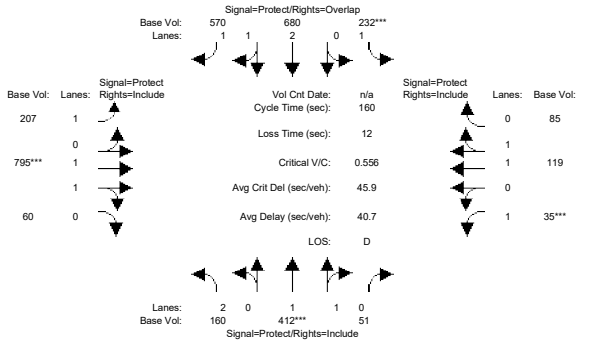
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
10 AM NearTerm_Proj

Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	160	412	51	232	680	570	207	795	60	35	119	85
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	412	51	232	680	570	207	795	60	35	119	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:	160	412	51	232	680	570	207	795	60	35	119	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	412	51	232	680	570	207	795	60	35	119	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:	160	412	51	232	680	570	207	795	60	35	119	85
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.91	0.88	0.93	0.86	0.88	0.99	0.91	0.88	0.94	0.86
Lanes:	2.00	1.76	0.24	1.00	2.09	1.91	1.00	1.85	0.15	1.00	1.13	0.87
Final Sat.:	2992	3296	408	1663	3708	3108	1663	3477	262	1663	2005	1432
Capacity Analysis Module:												
Vol/Sat:	0.05	0.12	0.12	0.14	0.18	0.18	0.12	0.23	0.23	0.02	0.06	0.06
Crit Moves:		****		****				****		****		
Green Time:	17.1	35.7	35.7	39.9	58.6	106.7	48.2	65.4	65.4	7.0	24.2	24.2
Volume/Cap:	0.50	0.56	0.56	0.56	0.50	0.27	0.41	0.56	0.56	0.48	0.39	0.39
Delay/Veh:	68.7	56.0	56.0	54.1	39.5	10.9	45.2	36.8	36.8	79.7	61.8	61.8
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:	68.7	56.0	56.0	54.1	39.5	10.9	45.2	36.8	36.8	79.7	61.8	61.8
LOS by Move:	E	E+	E+	D-	D	B+	D	D+	D+	E-	E	E
HCM2kAvgQ:	4	10	10	11	12	6	8	15	15	2	5	5

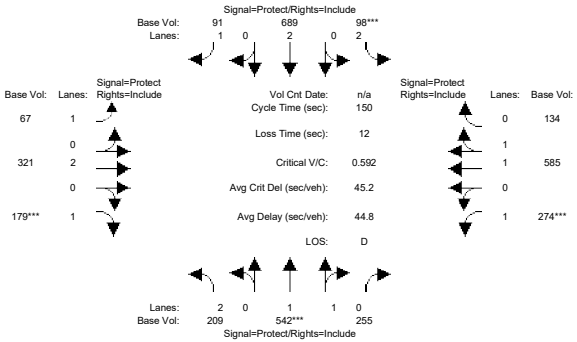
Note: Queue reported is the number of cars per lane.

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AM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
10 AM NearTerm_Proj

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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	542	255	98	689	91	67	321	179	274	585	134
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	542	255	98	689	91	67	321	179	274	585	134
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	542	255	98	689	91	67	321	179	274	585	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	209	542	255	98	689	91	67	321	179	274	585	134
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	542	255	98	689	91	67	321	179	274	585	134
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.95	0.88	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.97	0.90
Lanes:	2.00	1.32	0.68	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.60	0.40
Final Sat.:	2992	2394	1127	2992	3800	1488	1663	3800	1488	1663	2958	678
Capacity Analysis Module:												
Vol/Sat:	0.07	0.23	0.23	0.03	0.18	0.06	0.04	0.08	0.12	0.16	0.20	0.20
Crit Moves:		****		****					****	****		
Green Time:	18.3	57.4	57.4	8.3	47.4	47.4	13.8	30.5	30.5	41.8	58.5	58.5
Volume/Cap:	0.57	0.59	0.59	0.59	0.57	0.19	0.44	0.42	0.59	0.59	0.51	0.51
Delay/Veh:	64.4	37.7	37.7	74.8	43.5	37.6	66.4	52.3	57.2	48.8	35.1	35.1
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:	64.4	37.7	37.7	74.8	43.5	37.6	66.4	52.3	57.2	48.8	35.1	35.1
LOS by Move:	E	D+	D+	E	D	D+	E	D-	E+	D	D+	D+
HCM2kAvgQ:	6	15	15	4	13	3	3	6	8	12	13	13

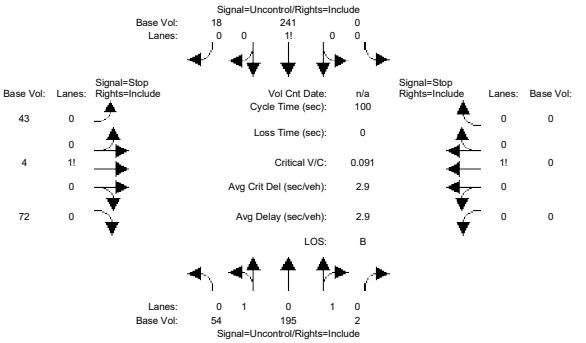
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
11 SchPM NearTerm_Proj

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                         Meadow Dr
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:      54  195    2     0  241   18    43    4   72     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:   54  195    2     0  241   18    43    4   72     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:    54  195    2     0  241   18    43    4   72     0    0     0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0     0
FinalVolume:   54  195    2     0  241   18    43    4   72     0    0     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5  6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0  3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  259 xxxx xxxxx  xxxx xxxx xxxxx   456  555  250   592  563    99
Potent Cap.: 1317 xxxx xxxxx  xxxx xxxx xxxxx   566  443  794   421  438   963
Move Cap.:   1317 xxxx xxxxx  xxxx xxxx xxxxx   548  424  794   368  420   963
Volume/Cap:  0.04 xxxx  xxxx  xxxx xxxx  xxxx  0.08 0.01 0.09  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  666 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.6 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.6 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     B     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           11.6          xxxxxx
ApproachLOS:         *                *             B              *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:   54  195     2     0  241    18    43    4    72     0    0     0
ApproachDel:    xxxxxx           xxxxxx             11.6           xxxxxx
------------|--------------||--------------||--------------||--------------|
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=119]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=629]
   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).

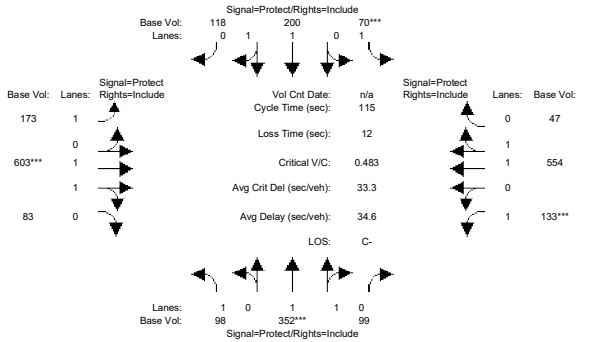
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:   54  195     2     0  241    18    43    4    72     0    0     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             510
Minor Approach Volume:           119
Minor Approach Volume Threshold: 517
--------------------------------------------------------------------------------
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.
```

School PM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
11 SchPM NearTerm_Proj

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	98	352	99	70	200	118	173	603	83	133	554	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	352	99	70	200	118	173	603	83	133	554	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	352	99	70	200	118	173	603	83	133	554	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	352	99	70	200	118	173	603	83	133	554	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	352	99	70	200	118	173	603	83	133	554	47
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.97	0.89	0.88	0.94	0.87	0.88	0.98	0.90	0.88	0.99	0.91
Lanes:	1.00	1.53	0.47	1.00	1.22	0.78	1.00	1.74	0.26	1.00	1.83	0.17
Final Sat.:	1663	2815	792	1663	2187	1290	1663	3246	447	1663	3438	292
Capacity Analysis Module:												
Vol/Sat:	0.06	0.13	0.13	0.04	0.09	0.09	0.10	0.19	0.19	0.08	0.16	0.16
Crit Moves:		****		****				****		****		
Green Time:	15.9	29.8	29.8	10.0	23.9	23.9	24.8	44.2	44.2	19.0	38.4	38.4
Volume/Cap:	0.43	0.48	0.48	0.48	0.44	0.44	0.48	0.48	0.48	0.48	0.48	0.48
Delay/Veh:	46.7	36.5	36.5	52.6	40.2	40.2	40.5	27.0	27.0	44.9	30.7	30.7
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:	46.7	36.5	36.5	52.6	40.2	40.2	40.5	27.0	27.0	44.9	30.7	30.7
LOS by Move:	D	D+	D+	D-	D	D	D	C	C	D	C	C
HCM2kAvgQ:	4	7	7	3	5	5	6	9	9	5	8	8

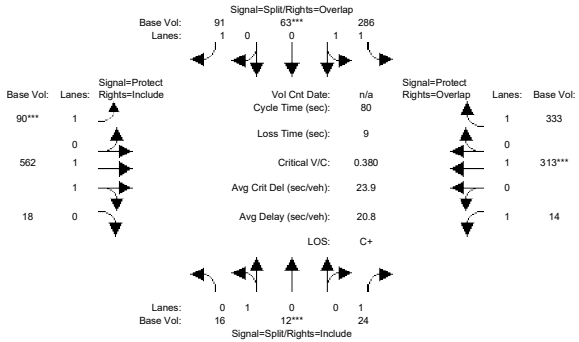
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
11 SchPM NearTerm_Proj

Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	16	12	24	286	63	91	90	562	18	14	313	333
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:	16	12	24	286	63	91	90	562	18	14	313	333
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:	16	12	24	286	63	91	90	562	18	14	313	333
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	12	24	286	63	91	90	562	18	14	313	333
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:	16	12	24	286	63	91	90	562	18	14	313	333
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.97	0.78	0.89	0.96	0.78	0.88	1.00	0.92	0.88	1.00	0.78
Lanes:	0.59	0.41	1.00	1.66	0.34	1.00	1.00	1.93	0.07	1.00	1.00	1.00
Final Sat.:	1006	755	1488	2796	616	1488	1663	3654	117	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.10	0.10	0.06	0.05	0.15	0.15	0.01	0.16	0.22
Crit Moves:		****			****		****				****	
Green Time:	10.0	10.0	10.0	19.4	19.4	29.7	10.3	22.9	22.9	18.6	31.3	50.7
Volume/Cap:	0.13	0.13	0.13	0.42	0.42	0.16	0.42	0.54	0.54	0.04	0.42	0.35
Delay/Veh:	31.4	31.4	31.4	25.9	25.9	17.0	33.5	24.6	24.6	23.8	18.1	7.1
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:	31.4	31.4	31.4	25.9	25.9	17.0	33.5	24.6	24.6	23.8	18.1	7.1
LOS by Move:	C	C	C	C	C	B	C-	C	C	C	B-	A
HCM2kAvgQ:	1	1	1	4	4	2	2	6	6	0	5	4

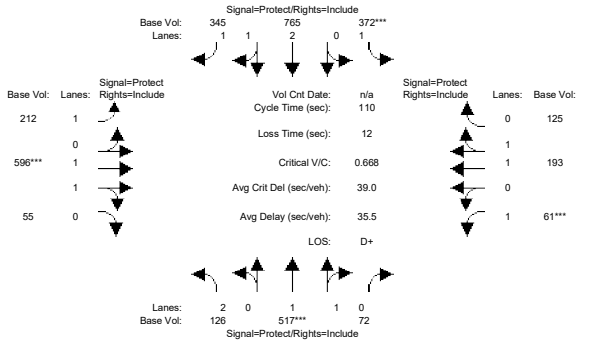
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
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Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	126	517	72	372	765	345	212	596	55	61	193	125
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:	126	517	72	372	765	345	212	596	55	61	193	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	126	517	72	372	765	345	212	596	55	61	193	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	517	72	372	765	345	212	596	55	61	193	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	126	517	72	372	765	345	212	596	55	61	193	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.90	0.88	0.95	0.88	0.88	0.99	0.91	0.88	0.94	0.87
Lanes:	2.00	1.74	0.26	1.00	2.69	1.31	1.00	1.82	0.18	1.00	1.17	0.83
Final Sat.:	2992	3241	451	1663	4862	2193	1663	3409	315	1663	2099	1360
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.16	0.22	0.16	0.16	0.13	0.17	0.17	0.04	0.09	0.09
Crit Moves:		****		****				****		****		
Green Time:	18.0	26.0	26.0	36.5	44.5	44.5	20.6	28.5	28.5	7.0	14.9	14.9
Volume/Cap:	0.26	0.67	0.67	0.67	0.39	0.39	0.68	0.67	0.67	0.58	0.68	0.68
Delay/Veh:	40.4	40.3	40.3	35.0	23.2	23.2	47.6	38.5	38.5	57.7	49.3	49.3
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:	40.4	40.3	40.3	35.0	23.2	23.2	47.6	38.5	38.5	57.7	49.3	49.3
LOS by Move:	D	D	D	C-	C	C	D	D+	D+	E+	D	D
HCM2kAvgQ:	2	9	9	13	7	7	7	10	10	3	7	7

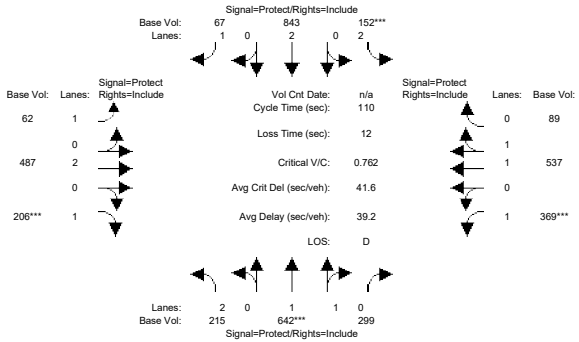
Note: Queue reported is the number of cars per lane.

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School PM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for 3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
11 SchPM NearTerm_Proj

Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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:	215	642	299	152	843	67	62	487	206	369	537	89
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:	215	642	299	152	843	67	62	487	206	369	537	89
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:	215	642	299	152	843	67	62	487	206	369	537	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	642	299	152	843	67	62	487	206	369	537	89
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:	215	642	299	152	843	67	62	487	206	369	537	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.95	0.88	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.98	0.90
Lanes:	2.00	1.33	0.67	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.69	0.31
Final Sat.:	2992	2403	1119	2992	3800	1488	1663	3800	1488	1663	3153	523
Capacity Analysis Module:												
Vol/Sat:	0.07	0.27	0.27	0.05	0.22	0.05	0.04	0.13	0.14	0.22	0.17	0.17
Crit Moves:		****		****					****	****		
Green Time:	11.2	38.6	38.6	7.3	34.7	34.7	14.2	20.0	20.0	32.1	37.9	37.9
Volume/Cap:	0.70	0.76	0.76	0.76	0.70	0.14	0.29	0.70	0.76	0.76	0.49	0.49
Delay/Veh:	55.0	34.5	34.5	66.2	35.0	27.1	44.1	45.5	54.7	42.5	28.8	28.8
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:	55.0	34.5	34.5	66.2	35.0	27.1	44.1	45.5	54.7	42.5	28.8	28.8
LOS by Move:	D-	C-	C-	E	D+	C	D	D	D-	D	C	C
HCM2kAvgQ:	6	16	16	5	13	2	2	8	7	14	9	9

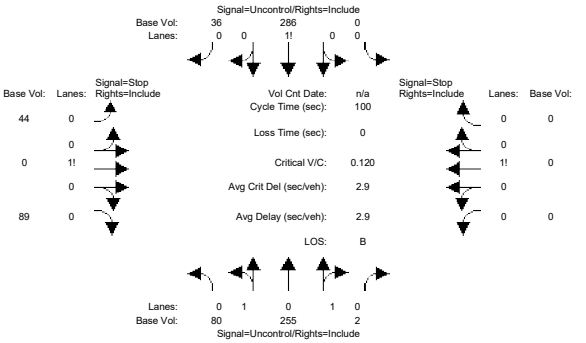
Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
12 PM NearTerm_Proj

Intersection #1: Fabian Wy/Meadow Dr




```
Street Name:              Fabian Wy                        Meadow Dr
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:       80  255    2     0  286   36    44    0   89     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:    80  255    2     0  286   36    44    0   89     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:     80  255    2     0  286   36    44    0   89     0    0     0
Reduct Vol:      0    0    0     0    0    0     0    0    0     0    0     0
FinalVolume:    80  255    2     0  286   36    44    0   89     0    0     0
------------|--------------||--------------||--------------||--------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|--------------||--------------||--------------||--------------|
Capacity Module:
Cnflict Vol:  322 xxxx xxxxx  xxxx xxxx xxxxx   592  721   304   765  738   129
Potent Cap.: 1249 xxxx xxxxx  xxxx xxxx xxxxx   473  356   740   323  348   927
Move Cap.:   1249 xxxx xxxxx  xxxx xxxx xxxxx   448  332   740   269  325   927
Volume/Cap:  0.06 xxxx  xxxx  xxxx xxxx  xxxx  0.10 0.00  0.12  0.00 0.00  0.00
------------|--------------||--------------||--------------||--------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  609 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.8 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  8.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.6 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     B    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           12.6          xxxxxx
ApproachLOS:         *                *             B              *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    80  255    2     0  286   36    44    0   89     0    0     0
ApproachDel:     xxxxxx           xxxxxx           12.6          xxxxxx
------------|--------------||--------------||--------------||--------------|
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=133]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=792]
   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).

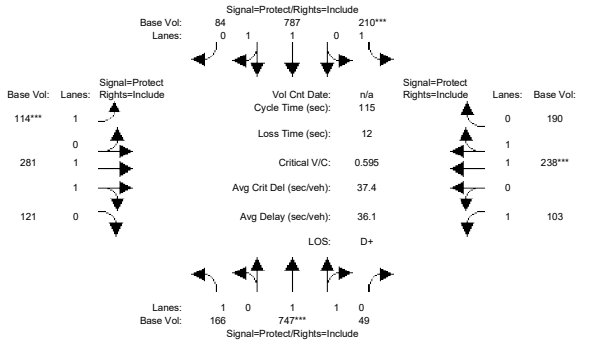
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 Fabian Wy/Meadow Dr
********************************************************************************
Base 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  1  0    0  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    80  255    2     0  286   36    44    0   89     0    0     0
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             659
Minor Approach Volume:           133
Minor Approach Volume Threshold: 429
--------------------------------------------------------------------------------
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.
```

PM Peak Hour - Near-Term + Project Condition
Local Transportation Analysis for3950 Fabian Way
City of Palo Alto

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
12 PM NearTerm_Proj

Intersection #2: Middlefield Rd/E. Charleston Rd



Street Name:	Middlefield Rd						E. Charleston 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:	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:	166	747	49	210	787	84	114	281	121	103	238	190
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:	166	747	49	210	787	84	114	281	121	103	238	190
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:	166	747	49	210	787	84	114	281	121	103	238	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	166	747	49	210	787	84	114	281	121	103	238	190
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:	166	747	49	210	787	84	114	281	121	103	238	190
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.99	0.91	0.88	0.99	0.91	0.88	0.96	0.88	0.88	0.93	0.86
Lanes:	1.00	1.87	0.13	1.00	1.79	0.21	1.00	1.36	0.64	1.00	1.07	0.93
Final Sat.:	1663	3515	231	1663	3358	358	1663	2473	1065	1663	1899	1516
Capacity Analysis Module:												
Vol/Sat:	0.10	0.21	0.21	0.13	0.23	0.23	0.07	0.11	0.11	0.06	0.13	0.13
Crit Moves:		****		****			****				****	
Green Time:	19.6	41.1	41.1	24.4	45.9	45.9	13.3	24.3	24.3	13.2	24.2	24.2
Volume/Cap:	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.54	0.54	0.54	0.59	0.59
Delay/Veh:	47.2	30.9	30.9	43.6	27.7	27.7	53.3	41.2	41.2	51.1	42.3	42.3
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:	47.2	30.9	30.9	43.6	27.7	27.7	53.3	41.2	41.2	51.1	42.3	42.3
LOS by Move:	D	C	C	D	C	C	D-	D	D	D-	D	D
HCM2kAvgQ:	7	12	12	8	12	12	5	7	7	4	7	7

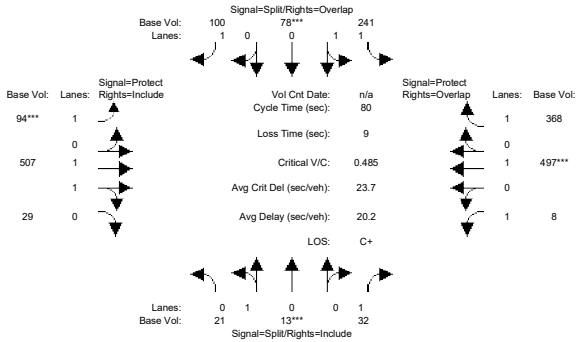
Note: Queue reported is the number of cars per lane.

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Intersection #3: Fabian Wy/E. Charleston Rd



Street Name:	Fabian Wy						E. Charleston 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:	21	13	32	241	78	100	94	507	29	8	497	368
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:	21	13	32	241	78	100	94	507	29	8	497	368
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:	21	13	32	241	78	100	94	507	29	8	497	368
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	13	32	241	78	100	94	507	29	8	497	368
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:	21	13	32	241	78	100	94	507	29	8	497	368
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.89	0.96	0.78	0.88	0.99	0.91	0.88	1.00	0.78
Lanes:	0.64	0.36	1.00	1.54	0.46	1.00	1.00	1.88	0.12	1.00	1.00	1.00
Final Sat.:	1081	669	1488	2599	841	1488	1663	3549	203	1663	1900	1488
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.09	0.09	0.07	0.06	0.14	0.14	0.00	0.26	0.25
Crit Moves:		****			****		****				****	
Green Time:	10.0	10.0	10.0	13.3	13.3	23.3	10.0	25.4	25.4	22.2	37.7	51.0
Volume/Cap:	0.16	0.16	0.17	0.56	0.56	0.23	0.45	0.45	0.45	0.02	0.56	0.39
Delay/Veh:	31.6	31.6	31.7	31.8	31.8	21.8	34.0	22.0	22.0	21.0	16.0	7.2
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:	31.6	31.6	31.7	31.8	31.8	21.8	34.0	22.0	22.0	21.0	16.0	7.2
LOS by Move:	C	C	C	C	C	C+	C-	C+	C+	C+	B	A
HCM2kAvgQ:	1	1	1	5	5	2	2	5	5	0	8	5

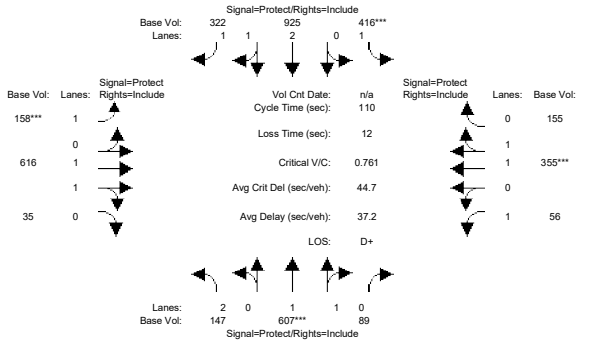
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Intersection #4: San Antonio Rd/E.Charleston Rd



Street Name:	San Antonio Rd						E. Charleston 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:	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:	147	607	89	416	925	322	158	616	35	56	355	155
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:	147	607	89	416	925	322	158	616	35	56	355	155
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:	147	607	89	416	925	322	158	616	35	56	355	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	147	607	89	416	925	322	158	616	35	56	355	155
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:	147	607	89	416	925	322	158	616	35	56	355	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.98	0.90	0.88	0.96	0.89	0.88	0.99	0.91	0.88	0.95	0.88
Lanes:	2.00	1.73	0.27	1.00	2.90	1.10	1.00	1.88	0.12	1.00	1.36	0.64
Final Sat.:	2992	3216	472	1663	5300	1845	1663	3551	202	1663	2459	1074
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.19	0.25	0.17	0.17	0.10	0.17	0.17	0.03	0.14	0.14
Crit Moves:		****		****			****				****	
Green Time:	16.9	27.3	27.3	36.1	46.5	46.5	13.7	25.3	25.3	9.3	20.9	20.9
Volume/Cap:	0.32	0.76	0.76	0.76	0.41	0.41	0.76	0.75	0.75	0.40	0.76	0.76
Delay/Veh:	41.8	42.2	42.2	39.3	22.3	22.3	61.7	43.3	43.3	49.6	47.3	47.3
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:	41.8	42.2	42.2	39.3	22.3	22.3	61.7	43.3	43.3	49.6	47.3	47.3
LOS by Move:	D	D	D	D	C+	C+	E	D	D	D	D	D
HCM2kAvgQ:	3	11	11	15	8	8	6	10	10	2	10	10

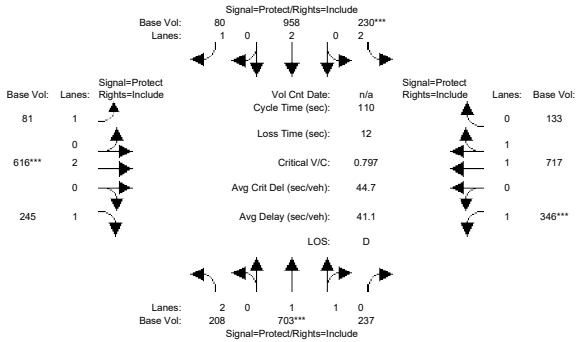
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Intersection #5: San Antonio Rd/Middlefield Rd



Street Name:	San Antonio Rd						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:	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	703	237	230	958	80	81	616	245	346	717	133
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	703	237	230	958	80	81	616	245	346	717	133
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	703	237	230	958	80	81	616	245	346	717	133
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	703	237	230	958	80	81	616	245	346	717	133
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	703	237	230	958	80	81	616	245	346	717	133
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	0.96	0.89	0.79	1.00	0.78	0.88	1.00	0.78	0.88	0.98	0.90
Lanes:	2.00	1.46	0.54	2.00	2.00	1.00	1.00	2.00	1.00	1.00	1.66	0.34
Final Sat.:	2992	2676	902	2992	3800	1488	1663	3800	1488	1663	3090	573
Capacity Analysis Module:												
Vol/Sat:	0.07	0.26	0.26	0.08	0.25	0.05	0.05	0.16	0.16	0.21	0.23	0.23
Crit Moves:		****		****				****		****		
Green Time:	10.1	36.3	36.3	10.6	36.8	36.8	11.0	22.4	22.4	28.7	40.1	40.1
Volume/Cap:	0.75	0.80	0.80	0.80	0.75	0.16	0.49	0.80	0.81	0.80	0.64	0.64
Delay/Veh:	60.0	37.4	37.4	62.9	35.2	25.9	49.1	47.4	56.7	47.8	29.9	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:	60.0	37.4	37.4	62.9	35.2	25.9	49.1	47.4	56.7	47.8	29.9	29.9
LOS by Move:	E+	D+	D+	E	D+	C	D	D	E+	D	C	C
HCM2kAvgQ:	6	17	17	7	16	2	3	10	9	14	13	13

Note: Queue reported is the number of cars per lane.

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Appendix B

Supporting Noise Data

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/27/2025
Case Description: 3950 Fabian Way School Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Demolition	Commercial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Dozer	No	40	85.0		50.0	0.0
Concrete Saw	No	20	90.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA) Day Evening Night

Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	90.0	83.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	90.0	86.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/27/2025
Case Description: 3950 Fabian Way School Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Site Preparation	Commercial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)				Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	82.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/27/2025
Case Description: 3950 Fabian Way School Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Grading	Commercial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Dozer	No	40	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	84.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/27/2025
Case Description: 3950 Fabian Way School Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Building Construction	Commercial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16	85.0		50.0	0.0
Man Lift	No	20	85.0		50.0	0.0
Man Lift	No	20	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Crane	85.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

| | | |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/27/2025
Case Description: 3950 Fabian Way School Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Paving	Commercial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80.0		50.0	0.0
Concrete Mixer Truck	No	40	85.0		50.0	0.0
Concrete Mixer Truck	No	40	85.0		50.0	0.0
Paver	No	50	85.0		50.0	0.0
Roller	No	20	85.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	85.0	82.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

| | | |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/27/2025
Case Description: 3950 Fabian Way School Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Architectural Coating	Commercial	60.0	55.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40	80.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)				Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Compressor (air)	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Product Data

WeatherMaker® Single Package Heat Pump Rooftop

15 to 25 Nominal Tons

ecoblue™ technology



50FCQ*17, 24, 28

Single-Packaged Heat Pump with Optional Electric Heat and Puron® Refrigerant (R-410A)

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Features/Benefits

The New Carrier WeatherMaker® packaged heat pump rooftop units (RTU) with EcoBlue™ Technology were designed by customers to provide value added benefits never seen in this type of equipment before.

New features include:

- A patented, industry first, Vane Axial Indoor Fan System, powered by an electronically commutated motor for quiet, efficient, and reliable operation. Compared to traditional belt driven forwards curved fans, this system has:
  - 75% fewer moving parts
  - No fan belts, pulleys, shaft, and shaft bearings
  - Up to 40% better efficiency than traditional belt drive forward curve fans
  - Slow ramp up capability for better sound and comfort control
  - Internal protection from phase reversal and phase loss situations
  - High external static capability
  - Slide out blower assembly design
- Reliable 2 stage cooling with tandem scroll compressors technology, fully active evaporator coil, and mixed air temperature protection on all models
- New unit control board with intuitive indoor fan adjustment that uses simple dial and switch adjustments
- An industry first 25 ton packaged heat pump
- Reliable copper tube/aluminum fin condenser coil with 5/16 in. tubing to help reduce refrigerant charge and reduce weight versus prior designs

WeatherMaker® 50FCQ units up to 25 tons are specifically designed for dedicated factory-supplied vertical air flow or horizontal air flow. No special field kits are required. All footprints were maintained to easily fit on R-410A Carrier and select competitor curbs, making replacements easier than ever.

With “no-strip” screw collars, handled access panels, and more, the unit is easy to install, easy to maintain, and easy to use.

Our 2 speed staged air volume through our Vane Axial fan allows our 15 to 25 ton 50FCQ WeatherMaker units to deliver IEER values up to 14.0 and provide optimum comfort and control.

Value-added features include:

- SystemVu™ intuitive intelligent controls option that provides:
  - Large full text, multi-line display
  - USB Flash Port for data transfer
  - Built in i-Vu®, CCN and BACnet[1]
  - Read refrigerant pressures from display — no gauges
  - Quick LED Status — Run, Alert, Fault
  - Conventional thermostat or sensor capabilities
  - Historical component runtime and starts
  - Supply air tempering
  - Navigator™ and Network Service Tool compatible
- Single point electrical connections
- All 15 to 25 ton models use TXV refrigerant metering devices
- Scroll compressors with internal line-break overload protection
- Units come with an easy access tool-less filter door. Filter track tilts out for filter removal and replacement. All filters are the same size in each unit

1. Third-party trademarks and logos are the property of their respective owners.

Installation ease

Lighter units make for easy replacement and aid in the structural approval process. Units have simple, fast plug-in connections to the standard integrated unit control board (UCB). Clearly labeled connections points to reduce installation time. Also, a large control box provides room to work and room to mount Carrier accessory controls.

Easy to maintain

With the new EcoBlue Vane Axial fan system and direct drive ECM motor, there is no longer a need to adjust or replace belts or pulleys as in past designs. This frees up maintenance, installation and commissioning time.

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Features/Benefits (cont)

Easy access handles by Carrier provide quick and easy access to all normally serviced components. Our "no-strip" screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit's metal.

Sloped, corrosion resistant composite drain pan sheds water and won't rust.

Easy to use

The newly re-designed Unit Control Board by Carrier puts all connections and troubleshooting points in one convenient place. Most low voltage connections are made to the same board and make it easy to access it. Setting up the fan is simple by an intuitive switch and rotary dial arrangement.

Carrier rooftops have high and low pressure switches, a new mixed air temperature switch, a filter drier, and 2 in. filters standard.

EcoBlue™ Technology

Direct drive EcoBlue Technology indoor fan system uses Vane Axial fan design and electrically commutated motors.

This new Vane Axial design has 75% fewer moving parts, uses up to 40% less energy and has no fan belts, blower bearings and shaft when compared with past belt drive systems. The full fan and motor assembly also slides out for easier maintenance and service.

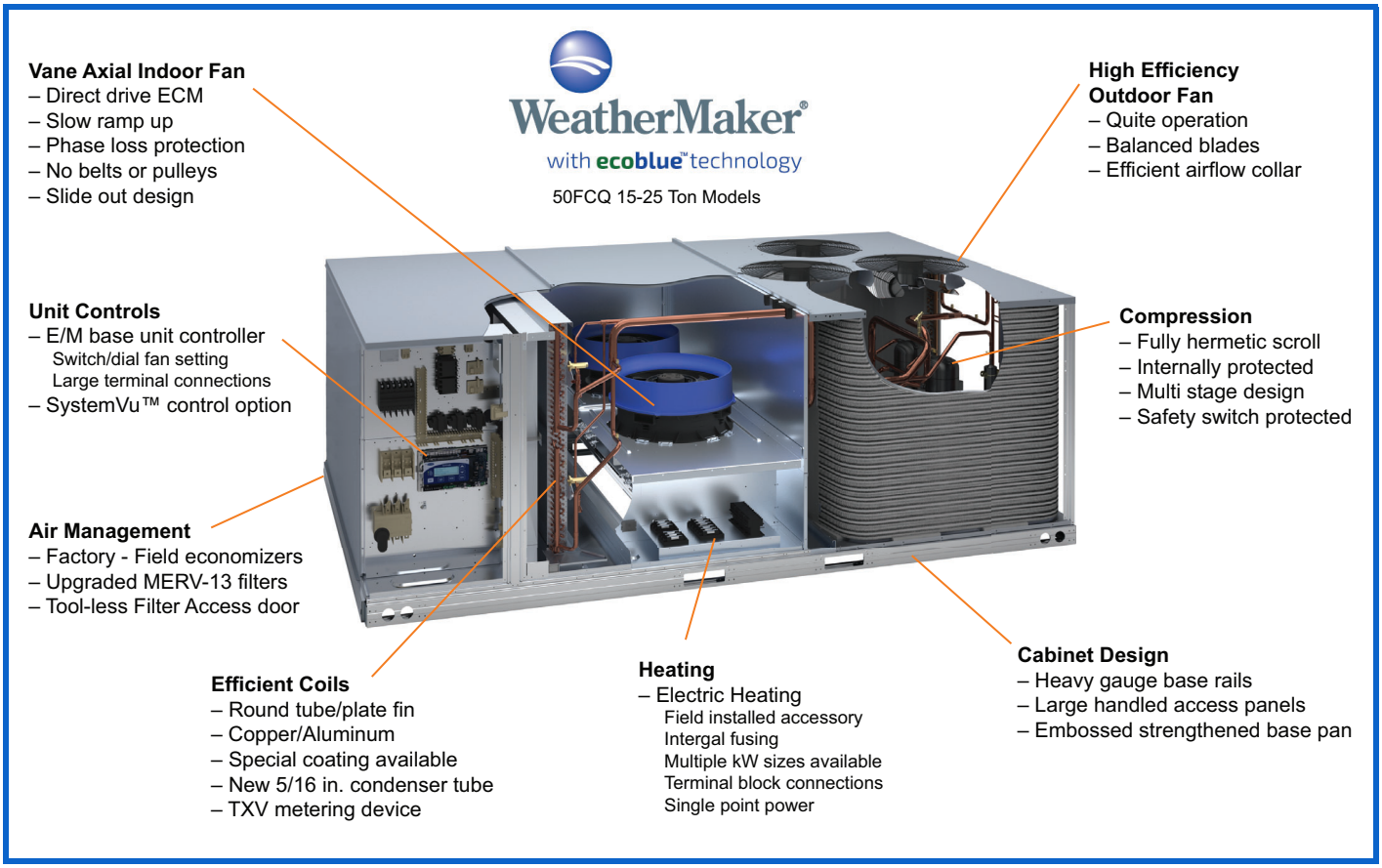
Streamlined control and integration

Carrier controllers make connecting WeatherMaker® rooftop heat pump units into existing building automation systems easy. The units are compatible with conventional thermostat controls or SystemVu™ controls for greater comfort, diagnostics and building network integration.

Operating efficiency and flexibility

These 50FCQ packaged rooftops meet the Department of Energy (DOE) 2023 efficiency standard, as well as the latest ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1 and IECC®[1] (International Energy Conservation Code) minimum IEER efficiency requirements.

1. Third-party trademarks and logos are the property of their respective owners.



Model number nomenclature

50FCQ*17-28 Model Number Nomenclature

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Example:	5	0	F	C	Q	M	2	4	A	2	A	6	-	0	A	0	A	0

Unit Heat Type
50 = Cooling Packaged Rooftop

Model Series - WeatherMaker®
FC = Standard Efficiency (EcoBlue™ Technology)

Heat Type
Q = Heat Pump
(Field-Installed Electic Heat)

Refrig. Systems Options
M = Two Stage Cooling/One Circuit Models

Cooling Tons
17 = 15.0 tons
24 = 20.0 tons
28 = 25.0 tons

Sensor Options
A = None
B = Return Air Smoke Detector (RA)
C = Supply Air Smoke Detector (SA)
D = RA + SA Smoke Detector
E = CO_2 Sensor
F = RA Smoke Detector and CO_2 Sensor
G = SA Smoke Detector and CO_2 Sensor
H = RA + SA Smoke Detector and CO_2 Sensor
J = Condensate Overflow Switch (COFS)
K = COFS + RA Smoke Detector
L = COFS + RA and SA Smoke Detectors
M = COFS + SA Smoke Detector
N = COFS + CO_2 Sensor
P = COFS + RA Smoke Detector and CO_2 Sensor
Q = COFS + SA Smoke Detector and CO_2 Sensor
R = COFS + RA and SA Smoke Detector and CO_2 Sensor

Indoor Fan Options - Vane Axial EcoBlue Fan System
2 = Standard/Medium Static Motor - Vertical Supply
3 = High Static Motor - Vertical Supply
5 = Standard/Medium Static Motor - Vertical Supply and Filter Status Switch
6 = High Static Motor - Vertical Supply and Filter Status Switch
J = High Static Motor - Horizontal Supply
L = High Static Motor - Horizontal Supply and Filter Status Switch

Coil Options – RTPF (Outdoor – Indoor) – Hail Guards
A = Al/Cu – Al/Cu
B = Precoat Al/Cu – Al/Cu
C = E-coat Al/Cu – Al/Cu
D = E-coat Al/Cu – E-coat Al/Cu
E = Cu/Cu – Al/Cu
F = Cu/Cu – Cu/Cu
M = Al/Cu – Al/Cu – Louvered Hail Guards
N = Precoat Al/Cu – Al/Cu – Louvered Hail Guards
P = E-coat Al/Cu – Al/Cu – Louvered Hail Guards
Q = E-coat Al/Cu – E-coat Al/Cu – Louvered Hail Guards
R = Cu/Cu – Al/Cu – Louvered Hail Guards
S = Cu/Cu – Cu/Cu – Louvered Hail Guards

Voltage
1 = 575-3-60
5 = 208/230-3-60
6 = 460-3-60

Base Unit Controls
0 = Electromechanical Controller (can be used with field installed W7212 EconoMi$er® IV — no FDD[a])
3 = SystemVu™ Controller
8 = Electromechanical Controls — with POL224 EconomizerONE (includes FDD[a])

Intake / Exhaust Options
A = None
B = Low Leak Temp Economizer w/ Baro Relief
D = Low Leak Temp Economizer w/ PE (cent) Vert Only
F = Low Leak Enthalpy Economizer w/ Baro Relief
H = Low Leak Enthalpy Economizer w/ PE (cent) Vert Only
U = ULTRA Low Leak Temp Economizer w/ Baro Relief
V = ULTRA Low Leak Temp Economizer w/ PE (cent) Vert Only
W = ULTRA Low Leak Enthalpy Economizer w/ Baro Relief
X = ULTRA Low Leak Enthalpy Economizer w/ PE (cent) Vert Only

Service Options
0 = None
1 = Unpowered Convenience Outlet
2 = Powered Convenience Outlet
3 = Hinged Access Panels
4 = Hinged Access Panels and Unpowered Convenience Outlet
5 = Hinged Access Panels and Powered Convenience Outlet
6 = 4" MERV 13 High Efficiency Filter Track
7 = Unpowered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track
8 = Powered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track
9 = Hinged Access Panels and 4" MERV 13 High Efficiency Filter Track
A = Hinged Access Panels, Unpowered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track
B = Hinged Access Panels, Powered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track

Electrical Options
A = None
C = Non-Fused Disconnect
N = Phase Monitor/Protection
Q = Phase Monitor/Protection and Non-Fused Disconnect
1 = HSCCR Protection

Packaging Compliance
0 = Standard

Design Revision
- = Factory Design Revision

[a] FDD (Fault Detection and Diagnostic) capability per California Title 24 section 120.2.

Capacity ratings

50FCQ AHRI Ratings, Cooling Mode[a,b,c]

UNIT	COOLING STAGES	NOMINAL CAPACITY (tons)	NET COOLING CAPACITY (Btuh)	TOTAL POWER (kW)	EER	IEER WITH 2-SPEED INDOOR FAN MOTOR	AHRI RATING CFM
50FCQM17	2	15	172,000	16.2	10.60	14.0	6,300
50FCQM24	2	20	240,000	24.5	9.80	14.0	8,000
50FCQM28	2	25	278,000	29.3	9.50	14.0	10,000

NOTE(S):

a. Rated in accordance with AHRI Standards 340/360.
b. Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
IEER Standard: A measure that expresses cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
c. All 50FCQ units comply with ASHRAE 90.1-2019 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum IEER requirements.

LEGEND

AHRI — Air-Conditioning, Heating and Refrigeration Institute
EER — Energy Efficiency Ratio
IEER — Integrated Energy Efficiency Ratio

50FCQ AHRI Ratings, Heating Mode[a,b,c]

UNIT	HEATING, LOW 17°F(–8°C) AMBIENT		HEATING, HIGH 47°F (8°C) AMBIENT		AHRI RATING CFM
	Net Capacity (Btuh)	COP	Net Capacity (Btuh)	COP	
50FCQM17	106,000	2.30	168,000	3.30	6300
50FCQM24	136,000	2.30	234,000	3.30	8000
50FCQM28	158,000	2.30	274,000	3.30	9500

NOTE(S):

a. Rated in accordance with AHRI Standards 340/360.
b. Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
IEER Standard: A measure that expresses cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
c. All 50FCQ units comply with ASHRAE 90.1-2019 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum IEER requirements.

LEGEND

AHRI — Air-Conditioning, Heating and Refrigeration Institute
COP — Coefficient of Performance

Capacity ratings (cont)

Sound Rating Table[a]

UNIT	COOLING STAGES	OUTDOOR SOUND (dB) AT 60 Hz[b]								
		A-WEIGHTED[c]	63	125	250	500	1000	2000	4000	8000
50FCQM17	2	84.1	92.2	83.9	80.4	81.8	78.7	76.5	72.2	65.4
50FCQM17	2	85.9	97.1	88.3	84.4	83.3	80.7	77.4	73.4	67.3
50FCQM28	2	85.9	97.1	88.3	84.4	83.3	80.7	77.4	73.4	67.3

NOTE(S):

a. Outdoor sound data is measured in accordance with AHRI.
b. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
c. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of “average” human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI.

LEGEND

dB — Decibel

Minimum - Maximum Airflow Ratings (cfm) — Cooling Units and Accessory Electric Heat

UNIT	COOLING			ELECTRIC HEAT[a]	
	MINIMUM 2-SPEED AIRFLOW (LOW SPEED)	MINIMUM 2-SPEED AIRFLOW (HIGH SPEED)	MAXIMUM AIRFLOW CFM	MINIMUM AIRFLOW CFM	MAXIMUM AIRFLOW CFM
50FCQM17	2700	4500	7500	4500	7500
50FCQM24	3000	6000	10,000	6000	10,000
50FCQM28	3750	7500	12,500	7500	12,500

NOTE(S):

a. Electric heat modules and single point kits are available as field-installed accessories for 50FCQ units.

Appendix C

Air Quality Modeling Results

3950 Fabian Way School Project v2 Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	3950 Fabian Way School Project v2
Construction Start Date	3/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.20
Precipitation (days)	32.8
Location	3950 Fabian Way, Palo Alto, CA 94303, USA
County	Santa Clara
City	Palo Alto
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1729
EDFZ	1
Electric Utility	City of Palo Alto
Gas Utility	City of Palo Alto Ultilities
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Junior High School	4.45	1000sqft	0.00	4,446	0.00	0.00	—	—

Parking Lot	53.0	Space	0.43	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.35	1.97	17.2	21.7	0.03	0.74	2.53	3.27	0.68	1.08	1.76	—	3,691	3,691	0.15	0.05	0.85	3,709
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.86	2.75	5.42	8.10	0.01	0.19	0.14	0.31	0.17	0.03	0.19	—	1,474	1,474	0.06	0.02	0.01	1,480
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.64	0.54	4.96	6.68	0.01	0.20	0.35	0.55	0.18	0.15	0.34	—	1,228	1,228	0.05	0.01	0.07	1,234
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.10	0.90	1.22	< 0.005	0.04	0.06	0.10	0.03	0.03	0.06	—	203	203	0.01	< 0.005	0.01	204

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	2.35	1.97	17.2	21.7	0.03	0.74	2.53	3.27	0.68	1.08	1.76	—	3,691	3,691	0.15	0.05	0.85	3,709
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.60	0.50	4.84	6.98	0.01	0.19	0.13	0.27	0.17	0.03	0.18	—	1,338	1,338	0.05	0.02	0.01	1,344
2027	2.86	2.75	5.42	8.10	0.01	0.19	0.14	0.31	0.17	0.03	0.19	—	1,474	1,474	0.06	0.02	0.01	1,480
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.64	0.54	4.96	6.68	0.01	0.20	0.35	0.55	0.18	0.15	0.34	—	1,228	1,228	0.05	0.01	0.07	1,234
2027	0.28	0.26	1.00	1.47	< 0.005	0.04	0.01	0.05	0.03	< 0.005	0.04	—	265	265	0.01	< 0.005	0.02	266
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.12	0.10	0.90	1.22	< 0.005	0.04	0.06	0.10	0.03	0.03	0.06	—	203	203	0.01	< 0.005	0.01	204
2027	0.05	0.05	0.18	0.27	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	43.9	43.9	< 0.005	< 0.005	< 0.005	44.1

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.48	0.44	0.30	3.22	0.01	0.01	0.75	0.76	0.01	0.19	0.20	3.29	852	855	0.36	0.03	2.60	876
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.43	0.40	0.34	2.73	0.01	0.01	0.75	0.76	0.01	0.19	0.20	3.29	803	807	0.36	0.03	0.08	825
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.35	0.33	0.25	2.03	0.01	0.01	0.53	0.53	0.01	0.13	0.14	3.29	596	599	0.35	0.02	0.81	615
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.06	0.05	0.37	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.03	0.54	98.6	99.2	0.06	< 0.005	0.13	102

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.33	0.30	0.25	2.98	0.01	< 0.005	0.75	0.76	< 0.005	0.19	0.20	—	793	793	0.03	0.03	2.58	804
Area	0.15	0.14	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.80	0.80	< 0.005	< 0.005	—	0.80
Energy	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.5	58.5	0.01	< 0.005	—	58.7
Water	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	< 0.005	—	0.75
Waste	—	—	—	—	—	—	—	—	—	—	—	3.11	0.00	3.11	0.31	0.00	—	10.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	0.48	0.44	0.30	3.22	0.01	0.01	0.75	0.76	0.01	0.19	0.20	3.29	852	855	0.36	0.03	2.60	876
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.31	0.28	0.29	2.69	0.01	< 0.005	0.75	0.76	< 0.005	0.19	0.20	—	745	745	0.03	0.03	0.07	755
Area	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.5	58.5	0.01	< 0.005	—	58.7
Water	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	< 0.005	—	0.75
Waste	—	—	—	—	—	—	—	—	—	—	—	3.11	0.00	3.11	0.31	0.00	—	10.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	0.43	0.40	0.34	2.73	0.01	0.01	0.75	0.76	0.01	0.19	0.20	3.29	803	807	0.36	0.03	0.08	825
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.22	0.20	0.20	1.89	0.01	< 0.005	0.53	0.53	< 0.005	0.13	0.14	—	537	537	0.02	0.02	0.80	544
Area	0.13	0.13	< 0.005	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.39
Energy	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.5	58.5	0.01	< 0.005	—	58.7
Water	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	< 0.005	—	0.75
Waste	—	—	—	—	—	—	—	—	—	—	—	3.11	0.00	3.11	0.31	0.00	—	10.9

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	0.35	0.33	0.25	2.03	0.01	0.01	0.53	0.53	0.01	0.13	0.14	3.29	596	599	0.35	0.02	0.81	615
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.04	0.34	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	—	88.9	88.9	< 0.005	< 0.005	0.13	90.1
Area	0.02	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.07
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.69	9.69	< 0.005	< 0.005	—	9.71
Water	—	—	—	—	—	—	—	—	—	—	—	0.03	0.00	0.03	< 0.005	< 0.005	—	0.12
Waste	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.80
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.06	0.06	0.05	0.37	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.03	0.54	98.6	99.2	0.06	< 0.005	0.13	102

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	0.44	4.09	5.58	0.01	0.13	—	0.13	0.12	—	0.12	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.53	0.44	4.09	5.58	0.01	0.13	—	0.13	0.12	—	0.12	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.58	0.79	< 0.005	0.02	—	0.02	0.02	—	0.02	—	121	121	< 0.005	< 0.005	—	122
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.38	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	84.1	84.1	< 0.005	< 0.005	0.31	85.4
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.4	32.4	< 0.005	0.01	0.07	34.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.03	0.03	0.33	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.9	77.9	< 0.005	< 0.005	0.01	79.0
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.4	32.4	< 0.005	0.01	< 0.005	34.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.02	11.4
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.62	4.62	< 0.005	< 0.005	< 0.005	4.85
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.88
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.80

3.3. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.44	3.74	5.54	0.01	0.19	—	0.19	0.17	—	0.17	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	61.1	61.1	< 0.005	< 0.005	—	61.4
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.1	10.1	< 0.005	< 0.005	—	10.2
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.0	42.0	< 0.005	< 0.005	0.15	42.7
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.7	29.7	< 0.005	< 0.005	0.06	31.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.85
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.22
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.47
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.37

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.02	9.19	9.69	0.02	0.42	—	0.42	0.39	—	0.39	—	1,714	1,714	0.07	0.01	—	1,720
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.17	0.15	1.31	1.38	< 0.005	0.06	—	0.06	0.05	—	0.05	—	244	244	0.01	< 0.005	—	245
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.4	40.4	< 0.005	< 0.005	—	40.6
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.1	63.1	< 0.005	< 0.005	0.23	64.0
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	0.03	15.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.41	8.41	< 0.005	< 0.005	0.01	8.54
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.22
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.39	1.39	< 0.005	< 0.005	< 0.005	1.41
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.37

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.81	6.91	0.01	0.19	—	0.19	0.17	—	0.17	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.81	6.91	0.01	0.19	—	0.19	0.17	—	0.17	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	2.77	3.97	0.01	0.11	—	0.11	0.10	—	0.10	—	751	751	0.03	0.01	—	753
Onsite truck	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.50	0.73	< 0.005	0.02	—	0.02	0.02	—	0.02	—	124	124	0.01	< 0.005	—	125
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.7	15.7	< 0.005	< 0.005	0.06	15.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.3	19.3	< 0.005	< 0.005	0.05	20.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.5	14.5	< 0.005	< 0.005	< 0.005	14.7
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.3	19.3	< 0.005	< 0.005	< 0.005	20.2
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.46	8.46	< 0.005	< 0.005	0.01	8.58
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.01	11.6
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.40	1.40	< 0.005	< 0.005	< 0.005	1.42
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.84	1.84	< 0.005	< 0.005	< 0.005	1.93
Hauling	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	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.56	6.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.63	0.96	< 0.005	0.02	—	0.02	0.02	—	0.02	—	181	181	0.01	< 0.005	—	181
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.9	29.9	< 0.005	< 0.005	—	30.0
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	< 0.005	14.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.9	18.9	< 0.005	< 0.005	< 0.005	19.8
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.03
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.62	2.62	< 0.005	< 0.005	< 0.005	2.75
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.43	0.43	< 0.005	< 0.005	< 0.005	0.45
Hauling	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	0.00

3.11. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	4.15	5.31	0.01	0.17	—	0.17	0.15	—	0.15	—	823	823	0.03	0.01	—	826
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.31	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	60.9	60.9	< 0.005	< 0.005	—	61.1
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.1	10.1	< 0.005	< 0.005	—	10.1
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.53	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	134	134	< 0.005	0.01	0.01	136
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.0	10.0	< 0.005	< 0.005	0.02	10.2
Vendor	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	0.00
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.66	1.66	< 0.005	< 0.005	< 0.005	1.68
Vendor	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	0.00
Hauling	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	0.00

3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.15	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.78	8.78	< 0.005	< 0.005	—	8.81
Architectural Coatings	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.45	1.45	< 0.005	< 0.005	—	1.46
Architectural Coatings	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.86	2.86	< 0.005	< 0.005	< 0.005	2.89
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.19	0.19	< 0.005	< 0.005	< 0.005	0.19
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	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	0.00
Hauling	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	0.00

3.15. Trenching/Utilities): (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00
Vendor	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	0.00

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	0.33	0.30	0.25	2.98	0.01	< 0.005	0.75	0.76	< 0.005	0.19	0.20	—	793	793	0.03	0.03	2.58	804
Parking Lot	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	0.00
Total	0.33	0.30	0.25	2.98	0.01	< 0.005	0.75	0.76	< 0.005	0.19	0.20	—	793	793	0.03	0.03	2.58	804
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	0.31	0.28	0.29	2.69	0.01	< 0.005	0.75	0.76	< 0.005	0.19	0.20	—	745	745	0.03	0.03	0.07	755
Parking Lot	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	0.00
Total	0.31	0.28	0.29	2.69	0.01	< 0.005	0.75	0.76	< 0.005	0.19	0.20	—	745	745	0.03	0.03	0.07	755

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	0.04	0.04	0.04	0.34	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	—	88.9	88.9	< 0.005	< 0.005	0.13	90.1
Parking Lot	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	0.00
Total	0.04	0.04	0.04	0.34	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	—	88.9	88.9	< 0.005	< 0.005	0.13	90.1

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.5	58.5	0.01	< 0.005	—	58.7
Parking Lot	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
Total	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.5	58.5	0.01	< 0.005	—	58.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.5	58.5	0.01	< 0.005	—	58.7
Parking Lot	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
Total	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.5	58.5	0.01	< 0.005	—	58.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.69	9.69	< 0.005	< 0.005	—	9.71

Parking Lot	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
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.69	9.69	< 0.005	< 0.005	—	9.71

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.03	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.80	0.80	< 0.005	< 0.005	—	0.80
Total	0.15	0.14	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.80	0.80	< 0.005	< 0.005	—	0.80
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.07
Total	0.02	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.07

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	< 0.005	—	0.75
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	< 0.005	—	0.75
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Junior High School	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	< 0.005	—	0.75
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	< 0.005	—	0.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	0.03	0.00	0.03	< 0.005	< 0.005	—	0.12
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.03	0.00	0.03	< 0.005	< 0.005	—	0.12

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	3.11	0.00	3.11	0.31	0.00	—	10.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.11	0.00	3.11	0.31	0.00	—	10.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Junior High School	—	—	—	—	—	—	—	—	—	—	—	3.11	0.00	3.11	0.31	0.00	—	10.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.11	0.00	3.11	0.31	0.00	—	10.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.80
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.80

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Junior High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	3/1/2026	4/30/2026	6.00	52.0	—
Site Preparation	Site Preparation	4/1/2026	4/30/2026	6.00	26.0	—
Grading	Grading	4/1/2026	5/31/2026	6.00	52.0	—
Building Construction	Building Construction	5/1/2026	2/28/2027	6.00	260	—
Paving	Paving	3/1/2027	3/31/2027	6.00	27.0	—
Architectural Coating	Architectural Coating	2/1/2027	2/28/2027	6.00	24.0	—
Trenching/Utilities):	Trenching	4/1/2026	5/31/2026	6.00	52.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40

Grading	Tractors/Loaders/Back	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	0.46	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.42	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	11.7	LDA,LDT1,LDT2

Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	0.21	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1.87	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	0.73	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.37	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching/Utilities):	—	—	—	—
Trenching/Utilities):	Worker	0.00	11.7	LDA,LDT1,LDT2
Trenching/Utilities):	Vendor	—	8.40	HHDT,MHDT
Trenching/Utilities):	Hauling	0.00	20.0	HHDT
Trenching/Utilities):	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	6,669	2,223	1,124

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	95.0	—
Site Preparation	85.0	0.00	13.0	0.00	—
Grading	85.0	0.00	39.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.43

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Junior High School	0.00	0%
Parking Lot	0.43	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O

2026	0.00	0.00	0.00	0.00
2027	0.00	0.00	0.00	0.00

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Junior High School	89.7	0.00	0.00	23,380	1,067	0.00	0.00	278,078
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	6,669	2,223	1,124

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Junior High School	19,729	0.00	0.0000	0.0000	182,557
Parking Lot	16,407	0.00	0.0000	0.0000	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Junior High School	91,681	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Junior High School	5.78	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Junior High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Junior High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Junior High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Junior High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	12.7	annual days of extreme heat
Extreme Precipitation	4.40	annual days with precipitation above 20 mm
Sea Level Rise	0.87	meters of inundation depth
Wildfire	8.55	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.6
AQ-PM	19.4
AQ-DPM	81.7
Drinking Water	38.1
Lead Risk Housing	40.4
Pesticides	0.00
Toxic Releases	26.4
Traffic	82.9
Effect Indicators	—
CleanUp Sites	77.6
Groundwater	96.0
Haz Waste Facilities/Generators	87.9
Impaired Water Bodies	23.9
Solid Waste	0.00
Sensitive Population	—
Asthma	59.0
Cardio-vascular	24.6
Low Birth Weights	24.6

Socioeconomic Factor Indicators	—
Education	7.40
Housing	4.03
Linguistic	63.0
Poverty	11.3
Unemployment	10.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	97.99820352
Employed	96.04773515
Median HI	98.62697292
Education	—
Bachelor's or higher	99.87167971
High school enrollment	100
Preschool enrollment	49.22366226
Transportation	—
Auto Access	42.10188631
Active commuting	61.81188246
Social	—
2-parent households	93.53265751
Voting	95.26498139
Neighborhood	—
Alcohol availability	46.16963942
Park access	81.35506224
Retail density	74.95187989

Supermarket access	61.10612088
Tree canopy	82.93340177
Housing	—
Homeownership	80.70062877
Housing habitability	95.07250096
Low-inc homeowner severe housing cost burden	85.28166303
Low-inc renter severe housing cost burden	93.63531374
Uncrowded housing	71.88502502
Health Outcomes	—
Insured adults	98.9734377
Arthritis	0.0
Asthma ER Admissions	37.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	98.4
Cognitively Disabled	66.4
Physically Disabled	76.0
Heart Attack ER Admissions	71.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0

Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	5.5
Children	87.9
Elderly	8.9
English Speaking	49.2
Foreign-born	76.3
Outdoor Workers	95.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	48.7
Traffic Density	76.6
Traffic Access	64.3
Other Indices	—
Hardship	3.5
Other Decision Support	—
2016 Voting	95.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	99.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	based on applicant provided information
Construction: Construction Phases	Based on applicant provided information

Appendix D

Cultural Resources Assessment

Rincon Consultants, Inc.
66 Franklin Street. Suite 300
Oakland, California 94607
510-834-4455

February 5, 2025
Project No: 24-17098

Steven Switzer, Historic Preservation Planner/Project Planner
Planning & Community Environment Department
City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301
Via email: Steven.Switzer@cityofpaloalto.org

Subject: Cultural Resources Assessment for the 3950 Fabian Way School Project in the City of Palo Alto, California

Dear Mr. Switzer:

This cultural resources assessment was completed in support of the City of Palo Alto's environmental review process for the proposed 3950 Fabian Way School Project (proposed project) located at 3950 Fabian Way in Palo Alto, California. The City of Palo Alto (City) retained Rincon Consultants, Inc. (Rincon) to support the proposed project's compliance with the California Environmental Quality Act (CEQA). This letter report documents the methods and results of a cultural resources records search, a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search, historic map and aerial review, and geoarchaeological sensitivity assessment. The intent of this study is to identify if archaeological or historical resources, as defined by CEQA Section 15064.5, will be impacted by the project.

Project Site and Description

The 1.51-acre project site is located on the west side of Fabian Way between East Charleston Road and East Meadow Drive, at 3950 Fabian Way in Palo Alto, California (Santa Clara County Assessor's Parcel Number: 127-37-023). The project site encompasses Section 8 of Township 6S, Range 2W on the *Mountain View, California* United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1).

The project would involve alteration of the existing building and changing its use to accommodate the Girls' Middle School, a private school (Figure 1 and Figure 2). The school would move from its current location on West Bayshore Avenue. The alterations would include partial demolition of the northern portion of the building and the addition of a new approximately 4,200 square-foot, single-level gymnasium in its place. Although the total gross floor area would not change, the project would increase lot coverage.

Methods

The following section describes background research methods of a records search, NAHC SLF search, and archaeological sensitivity assessment.

California Historical Resources Information System Records Search

On January 24, 2025, Rincon received California Historical Resources Information System (CHRIS) records search results from the Northwest Information Center (NWIC) (Attachment 2). The NWIC is the official state repository for cultural resources records and reports for Santa Clara County. The purpose of the records search was to identify previously recorded cultural resources, as well as previously conducted cultural resources studies within the project site and a 0.25-mile radius surrounding it. Rincon also reviewed the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks list, and the Built Environment Resources Directory (BERD).

Sacred Lands File Search

Rincon contacted the NAHC on January 17, 2025, to request a search of the SLF, as well as a contact list of Native Americans culturally affiliated with the project site vicinity (Attachment 3).

Archaeological Sensitivity Assessment

Rincon conducted a review of the following, which were used to inform an assessment of the project site's archaeological sensitivity: historical topographic maps, historical aerial imagery, geologic maps, soil maps.

Findings

The following section describes findings of the background research including the records search, NAHC SLF search, and archaeological sensitivity assessment.

California Historical Resources Information System Records Search

Previous Cultural Resources Studies

The CHRIS records search identified one cultural resources study within the project site and seven cultural resources studies within 0.25 mile of the project site (Attachment 2). The report identified within the project site is described further below.

Study S-041536

Michael Corbett and Denise Bradley with Dames & Moore conducted Study S-041536, *Final Survey Report Palo Alto Historical Survey Update August 1997-August 2000*, in February 2001. This study serves as an update to a survey conducted in 1979, which surveyed over 500 properties in Palo Alto and was adopted by the City as its Historic Building Inventory. Methods for the survey update study consisted of background and archival research, an initial reconnaissance survey, intensive survey, and preparation of Department of Parks and Recreation 523 forms. Corbett and Bradley evaluated 291 properties for individual eligibility for the NRHP. Of the 291 properties, 165 appeared eligible and 126 appeared ineligible for the NRHP. The study also identified 13 potentially significant historic

districts. No cultural resources were identified within the current project site. (Corbett and Bradley 2001)

Previously Recorded Cultural Resources

The CHRIS records search and background research identified no cultural resources within the project site or 0.25-mile radius.

Sacred Lands File Search

On January 23, 2025, the NAHC responded to Rincon's SLF search request, stating that the results of the SLF search were positive (Attachment 3), meaning there are documented sacred lands in the vicinity of the project site. No outreach was completed for this project.

Archaeological Sensitivity Assessment

Aerial Imagery and Historical Topographic Maps Review

General Land Office plat maps for Township 6 South, Range 2 West from 1865 and 1896 depict the project site as part of Rancho Rincon de San Francisquito (Bureau of Land Management 1865, 1896). Historical topographic maps from 1897 to 1902 depict the project site as undeveloped land east of San Antonio Creek and north of a road that appears to be present day East Charleston Road (USGS 2025, Nationwide Environmental Title Research [NETR] 2025). Four buildings are present to the southeast of the project site along an unnamed road that runs north from East Charleston Road. Historical topographic maps from 1941 through 1948 depict the development of major roads in the vicinity of the project site, including Bay Shore Boulevard to the northeast, San Antonio Road to the east, and Middlefield Road to the southwest (USGS 2025). A cluster of five buildings are depicted immediately south of the project site to the east of historical San Antonio Creek, which is re-labeled as Adobe Creek beginning in 1941 topographic maps. Aerial images dated to 1948 show the area surrounding the five buildings as agricultural fields (NETR 2025). Historical topographic maps from 1953 depict only one building at the end of what appears to be the southernmost end of present-day Fabian Way (USGS 2025). Aerial images from 1956 depict Fabian Way as an unpaved dirt road bisecting an agricultural field north of East Charleston Road (NETR 2025). Aerial images from 1958 depict mass development around the project site. Grading of Fabian Way is visible to the east, and a long T-shaped building is present to the northeast of the project site (NETR 2025). A large residential area is also present to the west, and Adobe Creek appears to be channelized up to the southeast of Nathan Way and Ross Road.

The entire vicinity to the project site is completely developed by 1968 (NETR 2025). Development of the project site begins in 1960, and two rectangular buildings are present within the project site from 1968 through 1988 (NETR 2025). Aerial imagery from 1991 shows a single building within the project site. The area remains in the same condition until 2005 when re-development occurs in the lot immediately east of Fabian Way. Aerials from 2022 show the project site is in its current condition (NETR 2025).

Geologic and Soils Map Review

Geologic mapping indicates Holocene age fossiliferous silty clay and organic clay of intra-fan areas (map unit Qac) is mapped at the surface within the project site (Dibblee and Minch 2007). Holocene-age alluvium and Pleistocene-age surfaces buried by Holocene alluvium are the most likely landforms to contain pre-contact archaeological resources. Since human populations increased over time, Late

Holocene-age soils are more likely to yield archeological resources than older, Early Holocene or Pleistocene-age soils. Also, the potential for pre-contact archaeological sites has been positively correlated with proximity to water (Meyer et al. 2010). The project site is located approximately 48 meters (158 feet) east of Adobe Creek, historically known as San Antonio Creek, and approximately 3.4 kilometers (2.1 miles) south of the San Francisco Bay, as shown by historical topographic maps (USGS 2025). Soils mapping indicates the project site is underlain by urban land (California Soil Web 2025). Urban land consists of highly populated and developed areas where commercial and residential development is prevalent. These soils consist of transported and altered materials where there are no native or intact soils present. Urban lands may also include artificial fill materials transported for nearby areas or previously excavated materials from the project site itself. Due to these soils being transported and altered, urban land soil patterns are unique for each city, including Palo Alto (United States Department of Agriculture 2019). As these soils are highly disturbed, these soils are not likely to contain buried A horizons, which are indicative of a rapidly buried ground surface conducive to the preservation of archaeological resources.

Archaeological Sensitivity Summary

The geologic units mapped at the surface of the project site are conducive to the natural burial and preservation of archaeological resources given that they were deposited during the Late Holocene period. Additionally, the project site is in proximity to a historical perennial water source. However, the CHRIS records search results did not identify cultural resources within 0.25 mile of the project site. Additionally, soils mapping indicates the soils within the project site do not contain buried A horizons, and ground disturbance within the project site is evident in aerial imagery from agricultural activities and mass development of the area. Based on these factors, the project site is considered to have low sensitivity for the presence of subsurface archaeological deposits.

Conclusions and Recommendations

The impact analysis included here is organized based on the cultural resources thresholds included in CEQA Guidelines Appendix G: Environmental Checklist Form:

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?
b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?
c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Threshold A broadly refers to historical resources. To more clearly differentiate between archaeological and built environment resources, we have chosen to limit analysis under Threshold A to built environment resources. Archaeological resources, including those that may be considered historical resources pursuant to Section 15064.5 and those that may be considered unique archaeological resources pursuant to Section 21083.2, are considered under Threshold B.

Historical Built Environment Resources

This assessment identified no built-environment historical resources within the project site. The proposed project would therefore result in ***no impact to historical resources*** pursuant to CEQA.

Historical and Unique Archaeological Resources

This assessment did not identify any archaeological resources or archaeological deposits in the project site, and the archaeological sensitivity of the project site is considered to be low based on the CHRIS records search results, soil mapping, and extent of previous ground disturbance. However, the lack of surface evidence of archaeological materials does not preclude their subsurface existence. With adherence to the following City of Palo Alto Standard Conditions of Approval related to unanticipated discovery of archaeological resources, Rincon recommends a finding of *less-than-significant impact to archaeological resources* under CEQA.

Standard Condition of Approval—Unanticipated Discovery of Buried Archaeological, Paleontological, and Tribal Cultural Resources

No known archeological or paleontological resources are present on or within the immediate vicinity of the site. However, in the unlikely event that an archeological resource or paleontological resource is unearthed during ground disturbing activities, work in the immediate area must be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archeology (National Park Service 1983) shall be contacted immediately to evaluate the find. If the find is Native American in origin, then a Native American representative must also be contacted to participate in the evaluation of the find. The qualified archaeologist, and, if applicable, the Native American representative, shall examine the find and make recommendations regarding additional work necessary to evaluate the significance of the find and the appropriate treatment of the resource. Recommendations could include, but are not limited to, invasive or non-invasive testing, sampling, laboratory analysis, preservation in place, or data recovery. A report of findings documenting any data recovered during monitoring shall be prepared by a qualified archaeologist and submitted to the Director of Planning prior to final planning inspection.

Human Remains

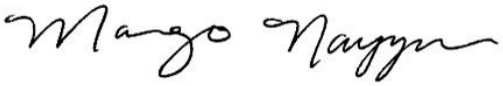
No human remains are known to be present within the project site. However, the discovery of human remains is a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance may occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be of Native American origin, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner must reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, Rincon recommends a finding of less-than-significant impact to human remains under CEQA.

Should you have any questions concerning this study, please do not hesitate to contact the undersigned at 805-869-1323 or lmaldonado@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.



Laura Maldonado, MA, RPA
Archaeologist



Margo Nayyar, MA
Cultural Resources Principal

Attachments

Attachment 1 Figures

Attachment 2 California Historical Resources Information System Results

Attachment 3 Native American Heritage Commission Sacred Lands File Search Results

References

Bureau of Land Management

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California Soil Web

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Dibblee, T.W. and J.A. Minch

2007 *Geologic map of the Palo Alto and Mountain View quadrangles, Santa Clara County, California.* Electronic resource, https://ngmdb.usgs.gov/Prodesc/proddesc_83441.htm, accessed January 2025.

Meyer, Jack, Craig Young, and Jeffery Rosenthal

2010 *Volume 1: A Geoarchaeological Overview and Assessment of Caltrans Districts 6 and 9; Cultural Resources Inventory of California District 6/9 Rural Conventional Highways.* Prepared for California Department of Transportation, District 6, Fresno, CA.

National Park Service

1983 Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. Electronic resource at https://www.nps.gov/articles/sec-standards-prof-quals.htm, accessed December 2024.

Nationwide Environmental Title Research (NETR)

2025 Aerial images of the proposed project site and surroundings. Electronic resource, https://www.historicaerials.com/viewer, accessed January 2025.

United States Department of Agriculture

2019 *Urban Soils Pamphlet*. Electronic resource, https://www.nrcs.usda.gov/sites/default/files/2022-11/Urban-Soils-Fact-Sheet.pdf, accessed January 2025.

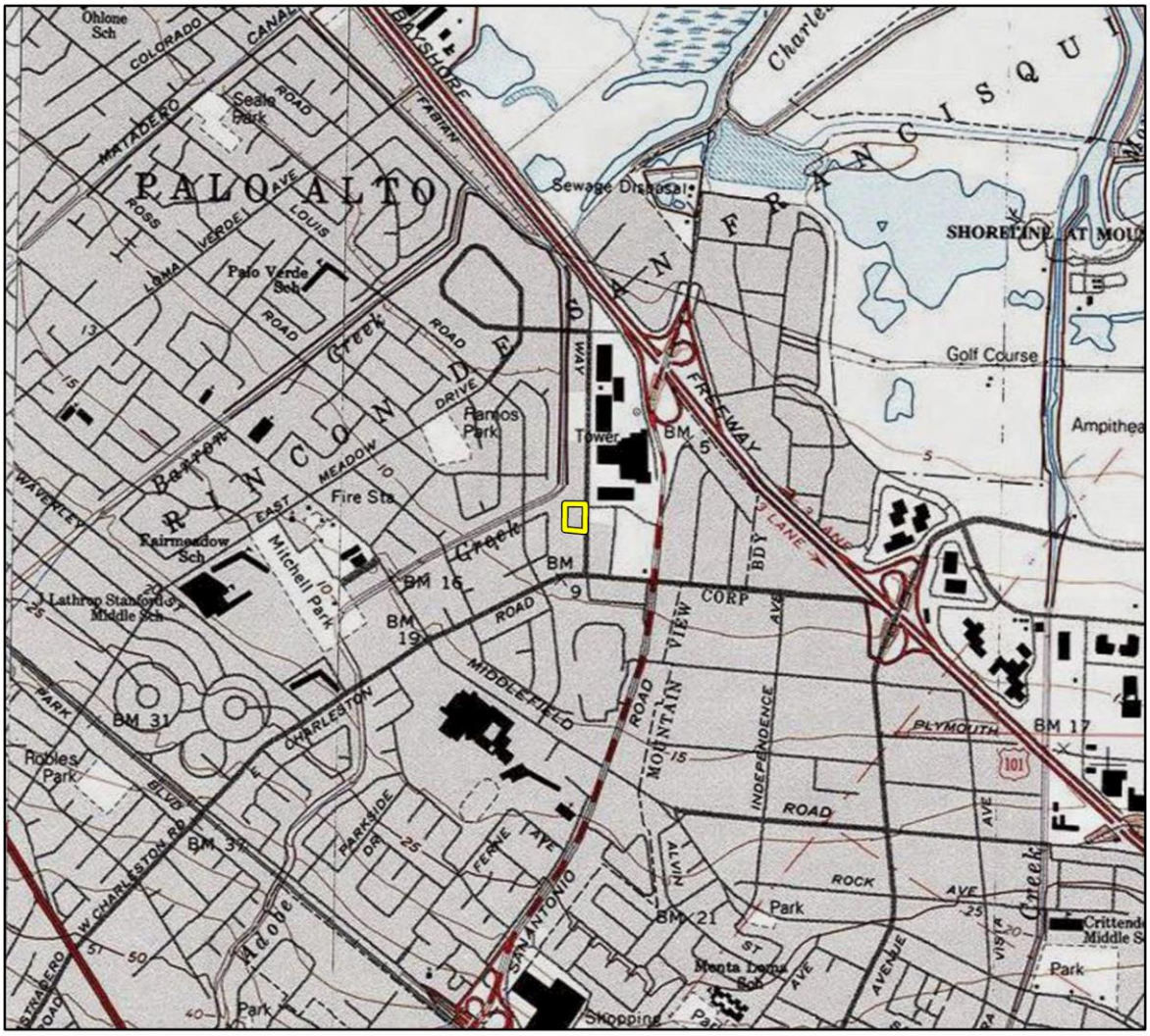
United States Geological Survey (USGS)

2025 *Topoviewer*. Electronic resource, https://ngmdb.usgs.gov/topoview/viewer/#13/37.4519/-122.0862, accessed January 2025.

Attachment 1

Figures

Figure 1 Project Location



Basemap provided by National Geographic Society, Esri and their licensors © 2025. Mountain View Quadrangle. T06S R02W S08. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

24-17098 CR
Fig X Regional Location Topo

Figure 2 Project Site



Imagery provided by Microsoft Bing and its licensors © 2025.

24-17098 CR
Fig X Project Site

Attachment 2

California Historical Resources Information System Results

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
1400 Valley House Drive, Suite 210
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
https://nwic.sonoma.edu

1/24/2025 NWIC File No.: 24-1057

Laura Maldonado
Rincon Consultants, Inc.
180 N. Ashwood Avenue
Ventura, CA 93003

Re: 3950 Fabian Way School Project

The Northwest Information Center received your record search request for the project area referenced above, located on the Mountain View USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a ¼ mile radius:

Resources within project area:	0
Resources within ¼ mi. radius:	0
Reports within project area:	1: S-041536
Reports within ¼ mi. radius:	7: See page 3

Resource Database Printout (list):	☐ enclosed	☐ not requested	☒ nothing listed
Resource Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Resource Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Resource Record Copies:	☐ enclosed	☐ not requested	☒ nothing listed
Report Copies:	☒ enclosed	☐ not requested	☐ nothing listed
OHP Built Environment Resources Directory:	☐ enclosed	☐ not requested	☒ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☒ not requested	☐ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed

*Notes:

** Current versions of these resources are available on-line:

Caltrans Bridge Survey: http://www.dot.ca.gov/hq/structur/strmaint/historic.html

Soil Survey: http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=CA

Shipwreck Inventory: http://www.slc.ca.gov/Info/Shipwrecks.html

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Lindsey Willoughby

Lindsey Willoughby
Researcher

Reports within ¼ mi. radius
8345
28669
29573
34171
37075
43191
45670

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-008345	Caltrans - 04393-389131; Caltrans - 04393-396171; Voided - E-828 SCL	1980	Mara Melandry	Archaeological Survey Report, 04-SCL-101, Portions of P.M. 38.3/52.5, Improvements to Route 101 Between Route 17 in San Jose and Embarcadero Road in Palo Alto, Santa Clara County, 04393-389131, 04393-396171	California Department of Transportation, District 04	43-000441
S-028669		2004	Miley Paul Holman	Archaeological Field Study of the 901 San Antonio Road Project Area, Palo Alto, Santa Clara County, California	Holman & Associates	
S-029573	Submitter - Job Number 647-014	2000	Jonathan Goodrich and John Holson	Final Report, Archaeological Survey and Record Search for the Six Fluor Global Fiber Optic Segments, Mountain View, Palo Alto, and San Mateo County, California.	Pacific Legacy, Inc.	43-000441, 43-000463, 43-000551, 43-000593
S-034171		2007	Miley Paul Holman	Archaeological Backhoe Testing for Cultural Resources at the 901 San Antonio Road Project Area, Palo Alto, Santa Clara Couty, California (letter report)	Holman & Associates	
S-037075	Caltrans - EA 04-4A330; Voided - S-35123; Voided - S-37074	2008	Adrian Whitaker	Historic Resources Compliance Report for the U.S. 101 Auxiliary Lanes (Route 85 to Embarcadero Road) Project, Santa Clara County, California 04-SCL-101 PM 52.17-48.97 EA 04-4A330	Far Western Anthropological Research Group, Inc.	43-000441, 43-000578
S-037075a		2008	Brian F. Byrd, Michael Darcangelo, Jeffrey Rosenthal, and Jack Meyer	Archaeological Survey Report for the US 101 Auxiliary Lanes (Route 85 to Embarcadero Road) Project, Santa Clara County, California, 04-SCL-101 PM 48.97/52.17 EA 04-4A3300	Far Western Research Group, Inc.	
S-037075b		2008	Adrian Whitaker	Extended Phase I Testing for the U.S. 101 Auxiliary Lanes (Route 85 to Embarcadero Road) Project, Santa Clara County, California 04-SCL-101 PM 52.17-48.97 EA 04-4A330O	Far Western Anthropological Research Group, Inc.	
S-041536		2001	Michael Corbett and Denise Bradley	Final Survey Report, Palo Alto Historical Survey Update, August 1997 - August 2000	Dames & Moore	43-000551
S-043191	Caltrans - EA 4A7900; Caltrans - EFIS 0400001163	2013	Kathleen Kubal and Jay Rehor	Historic Property Survey Report, State Route 85 Express Lanes Project, Santa Clara County, California, EA 4A7900, EFIS 0400001163, US 101 PM 23.1-28.6, SR 85 PM 0.0-24.1, US 101 PM 47.9-52.0	URS Corporation	43-000072, 43-000149, 43-000189, 43-000247, 43-000248, 43-000249, 43-000250, 43-000251, 43-000252, 43-000303, 43-000339, 43-000345, 43-000415, 43-000416, 43-000441, 43-000568, 43-000983, 43-001095, 43-001433, 43-001473

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-043191a		2013	Kathleen Kubal	Archaeological Survey Report, State Route 85 Express Lanes Project, Santa Clara County, California: EA 4A7900; EFIS 0400001163, US 101 PM 23.1-28.6, SR 85 PM 0.0-24.1, US 101 PM 47.9-52.0	URS Corporation	
S-043191b		2013	Jay Rehor and Kathleen Kubal	Extended Phase I Study, State Route 85 Express Lanes Project, Santa Clara County, California: Project No. 0400001163; EA 4A7900, US 101 PM 23.1-28.6, SR 85 PM 0.0-24.1, US 101 PM 47.9-52.0	URS Corporation	
S-043191c		2013	Kathleen Kubal	Environmentally Sensitive Area Action Plan, State Route 85 Express Lanes Project, Santa Clara County, California: EA 4A7900; EFIS 0400001163, US 101 PM 23.1-28.6, SR 85 PM 0.0-24.1, US 101 PM 47.9-52.0	URS Corporation	
S-045670	Caltrans - EA 2G7100; Caltrans - Project No. 0412000459; OHP PRN - FHWA 2014 0527 001	2014	Kathleen Kubal	Historic Property Survey Report, US 101 Express Lanes Project, Santa Clara County, California, Project No. 0412000459/EA 2G7100, 04-SCL-101 PM 16.00/52.55, 04-SCL-85 PM 23.0/24.1	URS Corporation	43-000032, 43-000040, 43-000072, 43-000175, 43-000181, 43-000183, 43-000189, 43-000247, 43-000250, 43-000251, 43-000252, 43-000339, 43-000345, 43-000415, 43-000416, 43-000441, 43-000560, 43-000568, 43-001001, 43-001095, 43-001163, 43-001473
S-045670a		2014	Kathleen Kubal	Supplemental Historic Property Survey Report, US 101 Express Lanes Project, Project No. 0412000459/EA 2G7100, 04-SCL-101 PM 16.00/52.55 - 04-SCL-85 PM 23.0/24.1, Santa Clara County, California	URS Corporation	
S-045670b		2014	Nancy E. Sikes, Molly Valasik, Amy Glover, Jay Rehor, and Kathleen Kubal	Archaeological Survey Report, US 101 Express Lanes Project, Project No. 0412000459/EA 2G7100, US 101 PM 16.00/52.55 - SR 85 PM 23.0/R24.1, Santa Clara County, California	Cogstone Resource Management, Inc.; URS Corporation	
S-045670c		2014	Jay Rehor	Extended Phase I Study, US 101 Express Lanes Project, Project No. 0412000459/EA 2G7100, US 101 PM 16.00/52.55 - SR 85 PM 23.0/R24.1, Santa Clara County, California	URS Corporation	
S-045670d		2014	Karin G. Beck	Historical Resources Evaluation Report, US 101 Express Lanes Project, Project No. 0412000459/EA 2G7100, US 101 PM 16.00-52.55, SR 85 PM 23.0-24.1, Santa Clara County, California	URS Corporation	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-045670e		2014	Carol Roland-Nawi	FHWA 2014 0527 001, Determinations of Eligibility for the Proposed US 101 Express Lanes Project, Santa Clara County, California	California Office of Historic Preservation	

Attachment 3

Native American Heritage Commission Sacred Lands File Search Results

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

ACTING EXECUTIVE SECRETARY
STEVEN QUINN

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

January 23, 2025

Laura Maldonado
Rincon Consultants, Inc.

Via Email to: lmaldonado@rinconconsultants.com

Re: 3950 Fabian Way School (Rincon No.:24-17098) Project, Santa Clara County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the tribes on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions, please contact me at my email address: Mathew.Lin@nahc.ca.gov

Sincerely,

Mathew Lin

Mathew Lin
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Santa Clara County
1/23/2025

County	Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
Santa Clara	Amah Mutsun Tribal Band	N	Valentin Lopez, Chairperson	P.O. Box 5272 Galt, CA, 95632	(916) 743-5833		vjltestingcenter@aol.com	Costanoan Northern Valley Yokut	Alameda,Calaveras,Contra Costa,Fresno,Madera,Mariposa,Merced,Monterey,San Benito,San Francisco,San Joaquin,San	7/20/2023
	Amah Mutsun Tribal Band	N	Ed Ketchum, Vice-Chairperson		(530) 578-3864		aerieways@aol.com	Costanoan Northern Valley Yokut	Alameda,Calaveras,Contra Costa,Fresno,Madera,Mariposa,Merced,Monter	7/20/2023
	Amah Mutsun Tribal Band of Mission San Juan Bautista	N	Shelby Brown, Senior Cultural Monitor & Consultant, Councilwoman	2451 Tyrolean Way Sacramento, CA, 95821	(916) 276-8380		shelbyzimmer1997@gmail.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	10/8/2024
	Amah Mutsun Tribal Band of Mission San Juan Bautista	N	Christopher Zimmer, Senior Cultural Monitor & Consultant, Councilman	PO Box 214211, 2929 Fulton Ave Unit 19 Sacramento, CA, 95821	(650) 520-8418		cdzimmer93@gmail.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	10/8/2024
	Amah Mutsun Tribal Band of Mission San Juan Bautista	N	Michelle Zimmer, Senior Cultural Monitor & Consultant	PO Box 214211, 2929 Fulton Ave Unit 19 Sacramento, CA, 95821	(916) 730-9468		michellezimmer1966@gmail.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	10/8/2024
	Amah Mutsun Tribal Band of Mission San Juan Bautista	N	Garry Zimmer, Senior Cultural Monitor & Consultant	PO Box 214211, 2929 Fulton Ave Unit 19 Sacramento, CA, 95821	(408) 771-8901		garryzimmer@gmail.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	10/8/2024
	Amah MutsunTribal Band of Mission San Juan Bautista	N	Irenne Zwierlein, Chairperson	3030 Soda Bay Road Lakeport, CA, 95453	(916) 730-9468		amahmutsuntribalcommunications@gmail.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	10/8/2024
	Costanoan Rumsen Carmel Tribe	N	Samuel Rodriguez, Cultural Resource Officer	29539 Oakbridge Dr Menifee, CA, 92586	(760) 681-6860		crct.crd@gmail.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	7/17/2024
	Costanoan Rumsen Carmel Tribe	N	Henry Muñoz, Cultural Resource Officer	108 South Acacia Rialto, CA, 92376	(909) 254-1610		crct.crd@gmail.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	7/17/2024
	Costanoan Rumsen Carmel Tribe	N	Carla Munoz, Tribal Council		(415) 690-3110		crct.crd@gmail.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa	7/17/2024
	Indian Canyon Mutsun Band of Costanoan	N	Kanyon Sayers-Roods, MLD Contact	1615 Pearson Court San Jose, CA, 95122	(408) 673-0626		kanyon@kanyonkonsulting.com	Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	3/15/2024
	Indian Canyon Mutsun Band of Costanoan	N	Ann Marie Sayers, Chairperson	P.O. Box 28 Hollister, CA, 95024	(831) 637-4238			Costanoan	Alameda,Contra Costa,Merced,Monterey,San Benito,San Francisco,San Mateo,Santa Clara,Santa Cruz,Stanislaus	3/15/2024
	Muwekma Ohlone Tribe of the SF Bay Area	N	Richard Massiatt, Councilmember/MLD Tribal Rep.	1169 S. Main Street, Ste. 336 Manteca, CA, 95377	(209) 321-0372		rmassiatt@muwekma.org	Costanoan	Alameda,Contra Costa,Marin,Merced,Napa,Sacramento,San Francisco,San Joaquin,San Mateo,Santa	3/28/2024
	Muwekma Ohlone Tribe of the SF Bay Area	N	Charlene Nijmeh, Chairperson	1169 S. Main Street, Ste. 336 Manteca, CA, 95377	(408) 464-2892		cnijmeh@muwekma.org	Costanoan	Alameda,Contra Costa,Marin,Merced,Napa,Sacramento,San Francisco,San Joaquin,San Mateo,Santa	3/28/2024
	Tamien Nation	N	Lillian Camarena, Secretary	336 Percy Street Madera, CA, 93638	(559) 363-5914		Lcamarena@tamien.org	Costanoan	Alameda,San Mateo,Santa Clara,Stanislaus	4/11/2023
	Tamien Nation	N	Johnathan Wasaka Costillas, THPO	10721 Pingree Road Clearlake Oaks, CA, 94523	(925) 336-5359		thpo@tamien.org	Costanoan	Alameda,San Mateo,Santa Clara,Stanislaus	4/11/2023
	Tamien Nation	N	Quirina Luna Geary, Chairperson	PO Box 8053 San Jose, CA, 95155	(707) 295-4011		qgeary@tamien.org	Costanoan	Alameda,San Mateo,Santa Clara,Stanislaus	4/11/2023
	The Ohlone Indian Tribe	N	Andrew Galvan, Chairperson	P.O. Box 3388 Fremont, CA, 94539	Phone: (510) 882-0527	(510) 687-9393	chochenyo@AOL.com	Bay Miwok Ohlone Patwin Plains Miwok	Alameda,Contra Costa,San Francisco,San Mateo,Santa Clara	7/24/2023
	The Ohlone Indian Tribe	N	Vincent Medina, Cultural Leader	17365 Via Del Rey San Lorenzo, CA, 94580	(510) 610-7587		vincent.d.medina@gmail.com	Bay Miwok Ohlone Patwin Plains Miwok	Alameda,Contra Costa,San Francisco,San Mateo,Santa Clara	7/24/2023
	The Ohlone Indian Tribe	N	Desiree Vigil, THPO	259 Winwood Avenue Pacifica, CA, 94044	(650) 290-0245		dirwin0368@yahoo.com	Bay Miwok Ohlone Patwin Plains Miwok	Alameda,Contra Costa,San Francisco,San Mateo,Santa Clara	11/30/2023
	Wuksachi Indian Tribe/Eshom Valley Band	N	Kenneth Woodrow, Chairperson	1179 Rock Haven Ct. Salinas, CA, 93906	(831) 443-9702		kwood8934@aol.com	Foothill Yokut Mono	Alameda,Calaveras,Contra Costa,Fresno,Inyo,Kings,Madera,Marin,Mariposa,Merced,Mono,Monterey,San Benito,San	6/19/2023

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 3950 Fabian Way School (Rincon No.:24-17098) Project, Santa Clara County.

Record: PROJ-2025-000412
Report Type: List of Tribes
Counties: Santa Clara
NAHC Group: All