City of Sunnyvale

Notice and Agenda - Revised

Bicycle and Pedestrian Advisory Commission

Thursday, September 16, 2021 **6:30 PM** **Telepresence Meeting: City Web Stream**

Meeting Online Link: https://sunnyvale-ca-gov.zoom.us/j/97997417379

TELECONFERENCE NOTICE

Because of the COVID-19 emergency and the "shelter in place" orders issued by Santa Clara County and the State of California, the meeting of the Sunnyvale Bicycle and Pedestrian Commission (BPAC) on September 16, 2021 will take place by teleconference, as allowed by Governor Gavin Newsom's Executive Orders N-29-20 and N-08-21.

• Watch the BPAC meeting at: http://youtube.com/SunnyvaleMeetings

• Submit written comments to the BPAC up to 4 hours prior to the meeting to BPAC@sunnyvale.ca.gov or by mail to City Clerk, 603 All America Way, Sunnyvale, CA 94086.

*• Teleconference participation: You may provide audio public comment by connecting to the teleconference meeting online or by telephone. Use the Raise Hand feature to request to speak (*9 on a telephone)*
- Meeting online link: https://sunnyvale-ca-gov.zoom.us/j/97997417379
- Meeting call-in telephone number: 833-548-0282 | Meeting ID: 979 9741 7379

Pursuant to the Americans with Disabilities Act (ADA) and Executive Order N-29-20, if you need special assistance to provide public comment, contact the City at least 2 hours prior to the meeting in order for the City to make reasonable alternative arrangements for you to communicate your comments. For other special assistance; please contact the City at least 48 hours prior to the meeting to enable the City to make reasonable arrangements to ensure accessibility to this meeting. ADA contact: Lillian Tsang may be reached at (408) 730-7556 or ltsang@sunnyvale.ca.gov (28 CFR 35.160 (b) (1)).

CALL TO ORDER

Call to Order via teleconference.

ROLL CALL

ORAL COMMUNICATIONS

This category provides an opportunity for members of the public to address the commission on items not listed on the agenda and is limited to 15 minutes (may be extended or continued after the public hearings/general business section of the agenda at the discretion of the Chair) with a maximum of up to three minutes per speaker. Please note the Brown Act (Open Meeting Law) does not allow commissioners to take action on an item not listed on the agenda. If you wish to address the commission, please complete a speaker card and give it to the Recording Secretary. Individuals are limited to one appearance during this section.

CONSENT CALENDAR

All matters listed on the consent calendar are considered to be routine and will be acted upon by one motion. There will be no separate discussion of these items. If a member of the public would like a consent calendar item pulled and discussed separately, please refer to the notice at the beginning of this agenda.

1.A 21-0898 Approve the Bicycle and Pedestrian Commission Meeting Minutes of August 19, 2021.

Recommendation: Approve the Bicycle and Pedestrian Commission Meeting Minutes of August 19, 2021 as submitted.

PUBLIC HEARINGS/GENERAL BUSINESS

If you wish to speak to a public hearing/general business item, please refer to notice at the beginning of this agenda. Each speaker is limited to a maximum of three minutes.

2 21-0765 Recommend to City Council the Removal of On-Street Parking on the East Side of Sunnyvale Avenue Between Maude Avenue and Arques Avenue and Both Sides of Sunnyvale Avenue Between Arques Avenue and Hendy Avenue to Install Buffered Bicycle Lanes on Both Sides of Sunnyvale Avenue Per the Active Transportation Plan

Recommendation: Alternative 1: Recommend to City Council the Removal of On-Street Parking on the East Side of Sunnyvale Avenue Between Maude Avenue and Arques Avenue and on Both Sides of Sunnyvale Avenue Between Arques Avenue and Hendy Avenue, and to Install Buffered Bicycle Lanes on Both Sides of Sunnyvale Avenue Per the Active Transportation Plan

3 21-0643 Discussion on VTA Measure B Education and Encouragement Program FY21-22 Potential Projects

STANDING ITEM: CONSIDERATION OF POTENTIAL STUDY ISSUES

4 21-0475 BPAC 2022 Study Issue Sponsorship (Scenario 1)

NON-AGENDA ITEMS & COMMENTS

-Commissioner Comments

-Staff Comments

INFORMATION ONLY REPORTS/ITEMS

21-0294 BPAC 2021 Annual Work Plan

21-0295 Active Items List September 2021

21-0465 2021 Deferred Study Issues

ADJOURNMENT

Notice to the Public:

Any agenda related writings or documents distributed to members of this meeting body regarding any item on this agenda will be made available for public inspection in the originating department or can be accessed through the Office of the City Clerk located at 603 All America Way, during normal business hours and in the Council Chamber on the evening of the Bicycle and Pedestrian Advisory Commission Meeting, pursuant to Government Code §54957.5.

Agenda information is available by contacting Lillian Tsang at pubworks@sunnyvale.ca.gov or (408) 730-7415. Agendas and associated reports

are also available on the City's website at sunnyvale.ca.gov or at the One-Stop Desk, City Hall, 456 W. Olive Ave., Sunnyvale, CA, (408) 730-7580 and at the Sunnyvale Public Library, 665 W.Olive Ave., Sunnyvale, 72 hours before the meeting.

City of Sunnyvale

Agenda Item

21-0898 **Agenda Date:** 9/16/2021

REPORT TO BICYCLE AND PEDESTRIAN ADVISORY COMMISSION

SUBJECT
Approve the Bicycle and Pedestrian Commission Meeting Minutes of August 19, 2021.

RECOMMENDATION
Approve the Bicycle and Pedestrian Commission Meeting Minutes of August 19, 2021 as submitted.

City of Sunnyvale

Meeting Minutes - Draft
Bicycle and Pedestrian Advisory Commission

Thursday, August 19, 2021 **6:30 PM** **Telepresence Meeting: City Web Stream**

CALL TO ORDER

Pursuant to Section 3 of Executive Order N-29-20 (March 17, 2020) and Section 42 of Executive Order N-08-21 (June 11, 2021) issued by Governor Newsom, the meeting was conducted telephonically.

Chair Mehlinger called the meeting to order at 6:34 p.m. via teleconference.

ROLL CALL

Present 6 - Chair Richard Mehlinger
Vice Chair Leia Mehlman
Commissioner Arwen Davé
Commissioner Dan Hafeman
Commissioner Timothy Oey
Commissioner Mihir Paradkar

Dennis Ng, Transportation and Traffic Manager, Lillian Tsang, Principal Transportation Engineer and Nabilah Deen, Transportation Engineer attended via teleconference.

Council Liaison Klein (present).

PRESENTATION

A 21-0845 Active Transportation Plan Progress Update

Nabilah Deen, Transportation Engineer, gave a presentation on the Active Transportation Plan Progress Update. Highlighting the following:

- Active Transportation Plan Background
- Vision Statement
- Goals
- Completed Bicycle Improvement Projects

- Class I Multi-Use Trail on Moffett Park Drive
- In-Progress Bicycle Improvement Projects
- Future Bicycle Improvement Projects
- Manila Avenue/Moffett Park Drive Class I Multi-use Trail
- Active Transportation Plan Bikeway Mileage
- Completed Pedestrian Improvement Projects
- In-Progress Pedestrian Improvement Projects
- Mathilda Avenue/Maude Avenue & Homestead Road/Mary Avenue
- Future Pedestrian Improvement Projects
- Future Stevens Creek Trail
- Safe Routes to School Improvement Projects
- In-Progress Safe Routes to School Improvement Projects
- Future Safe Routes to School Improvement Projects
- Next Steps

More information can be found at www.sunnyvale.ca.gov by searching "Transportation and Traffic Safety".

Chair Mehlinger opened for Public Comment.

Chair Mehlinger closed for Public Comment.

Commissioner Oey asked about the following:
- Plans on achieving the mode split increase by 10% by 2030
- Current mode split
- Would like to see mode split data measured annually
- Programs that the City would participate in to get people to mode shift
- City's position on SB 9 & 10
- Land Use
- Measurement of streets that should have a bikeway that don't currently have a bikeway
- Measurement of walkways that should have a walkway that don't currently have a walkway

Commissioner Davé commented on the following:
- Appreciated the Moffett Field adjacent improvements to bicycle facilities to encourage bicyclists

Commissioner Hafeman asked about the following:

- Difference between a street that has sharrows and a street that is a bicycle boulevard
- Consider speed bumps for bicycle boulevards
- Whether the Homestead Bike Lane Project is considered as being part of the Homestead Safe Routes to School Program
- Disappointed that there isn't a schedule for the Homestead Bike Lane Project

Chair Mehlinger commented and asked about the following:
- Buffered bike lanes on Borregas Avenue
- When will the City get more Class IV bike lanes
- Short staffing issues

Dennis Ng, Transportation and Traffic Manager, Lillian Tsang, Principal Transportation Engineer and Mayor Klein addressed the questions.

Chair Mehlinger opened for Public Comment.

Lauren Ledbedder, member of the public commented on the following:
- In full support of the Safe Routes to School Project to put bike lanes on Sunnyvale Avenue near Bishop Elementary School
- Improves opportunities for pedestrians along the corridor
- Add in striping and quick build improvements to make it easier for pedestrians to cross at Hazelton Avenue where there is an uncontrolled crosswalk

Alon Golong, member of the public commented on the following:
- In full support of bridging the gap on Sunnyvale Avenue
- Supports giving higher priority for Homestead Road as a permanent bike lane and a protective bike lane
- Need to build facilities so parents will feel that it is safe for their children to bike or walk to school
- Micro Mobility

Chair Mehlinger closed for Public Comment.

ORAL COMMUNICATIONS

Mayor Klein gave an update on the upcoming City Council Meeting on August 31 at 7:00 p.m. The agenda will include the following:

- Review Data Collected for the Temporary Eastbound Tasman Drive Lane Closure

During COVID-19 Pandemic and Consider Whether to Extend the Lane Closure as Employees Begin to Return to Workplace
- Remove On-Street Parking for the Northbound Direction on Willow Avenue between Reed Avenue and Aster Avenue and to Install Class IIB Buffered Bicycle Lane on Both Sides of the Street Per the Active Transportation Plan

Chair Mehlinger opened for Public Comment.

Erik Brewster, member of the public commented on the following:
- Concerned about traffic safety at Morse Avenue and Duane Avenue

Valerie Suarez, member of the public commented on the following:
- Safer route to school for students to travel between Columbia and Bishop Schools
- Extremely concerned about traffic safety on Borregas Avenue, Morse Avenue and Duane Avenue
- On behalf of the entire SNAIL neighborhood, begging the City to make these street safer by adding speed bumps or some kind of calming method

Chair Melhinger closed for Public Comment.

CONSENT CALENDAR

1.A 21-0819 Approve the Bicycle and Pedestrian Commission Meeting Minutes of July 15, 2021.

Approve the Bicycle and Pedestrian Commission Meeting Minutes of July 15, 2021 as submitted.

Commissioner Hafeman moved and Vice Chair Mehlman seconded to approve item 1.A.

The motion carried the following vote:

Yes 6 - Chair Mehlinger
Vice Chair Mehlman
Commissioner Davé
Commissioner Hafeman
Commissioner Oey
Commissioner Paradkar

No 0

PUBLIC HEARINGS/GENERAL BUSINESS

2 21-0846 Report and Discussion of Recent Santa Clara Valley Transportation Authority (VTA) Bicycle and Pedestrian Advisory Committee (BPAC) Meeting

Commissioner Oey, VTA BPAC Sunnyvale Representative, gave the meeting summary report regarding the following topics:
- Foothill and El Monte update picking Alternative 2 - Wide Stripe Striping
- County is in the process of creating their Bicycle Plan
- VTA's recommendations on Tasman Drive and Bascom Avenue Complete Streets Corridor Study
- Update on the Community Design and Transportation Manual
- Viva Calle SJ - September 19
- Silicon Valley Bikes (Fundraiser for the Silicon Valley Bicycle Coalition) September 19

Chair Mehlinger opened for Public Comment.

Chair Mehlinger closed for Public Comment.

Commissioner Hafeman asked how many of those people that objected to reducing the lanes on Tasman Avenue actually live along the corridor as opposed to how many people commute through the corridor? Commissioner Oey stated he does not have that information.

Vice Chair Mehlman commented on the following:
- Reasons why people might oppose reducing lanes on Tasman Avenue

Chair Mehlinger asked if there was an update on when the light rail service might be expected to resume? Commissioner Oey stated it might be a month or two.

STANDING ITEM: CONSIDERATION OF POTENTIAL STUDY ISSUES

NON-AGENDA ITEMS & COMMENTS

-Commissioner Comments

Commissioner Oey commented and asked about the following:
- Viva Calle SJ - September 19, great opportunity to experience open streets
- Silicon Valley Bikes (Fundraiser for the Silicon Valley Bicycle Coalition) -

September 19. There will be a 40 mile, 20 mile and 10 mile ride
- Will there be a BPAC hearing on the Sunnyvale Avenue bike lanes? Ms. Tsang stated it is tentatively scheduled for next month

Commissioner Hafeman asked if the City is looking at intersection improvements at Washington Avenue and Mathilda Avenue? Ms. Tsang stated currently there are no planned projects for this particular location.

Commissioner Oey commented on the following:
- Thanked City Council for having the ordinance in Sunnyvale to prohibit harassment against bicyclists

Chair Mehlinger asked about the following:
- Why can't the BPAC weigh in on the Tasman temporary lane closure before going to City Council? Mr. Ng stated that it was an operation decision that was initiated by City Council.
- Update on the traffic accident that occurred in August
- What can be done to address the SNAIL's traffic issues? Mayor Klein stated it is a regional issue, and Public Safety is working with other agencies to address this. Chair Mehlinger asked from an Engineering perspective what can be done to discourage that behavior? Mr. Ng stated that from an Engineering perspective it is being approached regionally. Talking with other agencies and manufacturers to come up with the best solution.

-Staff Comments

Lillian Tsang, Principal Transportation Engineer, commented on the following:
- Lawrence Station Plan updates will be brought to the Planning Commission for consideration to make a recommendation to City Council on Monday, August 23 and City Council will be hearing this item on Tuesday, September 14

Mr. Ng stated that staff is preparing a project to go to construction for upgrading our lighted crosswalks around the City. It will be a safety improvement that will upgrade some of these uncontrolled crosswalks. Going under construction by the end of this year.

Mayor Klein asked if in street flashing lights will be replaced with raised beacons? Mr. Ng stated some flashing lights on the roadway will be replaced with RRFB (Rectangular Rapid Flashing Beacons on the side of the roadway). Some flashing lights will still be in the roadway due to the width of the street in addition to the

flashing lights on the side of the road. In the long run more HAWKS will be built.

Chair Mehlinger stated if the BPAC has ideas for TDA Article 3 funding for next year to send an email to Ms. Tsang. Staff will keep a running list.

INFORMATION ONLY REPORTS/ITEMS

21-0847	BPAC 2021 Annual Work Plan
21-0848	Active Items List August 2021
21-0849	2022 Proposed Study Issues
21-0850	2021 Deferred Study Issues

ADJOURNMENT

Chair Mehlinger adjourned the meeting at 8:23 p.m.

21-0765 **Agenda Date:** 9/16/2021

REPORT TO BICYCLE AND PEDESTRIAN ADVISORY COMMISSION

SUBJECT

Recommend to City Council the Removal of On-Street Parking on the East Side of Sunnyvale Avenue Between Maude Avenue and Arques Avenue and Both Sides of Sunnyvale Avenue Between Arques Avenue and Hendy Avenue to Install Buffered Bicycle Lanes on Both Sides of Sunnyvale Avenue Per the Active Transportation Plan

BACKGROUND

Sunnyvale Avenue is a posted 25 miles per hour and 30 miles per hour north-south residential collector street between Maude Avenue and Evelyn Avenue; and a Class II arterial between Evelyn Avenue and El Camino Real, providing direct pedestrian, bicycle, and vehicular access to Downtown Sunnyvale and the commercial area along El Camino Real. The segment of Sunnyvale Avenue between Olive Avenue and the Caltrain railroad track is located within the Downtown Specific Plan area, and Sunnyvale Avenue terminates at El Camino Real, which then transitions into Sunnyvale-Saratoga Road south of El Camino Real. The north end of Sunnyvale Avenue connects to Borregas Avenue, which provides access to Moffett Park as well as the Bay Trail via the pedestrian and bicycle overcrossings over US 101 and SR 237. Sunnyvale Avenue between Hendy Avenue and Maude Avenue has one travel lane in each direction and has time-limited (no parking between 6:00 to 8:00 a.m. and 4:00 to 6:00 p.m.) on-street parking on both sides of the street along the frontage of Villa Oaks Apartments and Spangler Mortuary between Hendy Avenue and California Avenue. There is also on-street parking along the west side of the street south of Central Expressway, and on both sides of the street between Arques Avenue and Maude Avenue; there is no on-street parking for the remainder of the street. There is currently no bicycle facility on Sunnyvale Avenue between Hendy Avenue and Maude Avenue; bicyclists and vehicular traffic must share the travel lane.

Along the west side of Sunnyvale Avenue between Hendy Avenue and Maude Avenue, there are single-family and multi-family residential units, an auto repair shop and a church; along the east side of Sunnyvale Avenue, there are single-family and multi-family residential units, a mortuary, Murphy Park, and Bishop Elementary School.

At the August 25, 2020 meeting, City Council adopted the Active Transportation Plan (ATP) (RTC No. 20-0249), where one of the main goals of the plan is to create a safe, connected, and efficient citywide walking and bicycling network. The proposed bicycle improvement on Sunnyvale Avenue between Maude Avenue and Hendy Avenue as described in the ATP is a Class IIB buffered bicycle lane, which will fill in the missing gap in the bicycle network along Sunnyvale Avenue and provide bicycle connectivity for students traveling to Columbia Middle School and Bishop Elementary School, as well as the commercial area in downtown Sunnyvale and along El Camino Real corridor. The ATP identified that in order to implement a Class IIB buffered bicycle lane along Sunnyvale Avenue, on-street parking would need to be removed on at least one side of Sunnyvale Avenue north of Arques

Avenue, and on both sides of the street south of Arques Avenue; additionally, a parking study would need to be prepared to evaluate the potential parking impacts to determine whether the proposed improvement is feasible.

In 2017, the City was awarded an Active Transportation Program grant in the amount of $1,889,000 with a required local match of $473,000 to plan, design, and construct bicycle, pedestrian and Safe Routes to School (SRTS) improvements in the vicinity of Bishop Elementary School along Maude Avenue and Sunnyvale Avenue. On January 22, 2020, the City signed a consultant services agreement with Kimley Horn & Associates, Inc. (KHA) to conduct an environmental assessment and traffic study for the SRTS improvements project on Maude and Sunnyvale Avenues. In February 2020, KHA conducted data collection along the project corridor and in August 2020, KHA completed the *Traffic and Parking Study for Safe Routes to School Improvements on Maude Avenue and Sunnyvale Avenue* (Attachment 2). On July 29, 2021, the project team presented the parking study results and proposed bicycle improvements on Sunnyvale Avenue to the public for input on the parameters of the project.

Attachment 3 presents project limits and locations of where on-street parking spaces are proposed to be removed; Attachment 4 shows the existing and proposed cross sections on Sunnyvale Avenue.

The City Council is scheduled to consider this item on September 28, 2021.

EXISTING POLICY

Resolution No. 793-16 Complete Streets Policy (and Resolution No. 896-18 amending Resolution No. 793-16): The City wishes to improve its commitment to Complete Streets and desires that its streets form a comprehensive and integrated transportation network promoting safe, equitable, and convenient travel for all users while preserving flexibility, recognizing community context, and using the latest and best design guidelines and standards.

General Plan Chapter 3 Land Use and Transportation:

- **Goal LT-3**: An Effective Multimodal Transportation System - Offer the community a variety of transportation modes for local travel that are also integrated with the regional transportation system and land use pattern. Favor accommodation of alternative modes to the automobile as a means to enhance efficient transit use, bicycling, and walking and corresponding benefits to the environment, person-throughput, and qualitative improvements to the transportation system environment.
- **Policy LT-3.8**: Prioritize safe accommodation for all transportation users over non-transport uses. As city streets are public spaces dedicated to the movement of vehicles, bicycles, and pedestrians, facilities that meet minimum appropriate safety standards for transport uses shall be considered before non-transport uses are considered.
- **Policy LT-3.9**: As parking is the temporary storage of transportation vehicles do not consider parking a transport use of public streets.
- **Policy LT3-10**: Prioritize street space allocated for transportation uses over parking when determining the appropriate future use of street space.

Vision Zero Plan

- Reduce fatalities and serious injuries by 50 percent by 2029 and to continue improving traffic

safety towards zero fatal and serious injury collisions in the ten years that follow.
- Call to action to make Sunnyvale's streets safer, especially for people biking and walking.

Active Transportation Plan
- Sunnyvale is a Complete Streets Community where residents and commuters have a choice to bicycle and walk to meet their transportation needs on a connected, comfortable, convenient, safe and efficient network designed for all abilities and ages.
- Increase active transportation mode share to 10% by 2030 and continue to work toward increasing the active transportation mode share in the next 10 years.

ENVIRONMENTAL REVIEW
The California Environmental Quality Act (CEQA) determination for this project is a Class 1 categorical exemption pursuant to CEQA Guidelines Section 15301(c) for operation, repair or minor alteration of existing streets, sidewalks and pedestrian and bicycle trails or other similar alterations that do not create additional automobile lanes.

DISCUSSION
On-Street Parking Occupancy Study
To evaluate whether the removal of on-street parking on Sunnyvale Avenue would have an impact to the residents who live along the corridor and to nearby residents, an on-street parking study was conducted along Sunnyvale Avenue as well as streets perpendicular to Sunnyvale Avenue on three different mid-week weekdays: Tuesday, February 4, 2020 to Thursday, February 6, 2020. The data was collected at four different times throughout the day to capture the parking occupancy at 11:00 a.m., 3:00 p.m., 8:00 p.m. and 1:00 a.m. At the time when the on-street parking observation was conducted, it was prior to the COVID-19 pandemic, and therefore, it represented the normal pre-pandemic traffic conditions. When looking at the data in aggregate, the total number of parked vehicles along this corridor was very consistent among the three days of observation, with a slightly higher usage at night. Given the corridor consists of mostly residential land uses, the 1:00 a.m. observation would have the highest parking occupancy for the area. The average on-street parking occupancy data is summarized in Attachment 5.

Sunnyvale Avenue Between Maude Avenue and Arques Avenue
On Sunnyvale Avenue between Maude Avenue and Arques Avenue, there are 27 single family homes (plus 1 single family home on Maude Avenue) with 47 available on-street parking spaces on the west side of Sunnyvale Avenue, of which an average of 25 vehicles (53% utilization) were parked there at 1:00 a.m. On the east side of Sunnyvale Avenue, there are 13 single family homes with 39 available on-street parking spaces, of which an average of 13 vehicles (33% utilization) were parked there at 1:00 a.m. Based on the data collected, the parking spaces on the west side along this segment of Sunnyvale Avenue were more utilized whereas the parking spaces on the east side along this segment of Sunnyvale Avenue were not as utilized at night when residents are typically at home.

Based on this data, staff proposes to remove on-street parking on the east side of Sunnyvale Avenue between Maude Avenue and Arques Avenue. Table 5.2 and Figure 5.2 in Attachment 5 illustrate the proposed on-street parking removal locations, the number of parking spaces proposed to be removed, as well as the average number of vehicles parked on-street at 1:00 a.m. If on-street parking were to be removed along the east side of Sunnyvale Avenue, it will remove a total of 39 parking spaces, and 13 vehicles, which were observed to be parked along this segment at 1:00 a.m. when

residents were typically home, would be displaced.

To evaluate if the surrounding streets would have enough parking availability to accommodate parked vehicles displaced from Sunnyvale Avenue if on-street parking were to be removed, parking occupancy on surrounding streets were also observed. Figure 5.3 in Attachment 5 shows the number of unoccupied spaces on surrounding streets in green, and the occupied spaces (or number of parked vehicles to be displaced) in black. On Sunnyvale Avenue between Arques Avenue and E. Taylor Avenue, if the on-street parking were to be removed on the east side of the street, 10 parked vehicles would be displaced. The parking occupancy data showed that there are sufficient parking availabilities, across the street as well as around the corner on Arques Avenue and Taylor Avenue. For the segment of Sunnyvale Avenue between E. Taylor Avenue and Maude Avenue, a total of 3 parked vehicles would be displaced; and from the parking occupancy data, there are sufficient parking availabilities across the street as well as around the corner on E. Taylor Avenue and Hazelton Avenue. Residents can also park in their garage, driveway, or on the west side of Sunnyvale Avenue, in addition to around the corner.

Sunnyvale Avenue Between Arques Avenue and Hendy Avenue

On Sunnyvale Avenue between Arques Avenue and Hendy Avenue, there are 18 available parking spaces on the west side of Sunnyvale Avenue, of which an average of 2 vehicles (11% utilization) were parked there at 1:00 a.m. On the east side of Sunnyvale Avenue, there are 12 available parking spaces, of which an average of 3 vehicles (25% utilization) were parked there at 1:00 a.m. Based on the data collected, the parking spaces along this segment of Sunnyvale Avenue were not highly utilized at night when residents were typically home. As shown in Table 5.2 and Figure 5.2 in Attachment 5, if the on-street parking were to be removed on both sides of the street along this segment, 30 parking spaces would be removed, 2 parked vehicles would be displaced on the west side of Sunnyvale Avenue, and 3 parked vehicles would be displaced on the east side of Sunnyvale Avenue. Similar to the segment of Sunnyvale Avenue between Arques Avenue and Maude Avenue, instead of parking on the street, residents can park in their garage or driveway, in addition to around the corner.

A mortuary is located on the east side of Sunnyvale Avenue between Arques Avenue and Hendy Avenue. In front of the mortuary, on-street parking is allowed in general, but parking is prohibited between 6:00 to 8:00 a.m. and 4:00 to 6:00 p.m. Staff has reached out to the mortuary to discuss the project and if this project is approved, staff will work further with the mortuary to address their needs.

Online Public Outreach Meeting

On Thursday July 29, 2021, an online public outreach meeting was held with residents, and property owners along the project corridor, as well as other members of the public, to present the project and the parking occupancy study results, as well as to obtain input from the public. Residents and property owners along the Sunnyvale Avenue corridor as well as surrounding streets were notified of the public meeting through postcards mailed to their addresses (mailer notification area is shown in Attachment 2). A total of 16 members of the public participated in the outreach meeting. Some of the attendees voiced displeasure with the loss of on-street parking, citing concerns related to safety, convenience, and other personal factors. Other attendees were enthusiastic about the project and focused on the benefits that the project would bring, namely improved bicycle connectivity and encouraging further bicycle ridership. Attachment 6 provides a summary of the public outreach meeting conducted for this project.

Online Survey

The project team also solicited public input through an online survey, which was available from July 12 to August 2. There were 179 responses on the survey. Through the online survey, respondents answered questions on whether they reside on Sunnyvale Avenue, travel and parking patterns on Sunnyvale Avenue, whether they have a family member who attends Bishop Elementary School and whether or not if new buffered bike lanes would change their transportation mode choice. Respondents could also provide additional comments in the comment box at the end of the survey. The Public Outreach Memorandum (Attachment 6) provides a summary of the responses from the online survey.

Forty-one respondents indicated that they live on Sunnyvale Avenue, and 108 respondents indicated that they live in the area but not on Sunnyvale Avenue. The majority of the respondents who travel along Sunnyvale Avenue currently drive alone. 36 respondents indicated that they park along Sunnyvale Avenue, of which when asked why they parked on Sunnyvale Avenue, the majority of the 36 respondents indicated they were visiting a friend or relative, followed by “The private parking at my residence is occupied/used”, then by “It is more convenient for me to park on the street instead of on my private parking areas.” Some responded that they did not have any private parking at their residence, however, when Staff conducted a site visit along the corridor, all the residential dwelling units appeared to have private parking and/or driveways. This may indicate that some residences or rooms are rented out.

When asked if they would be more likely to bike if bike lanes were provided on Sunnyvale Avenue, 100 out of the 179 respondents indicated they would. Only 16 of the respondents indicated that they have children who attend Bishop Elementary School, of which 7 of them indicated they would consider letting their children bike to school with new bike lanes.

Of the 179 respondents, 42 respondents provided written comments on the survey: 19 supported the removal of on-street parking to install Class IIB bicycle lanes, and 19 did not support the removal of on-street parking. The remaining four responses were not directly related to the proposed project: two respondents asked not to close Sunnyvale Avenue from vehicular traffic; one respondent is in support adding dedicated bicycle lanes but wanted to include additional improvements; and one provided comment not related to the proposed project.

FISCAL IMPACT

If on-street parking were to be removed on the east side of Sunnyvale Avenue between Arques Avenue and Maude Avenue and both sides of Sunnyvale Avenue between Arques Avenue and Hendy Avenue to install Class IIB buffered bicycle lanes, funding is available in Project 833850 - Sunnyvale Safe Routes to School Improvements. The funding included an Active Transportation Program grant in the amount of $1,889,000 which included a required local match of $473,000 to plan, design, and construct bicycle, pedestrian and Safe Routes to School (SRTS) improvements in the vicinity of Bishop Elementary School along Maude Avenue and Sunnyvale Avenue. The estimated cost to plan, design, and construct the proposed Buffered Bicycle Lanes on Sunnyvale Avenue between Hendy Avenue and Maude Avenue would be approximately $400,000.

PUBLIC CONTACT

Public contact was made through posting of the Bicycle and Pedestrian Advisory Commission

agenda on the City's official-notice bulletin board, on the City's website, and the availability of the agenda and report in the Office of the City Clerk.

ALTERNATIVES

1. Recommend to City Council the Removal of On-Street Parking on the East Side of Sunnyvale Avenue Between Maude Avenue and Arques Avenue and on Both Sides of Sunnyvale Avenue Between Arques Avenue and Hendy Avenue, and to Install Buffered Bicycle Lanes on Both Sides of Sunnyvale Avenue Per the Active Transportation Plan

2. Recommend to City Council to Retain the On-Street Parking on the East Side of Sunnyvale Avenue Between Maude Avenue and Arques Avenue and on Both Sides of Sunnyvale Avenue Between Arques Avenue and Hendy Avenue, and Not to Install Buffered Bicycle Lanes on this Segment of Sunnyvale Avenue

RECOMMENDATION

Alternative 1: Recommend to City Council the Removal of On-Street Parking on the East Side of Sunnyvale Avenue Between Maude Avenue and Arques Avenue and on Both Sides of Sunnyvale Avenue Between Arques Avenue and Hendy Avenue, and to Install Buffered Bicycle Lanes on Both Sides of Sunnyvale Avenue Per the Active Transportation Plan

The City has a vision to increase the viability of bicycling, walking and transit ridership throughout the City in order to help provide people additional transportation options beyond driving a car. By removing on-street parking and installing Class IIB buffered bicycle lanes on Sunnyvale Avenue, it will fill in the gap in the bicycle network and provide a direct connection to the commercial areas in Downtown Sunnyvale and El Camino Real, residential areas and Murphy Park within the study corridor, and employment center and Bay Trail in north Sunnyvale. In addition, it will provide a dedicated bicycle facility for students to travel to and from Bishop Elementary School, Columbia Middle School, and Fremont High School.

Currently, there is no dedicated bicycle facility on this segment of Sunnyvale Avenue, however Sunnyvale Avenue is already a heavily used corridor for bicyclists because of several reasons:

1. The closest parallel routes include Mathilda Avenue and Fair Oaks Avenue, which both have heavier traffic and higher posted speed limits.
2. Sunnyvale Avenue provides a direct path for bicyclists to travel to/from north and south Sunnyvale, via Sunnyvale-Saratoga Road and Borregas Avenue, and the two existing pedestrian/bicyclist overcrossing bridges over US 101 and SR 237.
3. Sunnyvale Avenue has direct access to multiple destinations within the city
    a. Moffett Park and the Bay Trail to the north
    b. Downtown/El Camino Real employment and retail area to the south
    c. Connections to Bishop Elementary School and Columbia Middle School

Based on Vision Zero principles, the City aims to incorporate the appropriate roadway design to reduce the chance of collisions to occur for all road users. Dedicated buffered bicycle lanes are proven to improve the safety and comfort for users since a striped buffer will provide additional separation between vehicular traffic and the bicyclists.

Because of its proximity to key destinations within the City, Sunnyvale Avenue was identified as a high priority project in the Active Transportation Plan. In addition, this proposed improvement will

align with the City Council's Strategic Priority: Ability of Infrastructure to Support Development, Traffic and Active Transportation. Furthermore, it will comply with our Complete Streets Policy and support the City's Climate Action Plan goal to reduce vehicle emissions.

Prepared by: Lillian Tsang, Principal Transportation Engineer
Reviewed by: Dennis Ng, Transportation and Traffic Manager
Reviewed by: Chip Taylor, Director, Department of Public Works
Reviewed by: Teri Silva, Assistant City Manager
Approved by: Kent Steffens, City Manager

ATTACHMENTS

1. Reserved for Report to Council
2. Traffic and Parking Study for Safe Routes to School (SRTS) Improvements at Maude Avenue and Sunnyvale Avenue
3. Study Area
4. Proposed Bicycle Improvements on Sunnyvale Avenue
5. On-Street Parking Observation Summary & Study
6. Public Outreach Summary Memorandum

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Traffic and Parking Study

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

August 2020

Prepared for:

Sunnyvale

Prepared by:

Kimley»Horn

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1 INTRODUCTION

This study assesses the resulting traffic operations and parking availability associated with proposed Safe Routes to School (SRTS) improvements at Maude Avenue and Sunnyvale Avenue. Along Maude Avenue, proposed improvements consist of removing up to five (5) channelized right-turn lanes at the intersections of Maude Avenue / Mathilda Avenue and Maude Avenue / Borregas Avenue-Sunnyvale Avenue. Along Sunnyvale Avenue, improvements consist of removing on-street parking to providing bicycle lanes between Maude Avenue and Hendy Avenue.

1.1 Study Area

To assess changes in traffic conditions associated with the proposed project, the following intersections were selected for evaluation:

1. Maude Avenue / Mathilda Avenue (Signalized)
2. Maude Avenue / Borregas Avenue-Sunnyvale Avenue (Signalized)

In addition, the study area includes the Sunnyvale Avenue corridor between Maude Avenue and Hendy Avenue. The extents of the study area are shown in **Figure 1**. It should be noted that Intersection #2 – Maude Avenue / Borregas Avenue-Sunnyvale Avenue consists of two three-legged intersections but is analyzed as one intersection due to the shared signal controller.

1.2 Project Background

The goal of the project is to construct SRTS improvements identified in the 2020 Sunnyvale Active Transportation Plan.

The 2020 Active Transportation Plan identified high priority improvements at both study intersections in both the bicycle and pedestrian sections of the report. The 2020 Active Transportation Plan also identified improvements along Sunnyvale Avenue. The bicycle chapter identifies high priority to install a Class II Bicycle Lane along Sunnyvale Avenue between Maude Avenue and Arques Avenue and a Class IV Separated Bikeway along Sunnyvale Avenue between Arques Avenue and Washington Avenue. The pedestrian chapter identifies pedestrian improvements at the intersection of Mathilda Avenue and Maude Avenue. Bishop Elementary School is located on Sunnyvale Avenue between Maude Avenue and Hazelton Avenue. The SRTS chapter of the Active Transportation Plan identifies additional improvements such as installing high visibility crosswalks, lighting improvements, curb extension, and curb ramp improvements in the school vicinity.

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

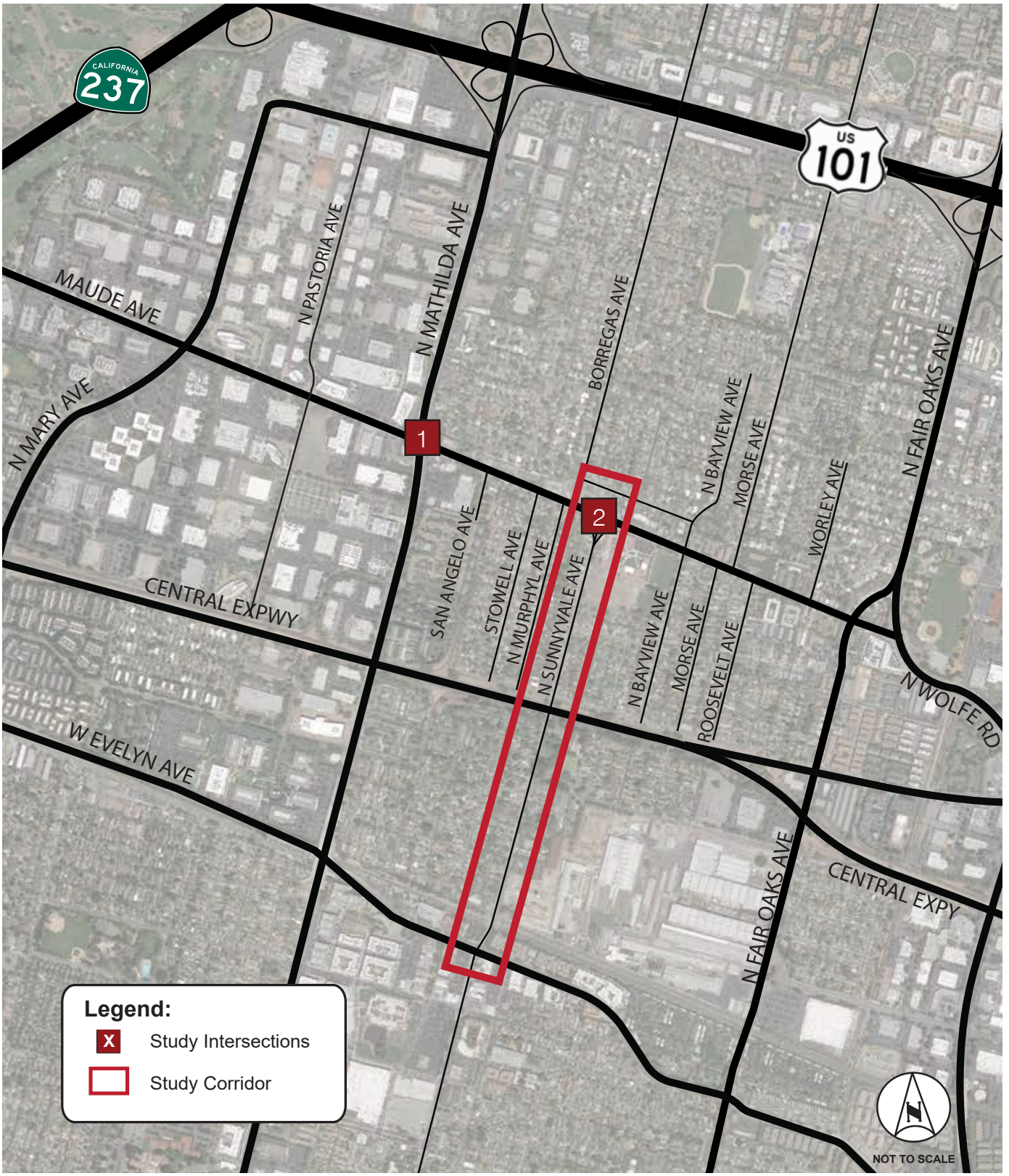

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FIGURE 1
STUDY AREA VICINITY MAP

1.2.1 Existing Bicycle and Pedestrian Facilities

Sunnyvale Avenue between Maude Avenue and California Avenue currently does not have an existing bicycle facility. For the segment between California Avenue and Hendy Avenue, it is a Class III Bicycle Route, where bicyclists share the road with vehicular traffic. Sidewalks are provided along the entirety of the Sunnyvale Avenue and Maude Avenue within the study area. The City of Sunnyvale existing bikeway network, including the study area, is shown in **Figure 2**.

1.2.2 Existing Transit Service

Transit service within the study area includes Route 55 operated by the Santa Clara Valley Transportation Authority (VTA). Route 55 operates between Old Ironsides Station in the City of Santa Clara and De Anza College in the City of Cupertino. Near the study area, it operates from Sunnyvale Caltrain, along Sunnyvale Avenue, and then east on Maude Avenue. Bus stops are located on Maude Avenue at Sunnyvale Avenue, and on Sunnyvale Avenue at Hazelton Avenue, south of E Arques Avenue, and E Hendy Avenue.

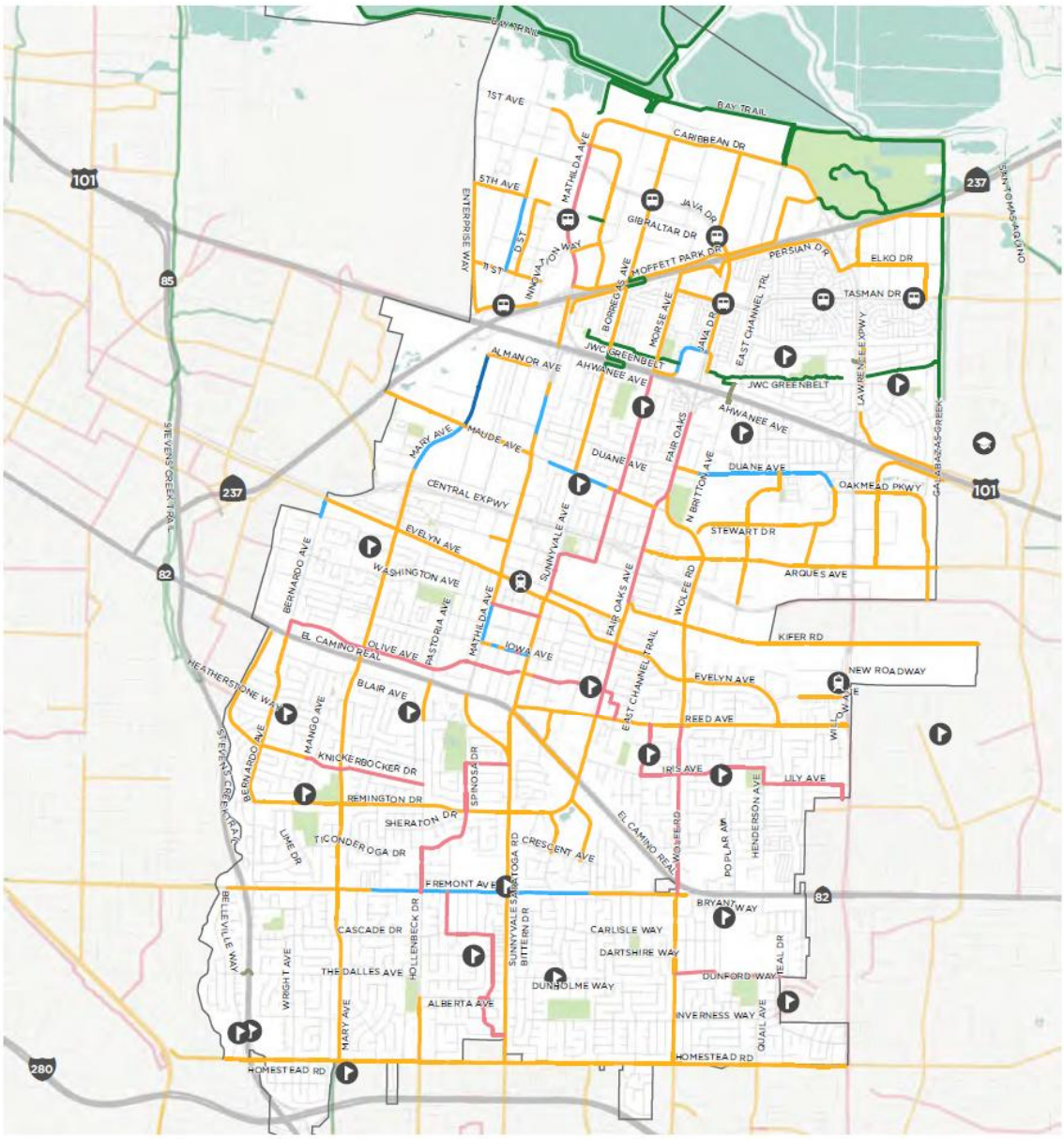
1.3 Analysis Methodology

This section describes the methodologies and impact criteria for evaluation of intersection level of service, intersection queueing and parking. The methodologies and criteria were used to determine the potential impacts for the proposed project.

1.3.1 Intersection Level of Service

Both the City of Sunnyvale and the VTA are transitioning to Vehicle Miles Traveled (VMT) as the metric for determining traffic impacts under California Environmental Quality Act (CEQA) in compliance with Senate Bill (SB) 743. The proposed improvements improve bicycle and pedestrian safety and would not increase VMT. Therefore, they are exempt from further VMT analysis. The SRTS project has completed a Categorical Exemption in accordance with CEQA and no traffic analysis is required. This study presents the findings from a traffic operational analysis as information only to aid the City in assessing the ramifications of the improvements. The analysis was performed in accordance with the *VTA Traffic Impact Analysis Guidelines (October 2014)* for consistency, but a traffic impact analysis is not required for environmental clearance and thus the analysis does not consider significance thresholds, nor does it identify traffic impacts.

Figure 2: City of Sunnyvale Existing Bikeway Network



Map 2. Existing Bicycle Network

Existing Bikeways
- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIB Buffered Bicycle Lane
- Class III Bicycle Route
- Class IV Separated Bikeway
- Pedestrian Bridge (Walk Bike)

Boundaries + Destinations
- Public School
- Caltrain Station
- Light Rail Station
- Mission College
- Park
- City Boundary

**Homestead Rd offers part-time bicycle lanes.

0 0.5 1 MILE

Source: City of Sunnyvale 2020 Sunnyvale Active Transportation Plan (June 2020)

Analysis of resulting traffic operations at the study intersections is based on the concept of level of service (LOS). Operating conditions experienced by drivers are described in terms of Level of Service (LOS), which is a qualitative measure of factors such as delay, speed, travel time, freedom to maneuver, and driving comfort and convenience. Levels of service are represented by a letter scale from LOS A to LOS F, with LOS A representing the best performance and LOS F representing the poorest performance.

The study intersections were analyzed using procedures and methodologies contained in the *Highway Capacity Manual, 2000* (HCM 2000), within the *Traffix* software. VTA has specific delay threshold for each LOS that are more specific than that of HCM. Plus and minuses (e.g. A+, A, A-) are added to the HCM ranges to further break down the LOS. **Table 1** relates the operational characteristics associated with each LOS category for signalized intersections.

The LOS standard for City of Sunnyvale intersections is LOS D except for City of Sunnyvale intersections that are designated as regionally significant. Regionally significant roadways are generally Congestion Management Plan (CMP) roadways. The CMP roadways relevant to this analysis are limited to Mathilda Avenue, thus Intersection #1 – Maude Avenue / Mathilda Avenue is subject to the LOS standard designated within the CMP. The threshold for regionally significant roadway intersections, consistent with Santa Clara County CMP intersections, is LOS E.

1.3.2 Intersection Queuing

The effects of vehicle queuing were analyzed and the 95th percentile queue is reported for all study intersections. The 95th percentile queue length represents a condition where 95 percent of the time during the peak hour, traffic volumes will be less than or equal to the queue length determined by the analysis. This is referred to as the “95th percentile queue.” Queues that exceed the turn pocket length can create potentially hazardous conditions by blocking or disrupting through traffic in adjacent travel lanes. The 95th percentile queue lengths were determined using *HCM 2000* methodology within the *Traffix* software.

Table 1: Intersection Level of Service Definitions

Level of Service	Description	Signalized (Avg. control delay per vehicle sec/veh.)
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	delay ≤ 10.0
B+ B B-	Stable traffic. Traffic flows smoothly with few delays.	10.0 < delay ≤ 12.0 12.0 < delay ≤ 18.0 18.0 < delay ≤ 20.0
C+ C C-	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	20.0 < delay ≤ 23.0 23.0 < delay ≤ 32.0 32.0 < delay ≤ 35.0
D+ D D-	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	35.0 < delay ≤ 39.0 39.0 < delay ≤ 51.0 51.0 < delay ≤ 55.0
E+ E E-	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	55.0 < delay ≤ 60.0 60.0 < delay ≤ 75.0 75.0 < delay ≤ 80.0
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	delay > 80

Source: VTA Level of Service Analysis Guidelines, 2003

1.3.3 Parking Analysis

Kimley-Horn analyzed on-street parking capacity and occupancy along Sunnyvale Avenue and the surrounding streets to determine the potential impact of removing parking along Sunnyvale Avenue within the study corridor. Existing parking occupancy was collected to determine whether the surrounding on-street parking could accommodate displaced demand from vehicles currently parked on Sunnyvale Avenue.

1.4 Data Collection

Weekday intersection turning movement volumes for the two study intersections were collected in May 2018, October 2018 and February 2020. Volumes for Intersection #1 – Mathilda Avenue / Maude Avenue for the AM peak hour was provided by the City, which collected data in May 2018. The PM peak hour utilized volumes from 2018 CMP report, which collected data in October 2018. Volumes for Intersection #2 – Maude Avenue / Sunnyvale Avenue were collected in February 2020 during the AM peak period (7:00 – 10:00 AM) and PM peak period (4:00 – 7:00 PM) on a weekday when local schools were in session. Additionally, on-street parking occupancy and utilization counts were

collected Tuesday through Thursday in February 2020, at different times throughout the day (11 AM, 3 PM, 8 PM, and 1 AM). The traffic counts, parking occupancy counts, and timing sheets are provided in the **Appendix**.

Field observations were conducted in February 2020 to observe corridor conditions throughout the day, document existing intersection and roadway geometrics, and identify potential areas of concern for bicycle and pedestrian safety. Below are existing field observations noted.

Maude Avenue / Mathilda Avenue: It was observed that northbound and westbound right channelized lanes at Mathilda Avenue and Maude Avenue are ineffective in reducing congestion due to the very limited storage length (less than 25 feet). In addition, the queue for the northbound through and westbound through would often block northbound and westbound right-turn traffic from fully utilizing the channelized rights; therefore, the northbound and westbound right-turn movements were analyzed as shared with their respective through movements in the existing conditions.

Maude Avenue / Borregas Avenue-Sunnyvale Avenue: Construction work was observed at the intersection associated with the Maude Avenue Streetscape Project. The construction activities consisted of closing both channelized right-turn lanes on Sunnyvale Avenue, therefore, the northbound and eastbound right-turn movements were analyzed as shared with their respective through movement in the existing conditions. The remaining roadway lanes were open to traffic and did not appear to affect the operation at the intersection. However, construction work did effect on-street parking along Maude Avenue near the intersection.

Sunnyvale Avenue: Construction work was observed at Bishop Elementary School. The construction activities consisted of installing charging stations and other improvements for the school parking lot. It was also observed that construction activity blocked off the majority of on-street parking on the east side of Sunnyvale Avenue between Maude Avenue and Hazelton Avenue.

2 EXISTING CONDITIONS ANALYSIS

This chapter presents the analysis results for the Existing Conditions which assumes existing lane configuration, traffic control, and traffic volumes.

2.1 Existing Lane Configuration and Traffic Control

Existing intersection lane configurations and traffic control at the study intersections are illustrated in **Figure 3**. Traffic signals are located at the two study intersections. The figure also shows the length of the right-turn and left-turn storage bays when present.

2.2 Existing Traffic Volumes

The AM and PM peak period traffic counts were collected between 7:00 - 10:00 AM and 4:00 - 7:00 PM. The existing peak-hour intersection turning movement volumes are shown in **Figure 4**.

2.3 Existing Level of Service at Study Intersections

Traffic operations were evaluated under existing traffic conditions for AM and PM peak hour conditions and results are presented in **Table 2**. Analysis worksheets are provided in the **Appendix**. Results of the analysis indicate that the following study intersection currently operates at unacceptable levels of service based on established LOS standards:

- Intersection #1 – Maude Avenue / Mathilda Avenue (AM peak hour).

Table 2: Existing Intersection Level of Service Results

#	Intersection	LOS Criteria	Control	Peak Hour	Existing			
					LOS	Delay	v/c Ratio	Crit. Delay
1	Maude Avenue / Mathilda Avenue	E	Signal	AM	**F**	**114.7**	**0.587**	**220.8**
				PM	D	47.2	0.653	51.2
2	Maude Avenue / Borregas Avenue-Sunnyvale Avenue	D	Signal	AM	C-	33.6	0.618	34.9
				PM	C	31.2	0.587	30.1

Notes:
- Delay and LOS calculated using *Highway Capacity Manual* (HCM) 2000 methodology and Traffix software.
- Delay reported in seconds/vehicle.
- Intersections operating unacceptably are bolded.

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

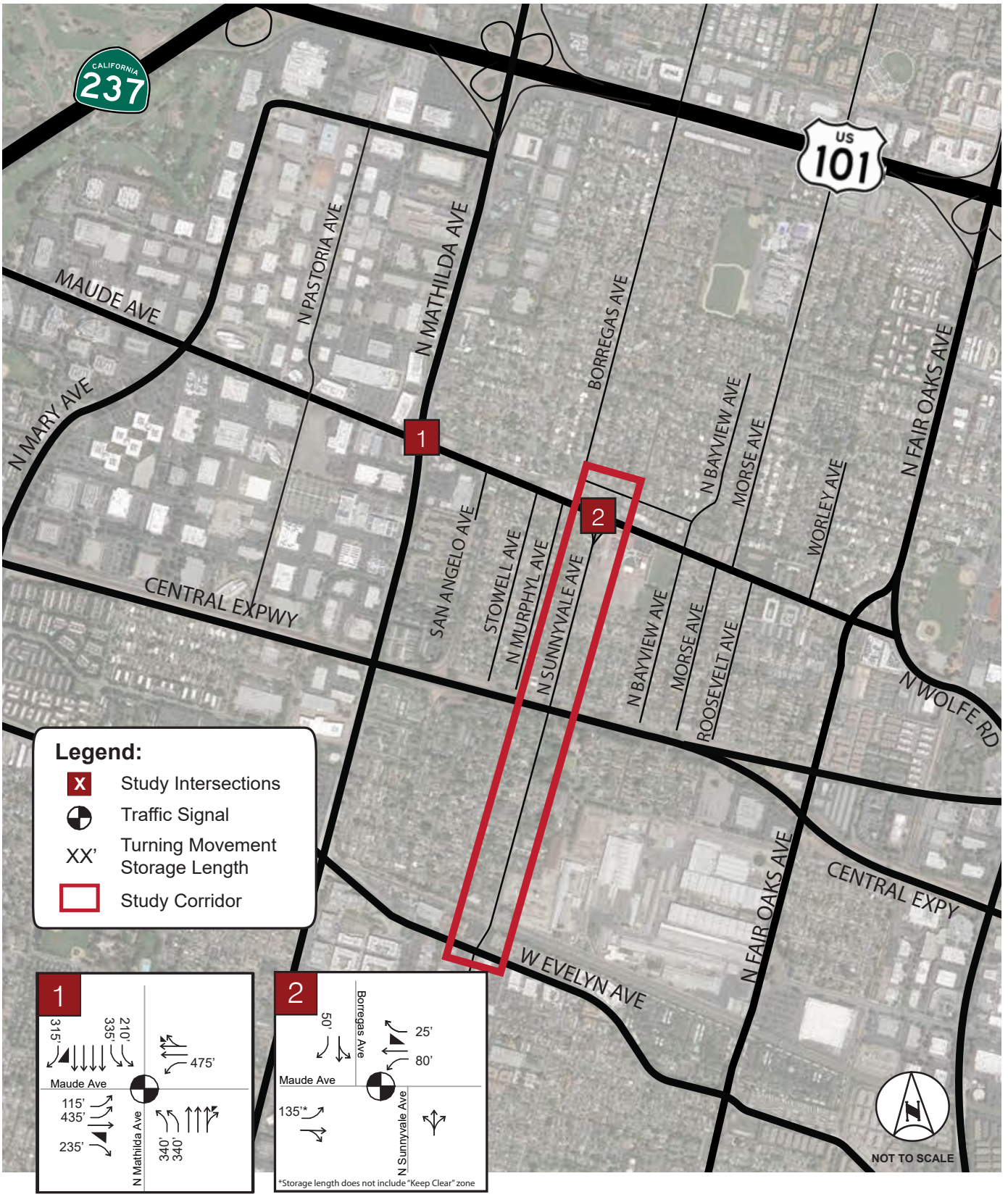


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FIGURE 3

INTERSECTION LANE GEOMETRY AND TRAFFIC CONTROL

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

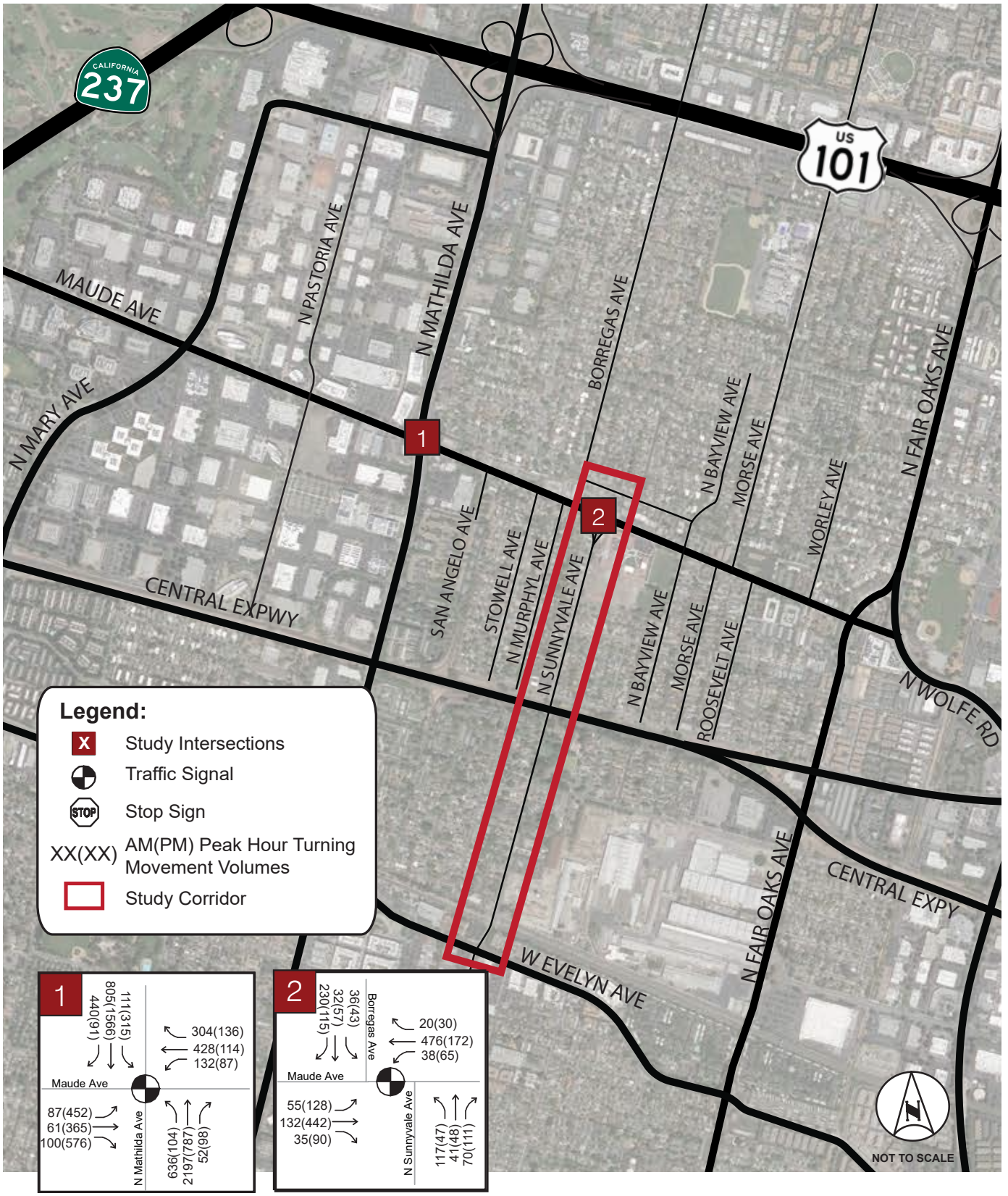

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FIGURE 4
EXISTING WEEKDAY AM AND PM PEAK-HOUR INTERSECTION TURNING MOVEMENT VOLUMES

2.4 Existing Queueing Analysis

Based on the existing Traffix model, 95th percentile queue lengths were used to determine queue spillback potential relative to existing turn pocket storage length. As illustrated in **Table 3** all existing queues are within available storage length, except for the following movements:

- Intersection #1 – Maude Avenue / Mathilda Avenue
  - Eastbound left (PM peak hour)
  - Eastbound right (PM peak hour)
  - Northbound left (AM peak hour)
  - Southbound left (PM peak hour)
  - Southbound right (AM peak hour)
- Intersection #2 – Maude Avenue / Borregas Avenue-Sunnyvale Avenue
  - Eastbound left (PM peak hour)
  - Westbound left (PM peak hour)
  - Southbound right (AM and PM peak hours)

Table 3: Existing Queue Lengths

#	Intersection	Link	Turning Movement							
			EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1	Maude Avenue / Mathilda Avenue	Existing Storage (ft)	275	235	475	-	340	-	270	315
		AM Peak Queue Length (ft)	87	171	245	1091	**1581**	1298	142	**410**
		PM Peak Queue Length (ft)	**469**	**931**	271	315	175	612	**445**	85
2	Maude Avenue / Borregas Avenue-Sunnyvale Avenue	Existing Storage (ft)	135	-	80	25	-	-	-	50
		AM Peak Queue Length (ft)	101	231	51	15	380	352	101	**382**
		PM Peak Queue Length (ft)	**164**	583	**122**	30	341	382	167	**231**

Notes:
- 95th percentile queue lengths calculated using Highway Capacity Manual (HCM) 2000 methodology and Traffix software.
- Queue lengths reported in feet per lane.
- Locations where the queue length exceeds the link storage by 25 feet or more are shown in shaded and bolded cells.

As noted previously, the channelized rights for the northbound and westbound approaches at Intersection #1 – Maude Avenue / Mathilda Avenue are ineffective in reducing congestion due to the short storage length (less than 25 feet). Therefore, these right-turn movements were analyzed as shared with their respective through movements.

2.5 Parking

Kimley-Horn analyzed the existing on-street parking supply and occupancy percentages along the Sunnyvale Avenue study corridor and surrounding roadway network to determine the baseline on-street parking conditions.

2.5.1 Existing On-Street Parking Supply

The total number of on-street parking spaces along Sunnyvale Avenue and the surrounding roadway network were inventoried to determine an existing parking supply. Because most of the locations within the study area do not have defined parking spaces the existing parking supply was determined to be the total length of available curb space divided by 20 feet per car. The on-street parking supply along Sunnyvale Avenue consists of 112 total parking spaces. The available parking spaces along Sunnyvale Avenue and the surrounding street network is summarized in **Table 4** and illustrated in **Figure 5**.

Parking restrictions within the study area are noted below:

- Arques Avenue
  - No vehicles over 6 feet high
    - Both sides between Murphy Avenue and Bayview Avenue
- Hendy Avenue
  - 3 Hour from 8:00 AM – 6:00 PM, Except Sat, Sun & Holidays
    - North side between Murphy Avenue and Sunnyvale Avenue
- Maude Avenue
  - Green curb 12-minute parking
    - North side between Sunnyvale Avenue and Bayview Avenue (only space for 2 vehicles marked adjacent to retail uses)
- Murphy Avenue
  - 7 Hour from 8:00 AM – 6:00 PM, Except Sat, Sun & Holidays
    - Both sides between California Avenue and Hendy Avenue
- Sunnyvale Avenue
  - No parking anytime or No parking 6:00 – 8:00 AM, 4:00 – 6:00 PM
    - Between California Avenue and Hendy Avenue
  - No parking any time
    - East side between Arques Avenue and California Avenue
    - Both sides between Hendy Avenue and Evelyn Avenue

It should be noted that at the time data was collected, on-street parking was available along Maude Avenue. However, in July 2020, the Maude Avenue Streetscape Project removed the on-street parking that was previously available along Maude Avenue within the study area at the time data collection was conducted.

2.5.2 Existing On-Street Parking Occupancy

On-street parking occupancy and utilization counts were collected Tuesday through Thursday in February 2020 at different times throughout the day (11 AM, 3 PM, 8 PM, and 1 AM). Based on the parking data collected on Sunnyvale Avenue and the surrounding roadway network a 3-day average weekday occupancy percentage was calculated for each of the four data collection times. The study area was broken down into smaller segments to help with the data collection and to better understand the existing average occupancy. A summary of the existing segment parking occupancies analyzed by time of day can be found in **Table 4** and is illustrated in **Figure 6** though **Figure 9**. **Figure 6** though **Figure 9** also illustrate the number of occupied spaces along Sunnyvale Avenue segments and the number of available spaces for remaining study segments. Full parking occupancy data is provided in the **Appendix**.

Only eleven of the total 56 on-street parking segments analyzed had an average weekday parking occupancy percentage at or above 75% during one of the four data collection times (11 AM, 3 PM, 8 PM, and 1 AM). Of those eleven segments, only one was found on Sunnyvale Avenue. The following segments have an average parking occupancy at or above 75%:

- Murphy Avenue
  - East side from Maude Avenue to 369/368 Murphy Avenue (1 AM)
  - East side between 333/334 Murphy Avenue and Arques Avenue (1AM)
  - West side between 333/334 Murphy Avenue and Arques Avenue (1AM)
  - West side, North of California Avenue (11 AM, 3 PM, and 1 AM)
  - East side, North of California Avenue (1 AM)
  - West side between California Avenue to Beemer Avenue (8 PM and 1 AM)
  - East side between California Avenue to Beemer Avenue (8 PM and 1 AM)
  - West side between Beemer Avenue to Hendy Avenue (3 PM)
  - East side between Beemer Avenue to Hendy Avenue (3 PM)
- Sunnyvale Avenue
  - West Side from Maude Avenue to Hazelton Avenue (11 AM)
- Bayview Avenue
  - West Side from Maude Avenue to Hazelton Avenue (8PM and 1 AM)

Along Sunnyvale Avenue, the maximum number of parked vehicles occurred during various times throughout the day, which is summarized below. Overall the maximum occupancy varied between 33 and 78 percent. The majority of segments experienced its maximum occupancy overnight at 1 AM. Segments that experienced its peak during the day were because of peaks for adjacent land uses, such as the school and mortuary, and found to have minimal number of parked vehicles for the remaining time periods.

- Between Maude Avenue and Hazelton Avenue
  - West side: 11 AM, 14 vehicles, 78% occupancy
  - East side: 11 AM, 7 vehicles, 54% occupancy
- Between Hazelton Avenue and Taylor Avenue
  - West side: 8 PM & 1 AM, 4 vehicles, 57% occupancy
  - East side: 8 PM & 1 AM, 2 vehicles, 40% occupancy
- Between Taylor Avenue and Arques Avenue
  - West side: 1 AM, 10 vehicles, 45% occupancy
  - East side: 1 AM, 10 vehicles, 48% occupancy
- Between Arques Avenue and California Avenue
  - West side: 8 PM, 2 vehicles, 67% occupancy
- Between California Avenue and Hendy Avenue
  - West side: 11 AM, 6 vehicles, 40% occupancy
  - East side: 11 AM and 8 PM, 4 vehicles, 33% occupancy

Table 4: Existing On-Street Parking Supply and Occupancy

Segment #	Street	Segment Limits	Street Side	Parking Supply	Average Number of Parked Vehicles[1]				Average Weekday Occupancy %			
					11 AM	3 PM	8 PM	1 AM	11 AM	3 PM	8 PM	1 AM
1	Maude Ave[2]	Borregas & Sunnyvale	North	5	1	1	1	1	20%	20%	20%	20%
2			South	6	0	1	0	0	0%	17%	0%	0%
3		Sunnyvale & Bayview	North	23	10	9	6	4	43%	39%	26%	17%
4			South	21	14	11	7	4	67%	52%	33%	19%
5	Murphy Ave (North)	Maude & 369/368 Murphy	West	15	9	9	9	10	60%	60%	60%	67%
6			East	17	4	6	12	13	24%	35%	71%	**76%**
7		369/368 Murphy & 333/334 Murphy	West	18	5	7	11	11	28%	39%	61%	61%
8			East	16	7	9	11	11	44%	56%	69%	69%
9		333/334 Murphy & Arques	West	19	7	7	14	15	37%	37%	74%	**79%**
10			East	21	9	9	15	19	43%	43%	71%	**90%**
11	Sunnyvale Ave	Maude & Hazelton	West	18	14	11	11	11	**78%**	61%	61%	61%
12			East	13	7	1	1	1	54%	8%	8%	8%
13		Hazelton & Taylor	West	7	2	3	4	4	29%	43%	57%	57%
14			East	5	1	1	2	2	20%	20%	40%	40%
15		Taylor & Arques	West	22	5	7	9	10	23%	32%	41%	45%
16			East	21	6	5	8	10	29%	24%	38%	48%
43		Arques & California	West	3	1	1	2	1	33%	33%	67%	33%
44			East	No On-Street Parking Allowed								
45		California & Hendy	West	15	6	0	1	1	40%	0%	7%	7%
46			East	12	4	1	4	3	33%	8%	33%	25%
47		Hendy & Evelyn	West	No On-Street Parking Allowed								
48			East	No On-Street Parking Allowed								
17	Bayview Ave	Maude & Hazelton	West	27	16	12	15	18	59%	44%	56 %	67%
18			East	20	10	9	13	15	50%	45%	65%	75%
21		Hazelton & Taylor	West	5	3	2	4	4	60%	40%	**80%**	**80%**
22			East	6	1	2	3	4	17%	33%	50%	67%
33		Taylor & Arques	West	21	5	6	5	7	24%	29%	24%	33%
34			East	21	7	7	6	7	33%	33%	29%	33%
19	Hazelton Ave	Sunnyvale & Bayview	North	29	9	11	3	3	31%	38%	10%	10%
20			South	26	11	10	10	11	42%	38%	38%	42%
23	Taylor Ave	Sunnyvale & Schroeder	North	7	2	1	2	3	29%	14%	29%	43%
24			South	7	2	2	2	2	29%	29%	29%	29%
25		Schroeder & Jackson	North	7	2	3	3	4	29%	43%	43%	57%
26			South	7	2	2	2	2	29%	29%	29%	29%

Note: Data was collected in February of 2020. Segments with an average weekday parking occupancy equal to or greater than 75% are shown in **bold** and highlighted.
[1] Average number of observed parked vehicles was rounded up to the nearest integer.
[2] Lower parking occupancy was observed due to Maude Avenue Streetscape Project construction work. Parking has since been removed as part of that project.

Table 4: Existing On-Street Parking Supply and Occupancy (Continued)

Segment #	Street	Segment Limits	Street Side	Parking Supply	Average Number of Parked Vehicles[1]				Average Weekday Occupancy %			
					11 AM	3 PM	8 PM	1 AM	11 AM	3 PM	8 PM	1 AM
27	Taylor Ave	Jackson & Bayview	North	9	3	3	4	4	33%	33%	44%	44%
28			South	7	2	2	4	4	29%	29%	57%	57%
29	Schroeder St	Taylor & Arques	West	21	8	8	8	11	38%	38%	38%	52%
30			East	20	6	8	9	11	30%	40%	45%	55%
31	Jackson St	Taylor & Arques	West	21	7	7	8	9	33%	33%	38%	43%
32			East	20	7	6	8	10	35%	30%	40%	50%
35	Arques Ave	Murphy & Sunnyvale	North	8	1	0	1	0	13%	0%	13%	0%
36			South	10	1	0	0	1	10%	0%	0%	10%
37		Sunnyvale & Schroeder	North	6	3	3	2	2	50%	50%	33%	33%
38			South	7	0	0	1	1	0%	0%	14%	14%
39		Schroeder & Jackson	North	5	1	1	1	1	20%	20%	20%	20%
40			South	8	1	1	1	2	13%	13%	13%	25%
41		Jackson & Bayview	North	6	1	1	2	1	17%	17%	33%	17%
42			South	9	2	1	1	1	22%	11%	11%	11%
49	Hendy Ave	Murphy & Sunnyvale	North	11	2	2	2	2	18%	18%	18%	18%
50			South	9	5	4	2	3	56%	44%	22%	33%
51	Murphy Ave (South)	North of California	West	23	22	23	17	18	**96%**	**100%**	74%	**78%**
52			East	15	8	10	9	12	53%	67%	60%	**80%**
53		California & Beemer	West	11	8	8	9	10	73%	73%	**82%**	**91%**
54			East	9	6	6	8	8	67%	67%	**89%**	**89%**
55		Beemer & Hendy	West	14	9	11	9	9	64%	**79%**	64%	64%
56			East	14	9	11	10	9	64%	**79%**	71%	64%

Note: Data was collected in February of 2020. Segments with an average weekday parking occupancy equal to or greater than 75% are shown in **bold** and highlighted.

[1] Average number of parked vehicles are rounded up to the nearest integer.

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

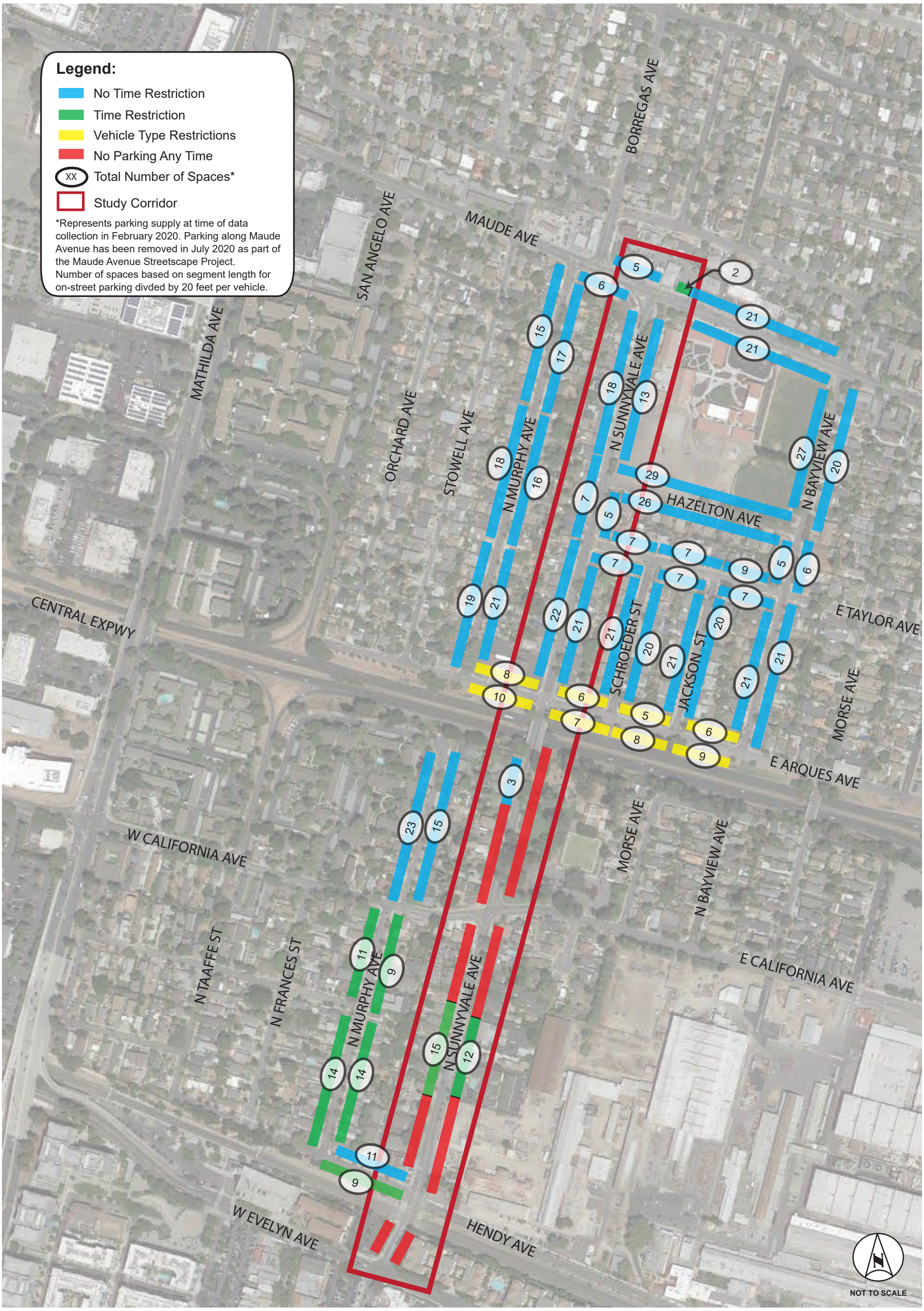

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FIGURE 5
EXISTING PARKING SUPPLY

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

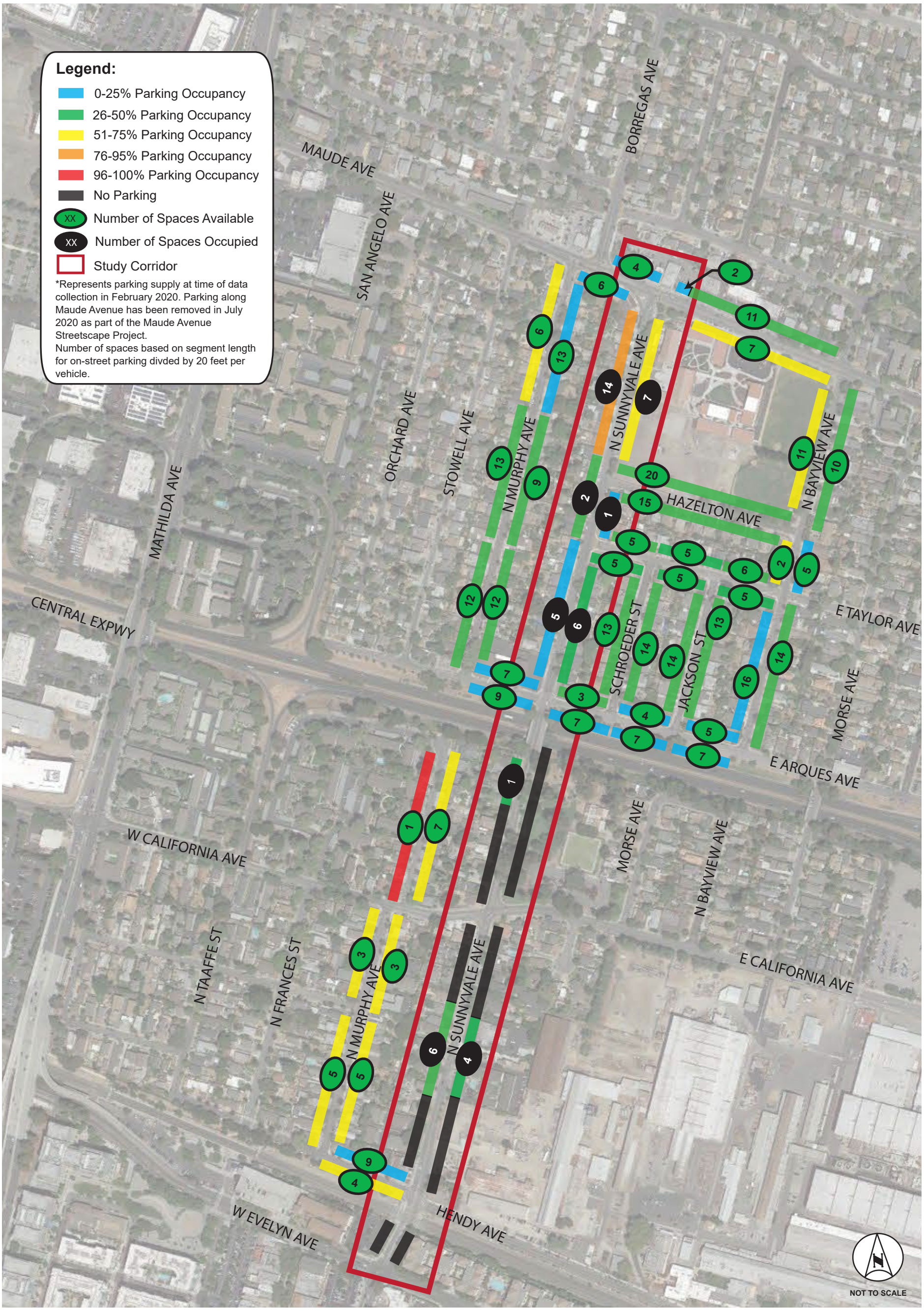

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FIGURE 6
AVERAGE WEEKDAY PEAK PARKING OCCUPANCY (11AM - 12PM)

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

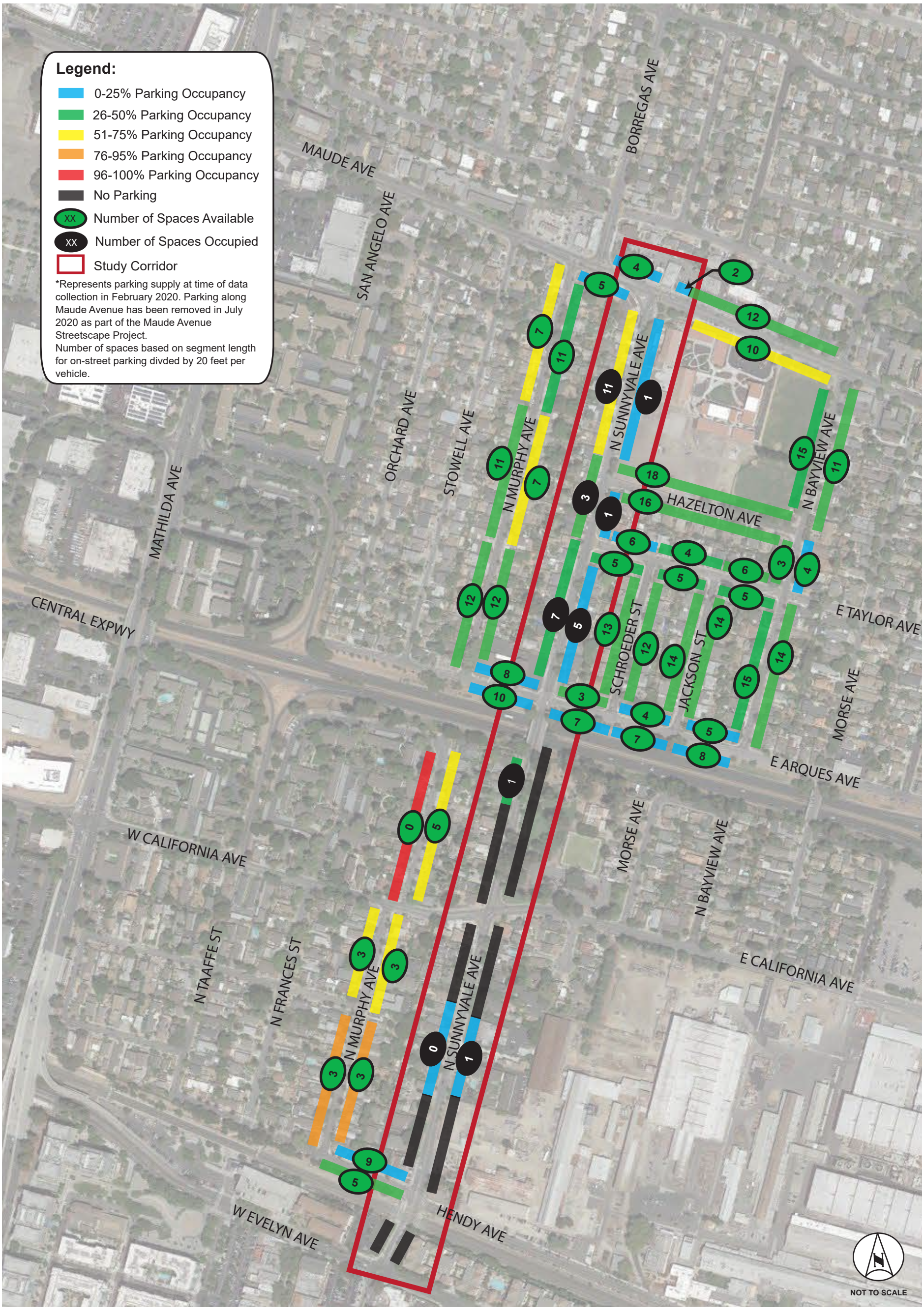

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FIGURE 7
AVERAGE WEEKDAY PEAK PARKING OCCUPANCY (3PM - 4PM)

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

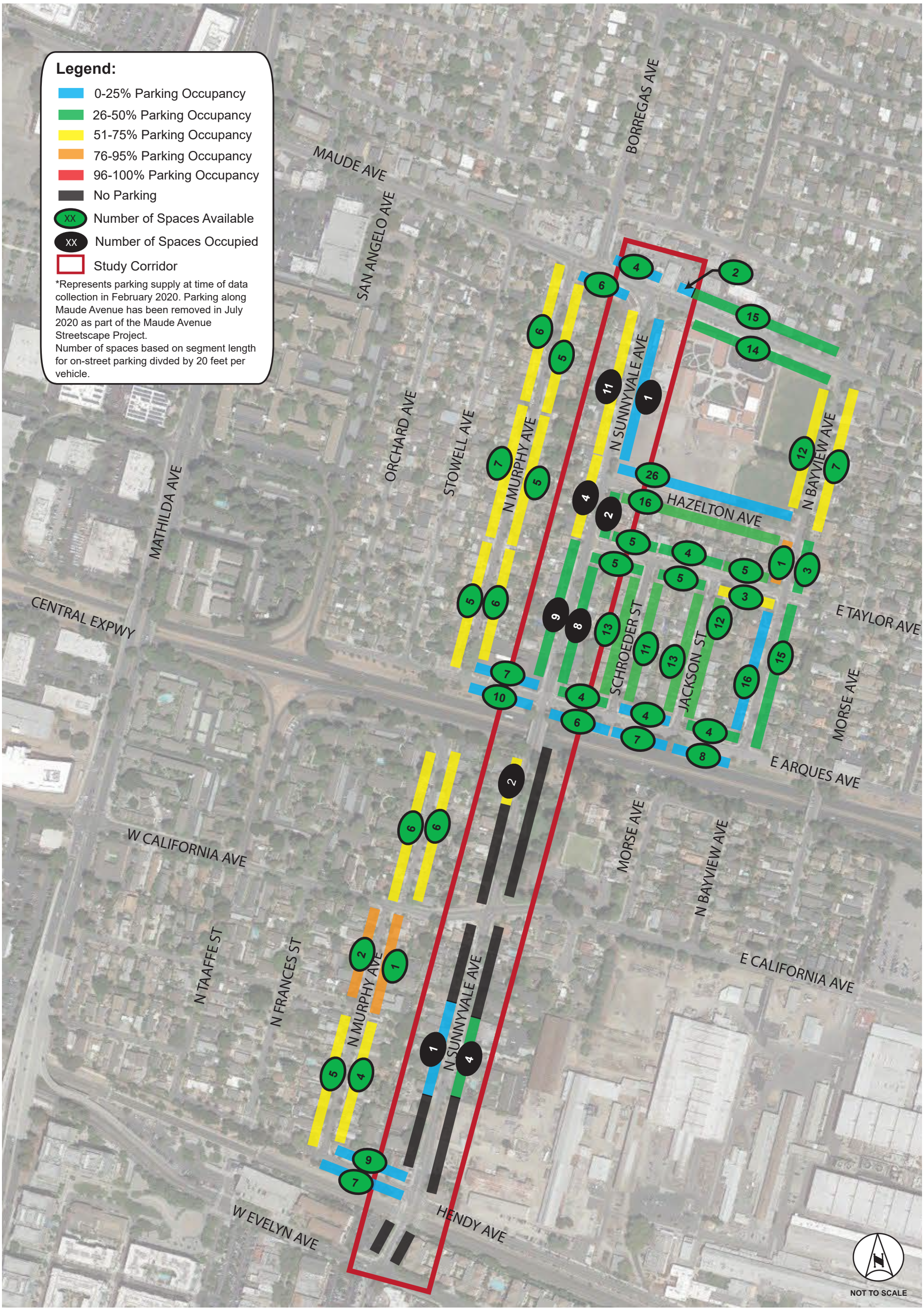

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FIGURE 8
AVERAGE WEEKDAY PEAK PARKING OCCUPANCY (8PM - 9PM)

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

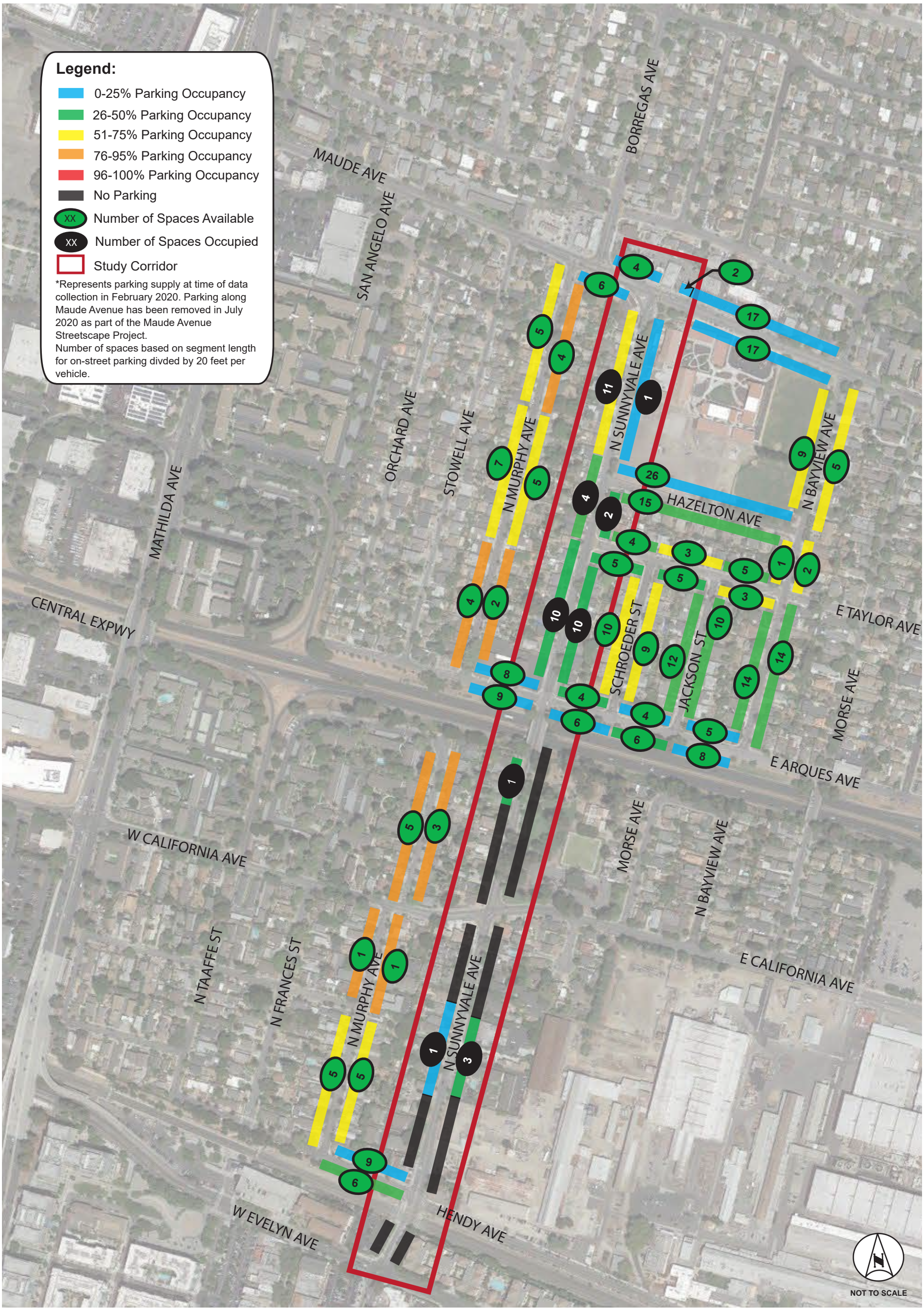

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FIGURE 9
AVERAGE WEEKDAY PEAK PARKING OCCUPANCY (1AM - 2AM)

2.6 Collision History

The City of Sunnyvale provided Kimley-Horn with three years of collision data, between 2016 and 2019, for the two signalized intersections and along the Sunnyvale Avenue study corridor from Maude Avenue to Evelyn Avenue. Summaries of the collision data by collision type and primary collision factor are provided in **Table 5** and **Table 6**, respectively. Collision locations, frequencies, and impacts are shown in **Figure 10**. The raw collision history data is provided in the **Appendix**.

At Intersection #1 – Maude Avenue / Mathilda Avenue, there was a total of 22 collisions. The most common collision type was rear end and the most common primary factor was due to unsafe speeds. At Intersection #2 – Maude Avenue / Borregas Avenue-Sunnyvale Avenue, there was a total of four (4) collisions. The most common collision type was also rear end and there was not a common primary factor among the four collisions.

Along Sunnyvale Avenue, there was a total of 31 collisions along the corridor. Nine (9) of the total collisions involved either a pedestrian or bicycle. Of those nine (9) collisions, four (4) involved pedestrians and five (5) involved bicycles. None of the pedestrian or bicycle collisions resulted in a fatality.

Table 5: Summary of Collision Type

Collision Type	#1 – Maude Avenue / Mathilda Avenue		#2 – Maude Avenue / Borregas Avenue - Sunnyvale Avenue		Sunnyvale Avenue Corridor	
Broadside	5	22.7%	-	-	7	22.6%
Head-On	-	-	1	25.0%	2	6.5%
Hit Object	2	9.1%	-	-	2	6.5%
Rear End	11	50.0%	2	50.0%	7	22.6%
Sideswipe	4	18.2%	-	-	6	19.3%
Vehicle-Pedestrian	-	-	1	25.0%	4	12.9%
Total	**22 (100%)**		**4 (100%)**		**31 (100%)**	

Table 6: Summary of Primary Collision Factor

Primary Collison Factor	#1 – Maude Avenue / Mathilda Avenue		#2 – Maude Avenue / Borregas Avenue - Sunnyvale Avenue		Sunnyvale Avenue Corridor	
Improper Turning	4	18.2%	-	-	4	12.9%
Pedestrian Violation	-	-	1	25.0%	1	3.2%
Traffic Signals & Signs	2	9.1%	1	25.0%	8	25.8%
Unsafe Lane Change	2	9.1%	-	-	3	9.7%
Unsafe Speed	10	45.4%	1	25.0%	4	12.9%
Other/Unknown	4	18.2%	1	25.0%	5	16.1%
Total	**22 (100%)**		**4 (100%)**		**31 (100%)**	

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

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FIGURE 10
PROJECT CORRIDOR COLLISIONS (2016-2019)

3 IMPROVEMENT ALTERNATIVES

3.1 Maude Avenue Improvements

The proposed improvements along Maude Avenue include removing all four of the channelized right-turn lanes at the intersection of Maude Avenue / Mathilda Avenue and the one channelized right-turn lane at the intersection of Maude Avenue / Borregas Avenue-Sunnyvale Avenue. Conceptual designs are shown in **Figure 11** and **Figure 12**. A summary of the major improvements and changes to each intersection are listed below:

- Intersection #1 – Maude Avenue / Mathilda Avenue
  - Remove channelizing islands and tighten curb radii at all four corners. Remove acceleration lane for eastbound to southbound right-turn movement. Maintain existing eastbound and southbound right-turn lanes.
  - Restriping to adjust crosswalks, provide bicycle slots where feasible, and adjust advanced stop bar
- Intersection #2 – Maude Avenue / Borregas Avenue-Sunnyvale Avenue
  - Remove channelizing island and tighten curb radius for westbound right-turn
  - Restriping of bicycle lanes near the northeast portion of the intersection

3.1.1 Traffic Analysis

Traffic operations were evaluated for the Project traffic conditions for AM and PM peak hours conditions and using *Traffix* software. Results of the analysis and the comparison to existing conditions are shown in **Table 7**. The project improvements at Intersection #1 – Maude Avenue / Mathilda Avenue do not change the lane geometry at the intersection; therefore, while the intersection continues to operate at a deficient LOS F during the AM peak hour and LOS D in the PM peak hour, there is no impact to delay or level of service associated with the project. The project improvements at Intersection #2 – Maude Avenue / Borregas Avenue-Sunnyvale Avenue does not change the lane geometry at the intersection; therefore, the intersection continues to operate at acceptable LOS.

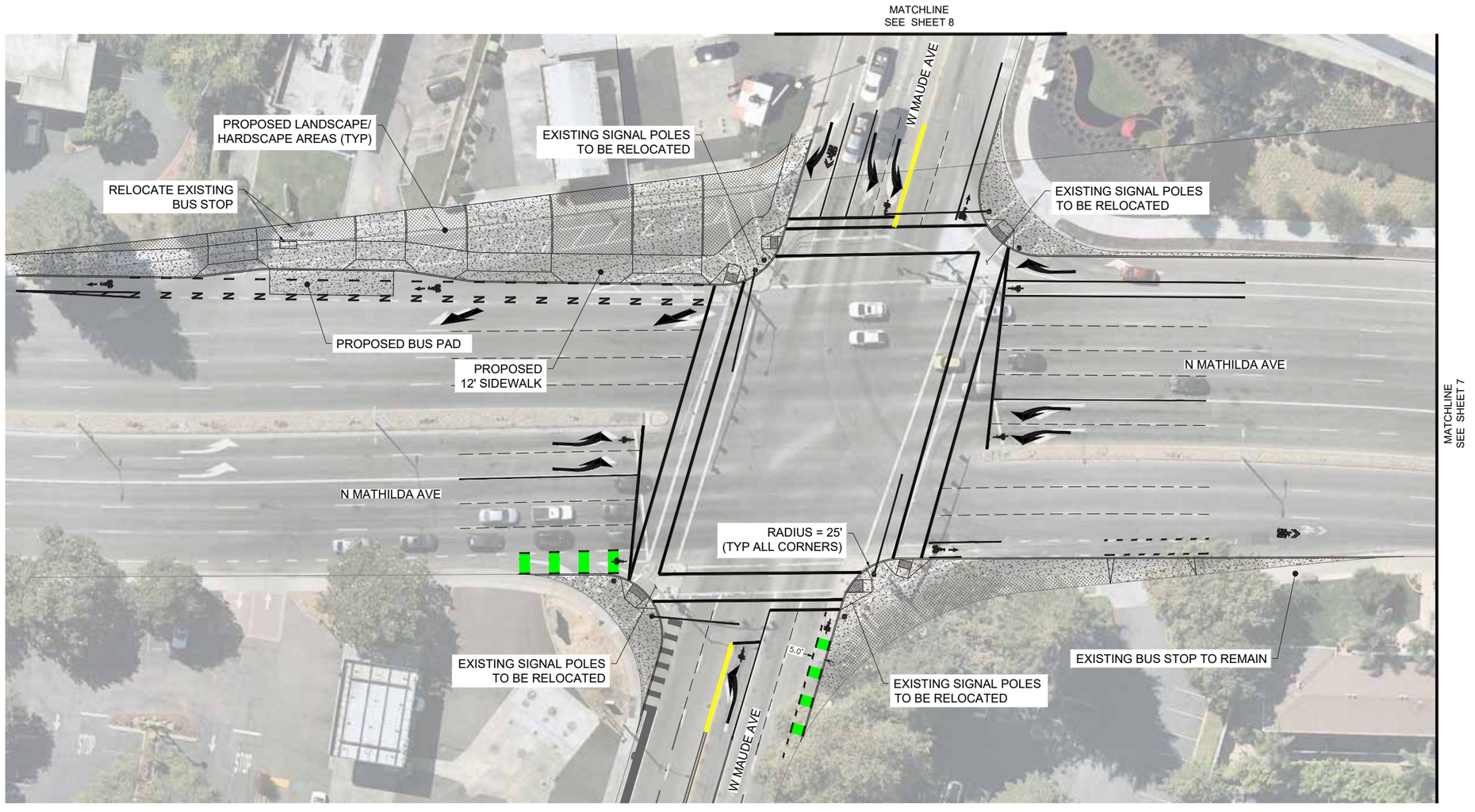
3.1.2 Queueing Analysis

The 95th percentile queue lengths for the intersections with project roadway geometry modification is shown in **Table 8**. The project improvements at Intersection #1 – Maude Avenue / Mathilda Avenue do not change the lane geometry at the intersection; therefore, there were no change to queue lengths. The project improvements at Intersection #2 – Maude Avenue / Borregas Avenue-Sunnyvale Avenue does not change the lane geometry at the intersection; therefore, there were no changes to queue lengths.

3.1.3 Safety Effects

The Draft 2020 Active Transportation Plan identifies channelized right-turn lanes as creating the potential for more vehicle-bike or vehicle-pedestrian conflicts. At these locations, both bicyclist and pedestrians feel stressed as drivers often do not look for bicyclist and pedestrians before turning and complete turning movements at high speeds. The removal of channelized right-turns would enhance safety for bicyclists and pedestrians crossing the intersection, since vehicles would be required to slow down while making a right-turn.

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue



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W MAUDE AVE & N MATHILDA AVE ALTERNATIVE
INTERSECTION CONCEPT PLAN
SHEET 6 OF 8
AUGUST 2020

LEGEND

- CONCRETE
- LANDSCAPING/HARDSCAPING

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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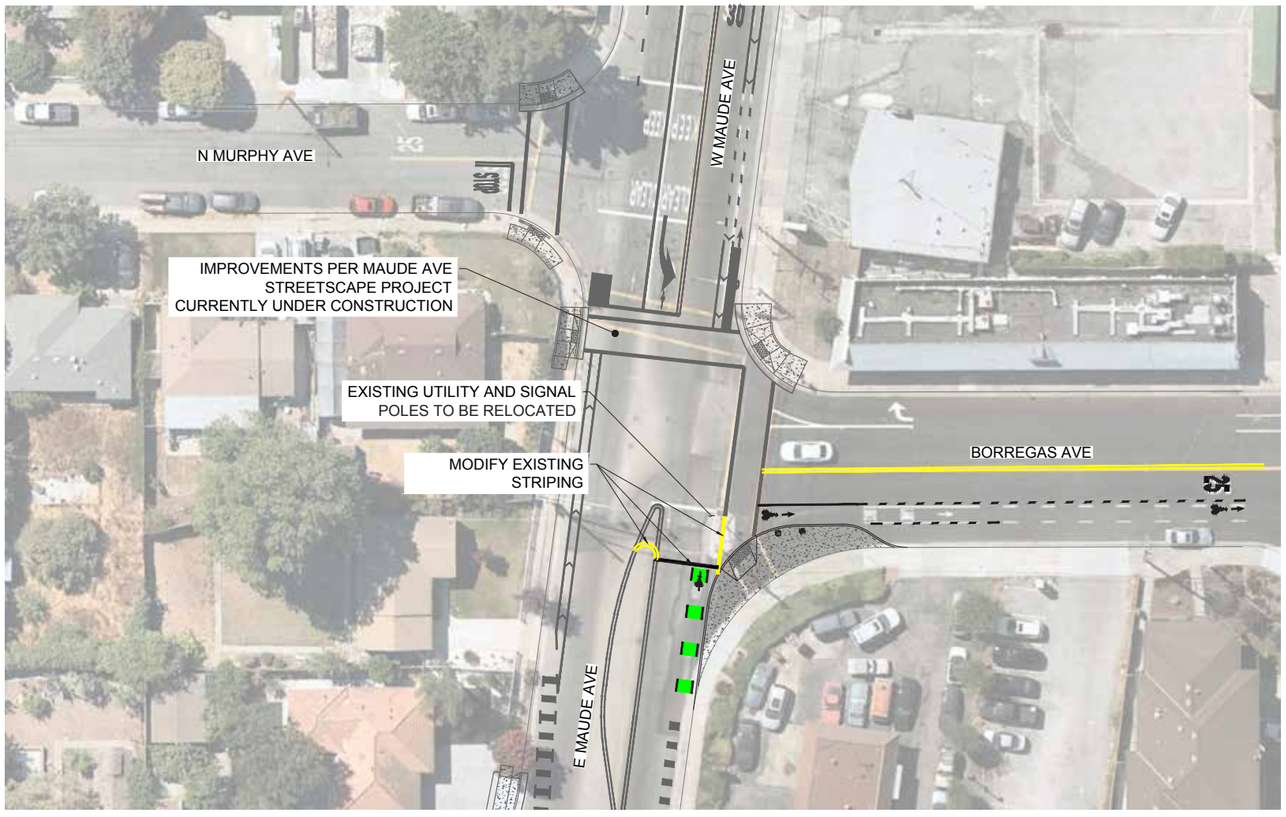
Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue



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MAUDE AVENUE & BORREGAS AVENUE
INTERSECTION CONCEPT PLAN
SHEET 5 OF 8
AUGUST 2020

LEGEND

CONCRETE

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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FIGURE 12

INTERSECTION CONCEPT DESIGNS (MAUDE AVENUE / BORREGAS AVENUE)

Table 7: Project Intersection Level of Service Results

#	Intersection	LOS Criteria	Control	Peak Hour	Existing				Project					
					LOS	Delay	v/c Ratio	Crit. Delay	LOS	Delay	V/C	Var	Crit. Delay	Var
1	Maude Avenue / Mathilda Avenue	E	Signal	AM	**F**	**114.7**	**0.587**	**220.8**	**F**	**114.7**	**0.587**	**0.000**	**220.8**	**0.0**
				PM	D	47.2	0.653	51.2	D	47.2	0.653	0.000	51.2	0.0
2	Maude Avenue / Borregas Avenue-Sunnyvale Avenue	D	Signal	AM	C-	33.6	0.618	34.9	C-	33.7	0.618	0.000	34.9	0.0
				PM	C	31.2	0.587	30.1	C	31.4	0.587	0.000	30.1	0.0

Notes:
- Delay and LOS calculated using *Highway Capacity Manual* (HCM) 2000 methodology and Traffix software.
- Delay reported in seconds/vehicle.
- Intersections operating deficiently are bolded.

Table 8: Project Queue Lengths

#	Intersection		Existing								Project							
			EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1	Mathilda Ave/ Maude Ave	Existing Storage (ft)	275	235	475	-	340	-	270	315	275	235	475	-	340	-	270	315
		AM Peak Queue Length (ft)	87	171	245	1091	**1581**	1298	142	**410**	87	171	245	1091	**1581**	1298	142	**410**
		PM Peak Queue Length (ft)	**469**	**931**	271	315	175	612	**445**	85	**469**	**931**	271	315	175	612	**445**	85
2	Borregas Ave & Sunnyvale Ave/ Maude Ave	Existing Storage (ft)	135	-	80	-	-	-	-	50	135	-	80	-	-	-	-	50
		AM Peak Queue Length (ft)	101	231	51	15	380	352	101	**382**	101	231	51	21	380	352	101	**382**
		PM Peak Queue Length (ft)	**164**	583	**122**	30	341	382	167	**231**	**164**	583	**122**	37	341	382	167	**231**

Notes:
- 95th percentile queue lengths calculated using Highway Capacity Manual (HCM) 2000 methodology and Traffix software.
- Queue lengths reported in feet per lane.
- Locations where the queue length exceeds the link storage by 25 feet or more are shown in bolded cells. Locations where the Alternative #1 improvement causes the queue length to exceed the queue storage or adds 25 feet or more to an already deficient queue length are shown in bolded and shaded.

3.2 Sunnyvale Avenue Improvements

The installation of bicycle lanes would require the removal of on-street parking on the east side of Sunnyvale Avenue between Maude Avenue and Arques Avenue and on both sides of Sunnyvale Avenue between Arques Avenue and Hendy Avenue. **Figure 13** through **Figure 16** shows the concept design for the Sunnyvale Avenue corridor. A summary of the major improvements and changes to each intersection are listed below:

- Provision of a Class II Bicycle Lane along the full corridor extent
- Where possible, provide a 1.5'- 4.5' buffer for bicycle lane
- Refresh crosswalks at Arques Avenue, Taylor Avenue, and Hazelton Avenue

3.2.1 Parking Impacts

The improvements along Sunnyvale Avenue would require the removal of on-street parking on the east side between Maude Avenue and Arques Avenue and on both sides between Arques Avenue and Hendy Avenue. It should be noted that based on field observations and occupancy counts, most vehicles parking on the west side belong to residents along Sunnyvale Avenue and these segments had consistently higher occupancy than the east side throughout the day. Therefore, the removal of on-street parking on the west side of Sunnyvale Avenue between Maude Avenue and Arques Avenue is not recommended in order to minimize the parking impacts to the nearby streets.

The total number of parking spaces removed would be 39 on the east side of Sunnyvale Avenue between Maude Avenue and Arques Avenue, three on the west side of Sunnyvale Avenue between Arques Avenue and California Avenue, and 27 combined on both sides of Sunnyvale Avenue between California Avenue and Hendy Avenue.

A parking analysis was conducted to determine if the surrounding roadway network would be able to accommodate the shifted on-street parking from Sunnyvale Avenue as noted in Chapter 3.2.1 The existing overnight (1 AM) weekday time period was selected for evaluation because it represents the period with the highest parking demand in the study area as a whole. As noted in Chapter 2.5, eight of the eleven segments currently experience a parking utilization of 75 percent or greater at 1 AM. It should be noted that parking demand within the segments of Sunnyvale Avenue proposed for parking removal is slightly higher at 11 AM (19 cars) than 1 AM (18 cars), but overall parking demand in the surrounding area is notably higher at 1 AM than 11 AM.

The analysis of parking utilization effects from the proposed project was performed by taking the average number of overnight (1 AM) weekday cars parked on Sunnyvale Avenue segments and distributing those parked cars to the closest adjacent segments. After the parked cars were distributed to the nearest on-street parking segments a new average overnight weekday occupancy percentage was calculated.

Based on the existing parking occupancy at 1 AM discussed in Chapter 2.5, Sunnyvale Avenue bicycle lanes would impact 13 existing parking cars between Maude Avenue and Arques Avenue, one existing parked car between Arques Avenue and California Avenue, and four existing parked cars between California Avenue and Hendy Avenue.

The results of the analysis showed that the surrounding roadway network would be able to accommodate the resulting removal of on-street parking on segments of Sunnyvale Avenue. Residents and visitors to properties on segments of Sunnyvale Avenue would be required to walk further to access on-street parking, but parking nearby would be available. North of California Avenue, most impacted parking would likely shift to street segments on the same side of Sunnyvale Avenue as where the impacted parking is currently provided, avoiding the need to cross Sunnyvale Avenue to travel between the relocated parking area and residences. Some vehicles may alternatively choose to park on the west side of Sunnyvale Avenue and cross Sunnyvale Avenue at the existing crossing at Hazelton Avenue or Arques Avenue. The three vehicles currently parking on the east side of Sunnyvale Avenue south of California Avenue would likely shift to Hendy Avenue, necessitating crossing Sunnyvale Avenue at the signalized crosswalk at Hendy Avenue.

In addition, all properties were observed to have off-street parking on driveways and in garages. A summary of the forecast parking occupancy changes with the removal of on-street parking are presented in **Table 9** and illustrated in **Figure 17**.

This analysis shows three parking segments with a parking occupancy at or above 75% as a result of the proposed improvements. The following are the segments with an average parking occupancy at or above 75% with the relocation of on-street parking demand on Sunnyvale Avenue and Maude Avenue:

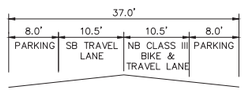
- Arques Avenue – North side from Sunnyvale Avenue to Schroeder Street (relocation of three Sunnyvale Avenue vehicles)
- Murphy Avenue – East side north of California Avenue (relocation of one Sunnyvale Avenue vehicle, but already above 75% in existing conditions)

3.2.2 Safety Effects

The provision of buffered bike lanes along the project corridor provide increased safety benefits over shared travel lanes. Providing dedicated space for cyclists reduces bicycle and auto conflicts and increases the prominence of the right of the cyclists to use the roadway. Provision of an on-street bicycle lane closes a critical gap in the City's bicycle network and may encourage more bicycle users, which thereby provides additional safety benefits. Providing a buffer in the majority of the corridor further separates bicycle and auto travel, improving safety and comfort of the bicycle facility. Removal of on-

street parking also removed a sight distance obstacle that should improve visibility of pedestrians and cyclists both at driveways and intersections.

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue



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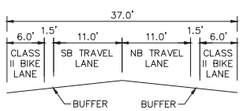

PROPOSED A-A

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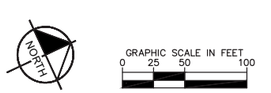

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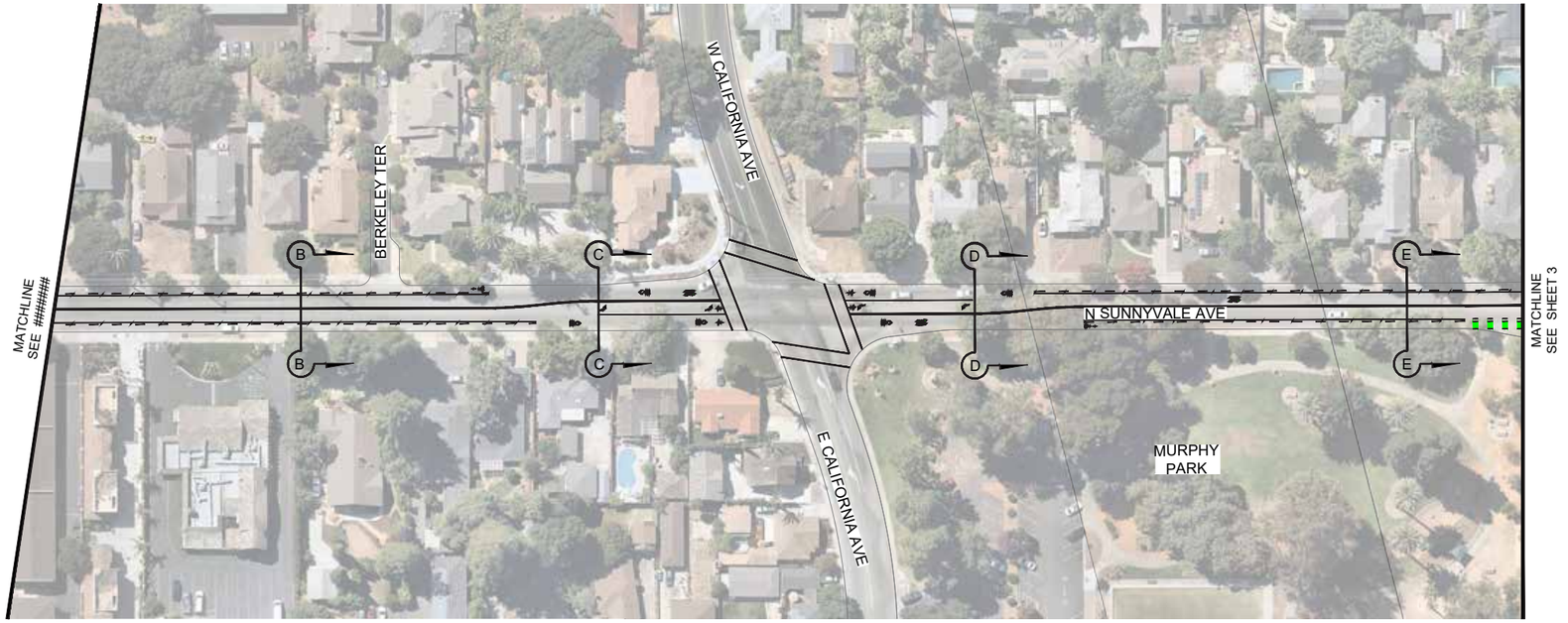

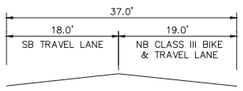

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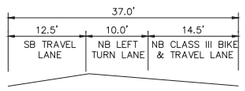

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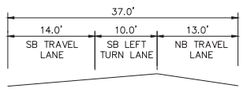

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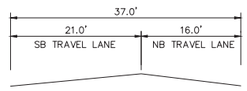

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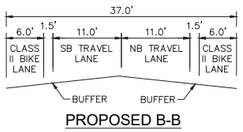

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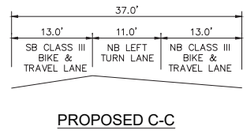

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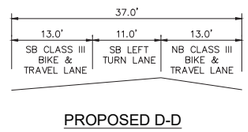

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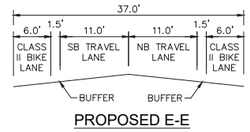

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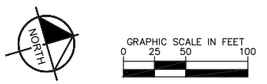

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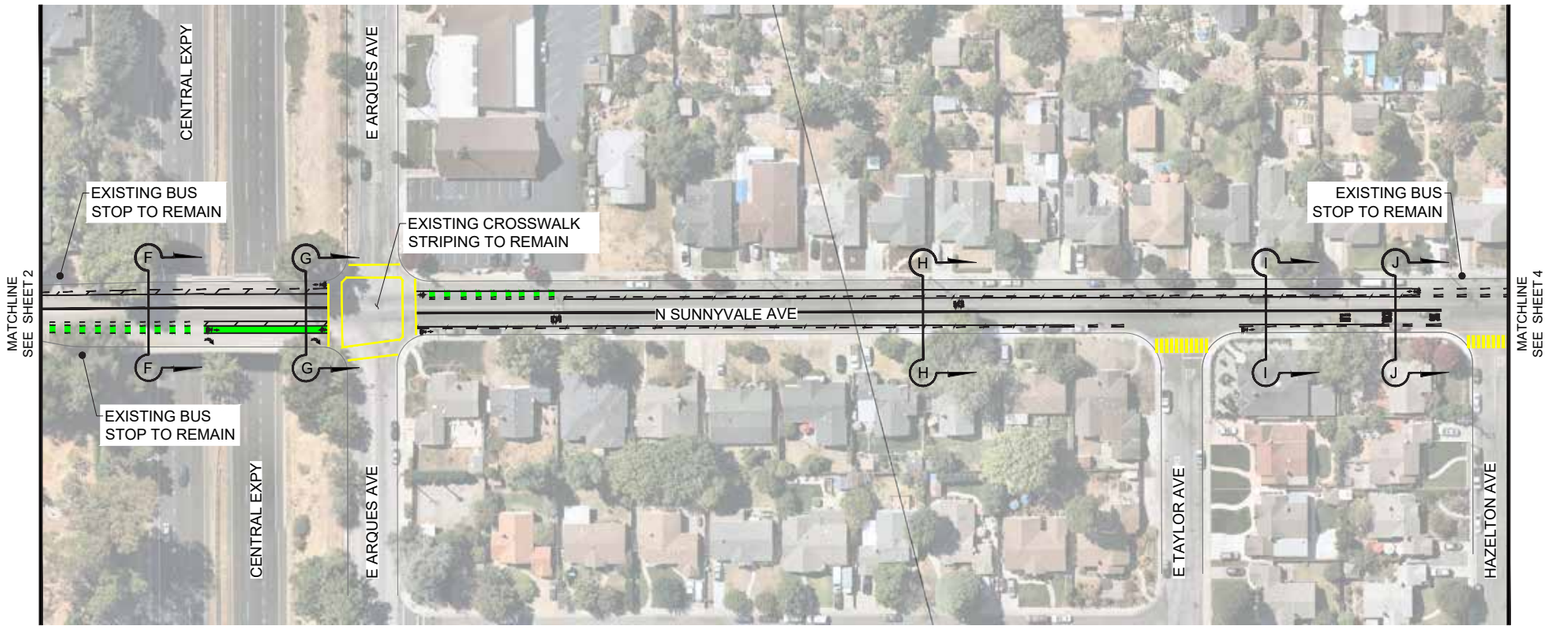

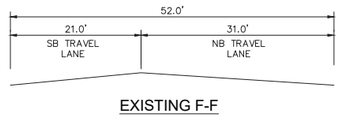

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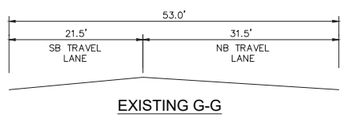

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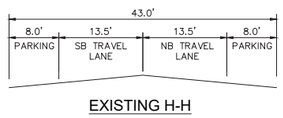

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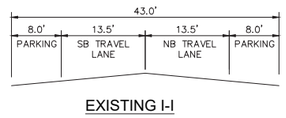

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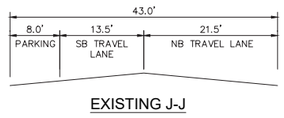

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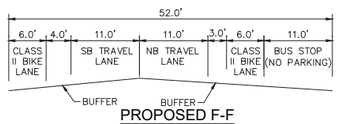

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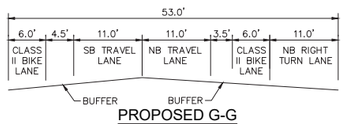

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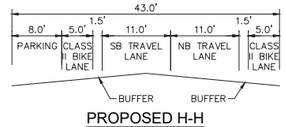

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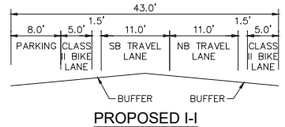
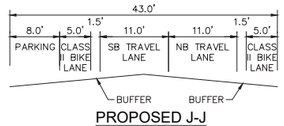
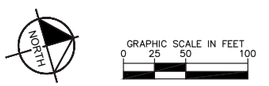


PROPOSED I-I



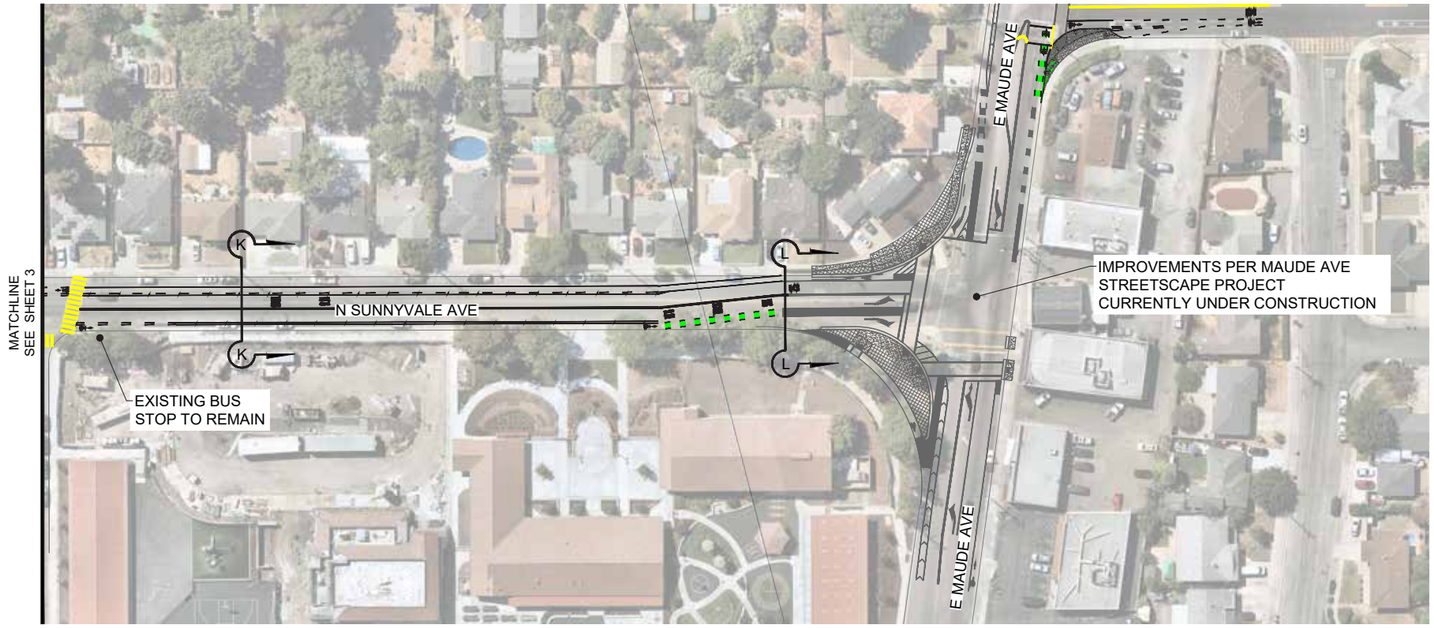
PROPOSED J-J

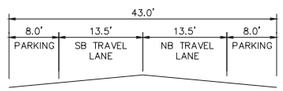
SUNNYVALE SRTS IMPROVEMENTS PROJECT
SUNNYVALE AVENUE
CORRIDOR CONCEPT PLAN
SHEET 3 OF 8
AUGUST 2020



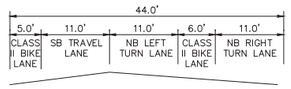
Kimley»Horn ©2014

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue

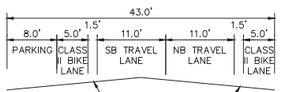




EXISTING K-K

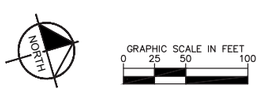


PROJECTED CONDITIONS L-L
(FROM MAUDE STREETSCAPE PROJECT)



PROPOSED K-K

SUNNYVALE SRTS IMPROVEMENTS PROJECT
SUNNYVALE AVENUE
CORRIDOR CONCEPT PLAN
SHEET 4 OF 8
AUGUST 2020



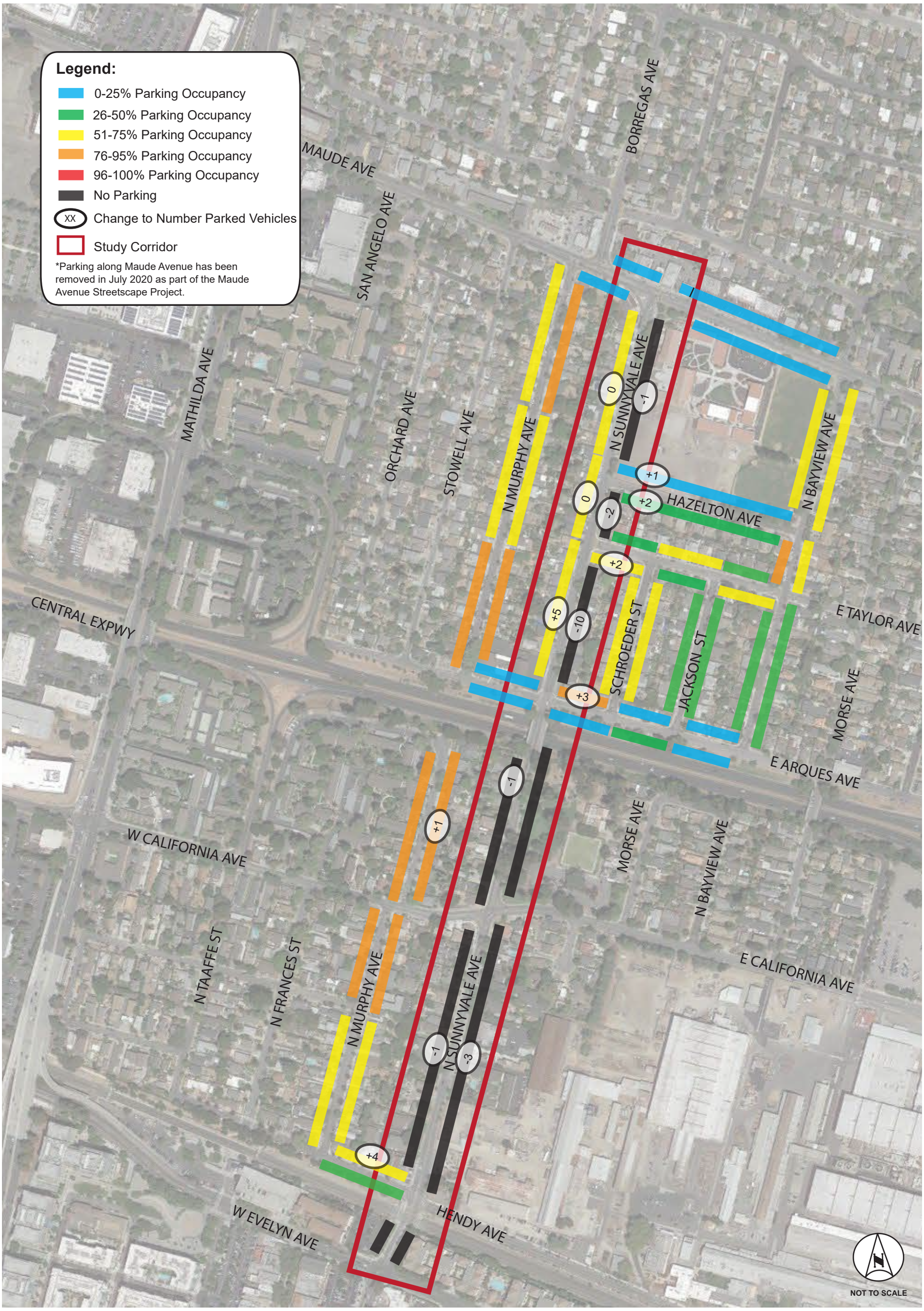
Kimley»Horn ©2014

Table 9: Existing and Proposed Overnight Occupancy Percentages

Segment #	Street	Segment Limits	Street Side	Existing Parking Supply[1]	Existing # Parked Vehicles	Existing % Occupancy	Proposed Parking Supply[2]	Change to # parked Vehicles	Adjusted # Parked Vehicles	Proposed % Occupancy
11	Sunnyvale Ave	Maude & Hazelton	West	18	11	61%	18	0	11	61%
12			East	13	1	8%	-[2]	-1	0	-
13		Hazelton & Taylor	West	7	4	57%	7	0	4	57%
14			East	5	2	40%	-[2]	-2	0	-
15		Taylor & Arques	West	22	10	45%	22	+5	15	68%
16			East	21	10	48%	-[2]	-10	0	-
43		Arques & California	West	3	1	33%	-[2]	-1	0	-
44			East	-[1]	-	-	-[1]	-	0	-
45		California & Hendy	West	15	1	7%	-[2]	-1	0	-
46			East	12	3	25%	-[2]	-3	0	-
19	Hazelton Ave	Sunnyvale & Bayview	North	29	3	10%	29	+1	4	14%
20			South	26	11	42%	26	+2	13	50%
24	Taylor Ave	Sunnyvale & Schroeder	South	7	2	29%	7	+2	4	57%
37	Arques Ave	Sunnyvale & Schroeder	North	6	2	33%	6	+3	5	**83%**
49	Hendy Ave	Murphy & Sunnyvale	North	11	2	18%	11	+4	6	55%
52	Murphy Ave (South)	North of California	East	15	12	**78%**	15	+1	13	**87%**

Note: Segments that experience a change in parking supple or expected number of parked cars are listed above. All other segments not listed in the table do not experience any change.
Segments with an average weekday parking occupancy equal to or greater than 75% are shown in **bold** and highlighted.
[1]Under Existing conditions, no on-street parking is allowed along Segments 44.
[2]The Project proposes removing existing on-street parking along the east side of Sunnyvale Avenue between Maude Avenue and Arques Avenue (Segments 12, 14, and 16) and on both sides between Arques Avenue and Hendy Avenue (Segments 43-46).

Safe Routes to School (SRTS) Improvements on Maude Avenue and Sunnyvale Avenue



Kimley»Horn

FIGURE 17
ADJUSTED WEEKDAY PEAK PARKING OCCUPANCY (1AM - 2AM)

4 SUMMARY OF ALTERNATIVES

The chapter summarizes the results of the SRTS improvements along Maude Avenue and Sunnyvale Avenue.

Maude Avenue Improvements

The improvements along Maude Avenue consist of adjusting corner radii by removing right-turn channelization at all four corners of Intersection #1 – Maude Avenue / Mathilda Avenue and right-turn channelization for the westbound right-turn at Intersection #2 – Maude Avenue / Borregas Avenue-Sunnyvale Avenue. The removal of right-turn channelization would increase safety at both intersections since the improvements would require vehicles to slow down to make the right-turn.

The removal of the channelization does not affect intersection geometrics and thus does not affect intersection level of service or delay. Existing southbound and eastbound right turn lanes at Intersection #1 – Maude Avenue / Mathilda Avenue would remain. Intersection #1 – Maude Avenue / Mathilda Avenue will continue to operate at LOS F in the AM peak hour and LOS D in the PM peak hour. Intersection #2 – Maude Avenue / Borregas Avenue-Sunnyvale Avenue will continue to operate at an acceptable LOS.

Sunnyvale Avenue Improvements

The improvements along Sunnyvale Avenue would consist of removing a portion of the on-street parking to install buffered bicycle lanes between Maude Avenue and Hendy Avenue. Only on-street parking on the east side will be removed between Maude Avenue and Arques Avenue and on-street parking on both sides will be removed between Arques Avenue and Hendy Avenue. A total of 79 parking spaces would be removed, although no more than 18 vehicles were observed to be utilizing those 79 spaces at the time periods during which parking data was collected. The installation of buffered bicycle lanes would greatly increase bicycle user safety over the existing shared travel lanes.

A parking analysis was conducted to determine if adjacent streets provide sufficient parking capacity to support the on-street parking demand being displaced from Sunnyvale Avenue. The parking analysis found that the surrounding street network has ample available on-street parking to support the redistribution of parking demand from segments of Sunnyvale Avenue. Only two street segments would experience a parking occupancy over 75% at 1 AM, including one segment that currently experiences a parking occupancy over 75%. Other on-street parking is available within one block for all displaced parking and the study area has ample parking to support the redistribution of impacted Sunnyvale Avenue parked vehicles. Only eight existing parked vehicles would need to be relocated to a parking area that would require crossing Sunnyvale Avenue to travel between the replacement parking area and their original parked location. In addition, the residences along Sunnyvale Avenue have off-street driveways

and garages where vehicles may be able to use if displaced from on-street parking areas. Therefore, the analysis found that there would be minimal detriment to the removal of on-street parking along Sunnyvale Avenue as proposed in the improvement concept.

Appendices

A: Study Intersection Traffic Counts
B: Parking Survey
C: Traffix Analysis Sheets
D: Collision History Data

Appendix A: Study Intersection Traffic Counts

North/South	East/West	Count Date	Time	Northbound				Southbound				Eastbound				Westbound				Grand Total
				L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Mathilda Avenue	Maude Avenue	May 2018	8:45AM-9:45AM	636	2197	52	2885	111	805	440	1356	87	61	100	248	132	428	304	864	5353
			4:30PM-5:30PM	103	821	107	1031	286	2025	105	2416	455	340	607	1402	98	73	134	305	5154

```
MITIG8 - Existing (PM)     Mon Jun 29, 2020 19:35:39                 Page 1-1
------------------------------------------------------------------------------
------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
******************************************************************************
Intersection #1413 Mathilda Ave / Maude Ave
******************************************************************************
Cycle (sec):         160                Critical Vol./Cap.(X):         0.653
Loss Time (sec):      12                Average Delay (sec/veh):        47.2
Optimal Cycle:        58                Level Of Service:                  D
******************************************************************************
Street Name:         Mathilda Avenue                    Maude Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Ovl              Ovl            Include
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
Lanes:        2  0  2  1  0    2  0  4  0  1    2  0  1  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 30 Oct 2018 << 4:30 - 5:30 PM
Base Vol:     104  787    98   315 1566    91   452  365   576    87  114   136
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:  104  787    98   315 1566    91   452  365   576    87  114   136
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  104  787    98   315 1566    91   452  365   576    87  114   136
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   104  787    98   315 1566    91   452  365   576    87  114   136
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  104  787    98   315 1566    91   452  365   576    87  114   136
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:  104  787    98   315 1566    91   452  365   576    87  114   136
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.83 0.99  0.95  0.83 1.00  0.92  0.83 1.00  0.92  0.92 1.00  0.92
Lanes:       2.00 2.66  0.34  2.00 4.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  3150 4979   620  3150 7600  1750  3150 1900  1750  1750 1900  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.16  0.16  0.10 0.21  0.05  0.14 0.19  0.33  0.05 0.06  0.08
Crit Moves:       ****        ****                          ****  ****
Green Time:  11.1 38.7  38.7  24.5 52.2 105.4  53.3 69.9  81.0  12.2 28.9  28.9
Volume/Cap:  0.48 0.65  0.65  0.65 0.63  0.08  0.43 0.44  0.65  0.65 0.33  0.43
Uniform Del: 71.7 54.6  54.6  63.7 45.8   9.8  41.6 31.4  29.1  71.9 57.2  58.3
IncremntDel:  1.6  1.2   1.2   3.2  0.5   0.0   0.3  0.4   1.7  11.0  0.3   0.5
InitQueuDel:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   73.3 55.7  55.7  66.9 46.3   9.8  41.8 31.7  30.8  82.9 57.4  58.8
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:  73.3 55.7  55.7  66.9 46.3   9.8  41.8 31.7  30.8  82.9 57.4  58.8
LOS by Move:    E   E+    E+     E    D     A     D    C     C     F   E+    E+
HCM2kAvgQ:      3   13    13    10   16     2    10   12    22     6    5     7

  Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to K-H, PHOENIX, AZ
```

Prepared by National Data & Surveying Services

Borregas Ave / Sunnyvale Ave & Maude Ave

Peak Hour Turning Movement Count

ID: 20-08052-001
City: Sunnyvale

Day: Thursday
Date: 02/06/2020

PEAK HOURS
AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS
AM: 07:00 AM - 10:00 AM
NOON: NONE
PM: 04:00 PM - 07:00 PM

Borregas Ave/Sunnyvale Ave

SOUTHBOUND

AM	230	32	36	0	116	AM
NOON	0	0	0	0	0	NOON
PM	115	57	43	0	206	PM
	1	1	0	0		

EASTBOUND (Maude Ave)

AM	NOON	PM	
823	0	334	
0	0	0	0
55	0	128	1
132	0	442	1
35	0	90	0
AM	NOON	PM	

WESTBOUND (Maude Ave)

PM	NOON	AM	
30	0	20	0
172	0	476	1
65	0	38	1
0	0	0	0
596	0	238	
PM	NOON	AM	

CONTROL: Signalized

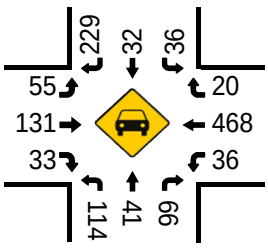
TEV	1282	0	1348
	AM	NOON	PM
PHF	0.93		0.95

PM	212	0	47	48	111	PM
NOON	0	0	0	0	0	NOON
AM	105	0	117	41	70	AM
		0	0	1	1	

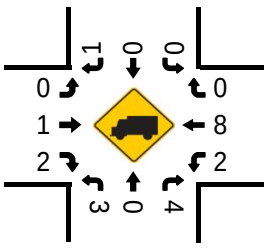
NORTHBOUND

Borregas Ave/Sunnyvale Ave

Cars (AM)



HT (AM)



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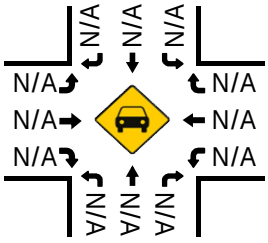

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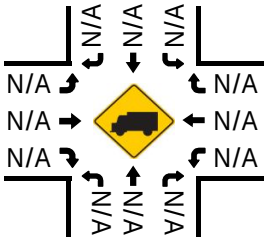
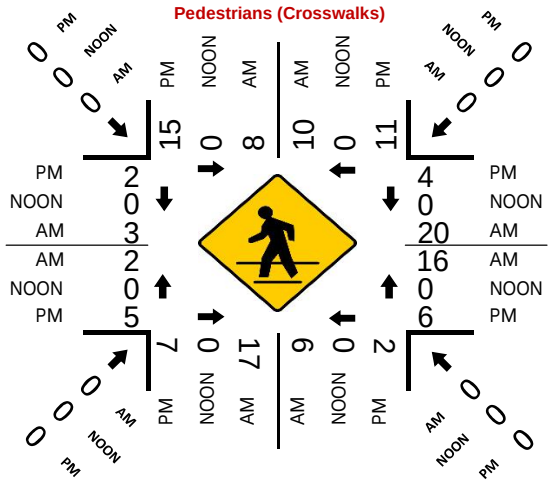


Pedestrians (Crosswalks)



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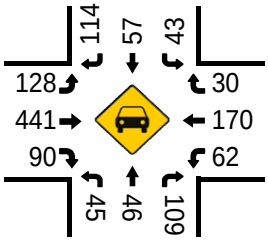

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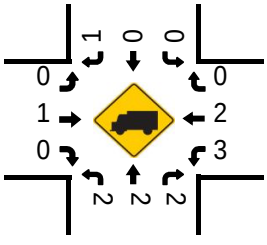


National Data & Surveying Services

Intersection Turning Movement Count

Location: Borregas Ave/Sunnyvale Ave & Maude Ave
City: Sunnyvale
Control: Signalized

Project ID: 20-08052-001
Date: 2/6/2020

Total

NS/EW Streets: Borregas Ave/Sunnyvale Ave (Northbound), Borregas Ave/Sunnyvale Ave (Southbound), Maude Ave (Eastbound), Maude Ave (Westbound)

AM

AM	NORTHBOUND NL	NT	NR	NU	NT2	NR2	NU2	SOUTHBOUND SL	ST	SR	SU	SL2	ST2	SU2
	0	1	1	0	0	0	0	0	1	1	0	0	0	0
7:00 AM	17	3	10	0	0	0	0	2	13	37	0	0	0	0
7:15 AM	17	1	14	0	0	0	0	4	7	52	0	0	0	0
7:30 AM	21	7	17	0	0	0	0	10	16	52	0	0	0	0
7:45 AM	19	12	24	0	0	0	0	21	7	43	0	0	0	0
8:00 AM	34	13	14	0	0	1	0	7	9	54	0	0	0	0
8:15 AM	32	10	16	0	0	0	0	5	7	67	0	0	0	0
8:30 AM	32	6	16	0	0	2	0	3	9	66	0	0	0	0
8:45 AM	23	7	9	0	0	1	0	0	10	76	0	0	0	0
9:00 AM	32	12	7	0	0	0	0	2	5	68	0	0	0	0
9:15 AM	24	10	13	0	0	1	0	4	6	46	0	0	0	0
9:30 AM	16	5	8	0	0	1	0	3	4	38	0	0	0	0
9:45 AM	19	7	14	0	1	0	0	5	7	44	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
TOTAL VOLUMES :	286	93	162	0	1	6	0	66	100	643	0	0	0	0
APPROACH %'s :	52.19%	16.97%	29.56%	0.00%	0.18%	1.09%	0.00%	8.16%	12.36%	79.48%	0.00%	0.00%	0.00%	0.00%
PEAK HR :	07:45 AM - 08:45 AM													
PEAK HR VOL :	117	41	70	0	0	3	0	36	32	230	0	0	0	0
PEAK HR FACTOR :	0.860	0.788	0.729	0.000	0.000	0.375	0.000	0.429	0.889	0.858	0.000	0.000	0.000	0.000
				0.931							0.943			

AM	EASTBOUND EL	ET	ER	EU	EL2	ET2	ER2	WESTBOUND WL	WT	WR	WU	WL2	WR2	WU2
	1	1	0	0	0	0	0	1	1	0	0	0	0	0
7:00 AM	9	17	7	0	0	0	0	3	42	6	0	0	0	0
7:15 AM	5	33	10	0	0	0	0	5	44	8	0	0	0	0
7:30 AM	9	31	5	0	0	0	0	8	84	3	0	0	0	0
7:45 AM	16	46	6	0	0	0	0	10	107	6	0	0	0	0
8:00 AM	12	27	8	0	0	0	0	13	119	8	0	0	0	1
8:15 AM	11	39	11	0	0	0	0	9	135	3	0	0	0	0
8:30 AM	16	20	10	0	0	0	0	6	115	3	0	0	0	0
8:45 AM	12	23	7	0	0	0	0	2	134	1	0	0	0	0
9:00 AM	10	40	8	0	0	0	0	8	128	1	0	0	0	2
9:15 AM	11	27	8	0	0	0	0	5	117	7	0	0	0	2
9:30 AM	5	34	11	0	0	0	0	4	76	5	0	0	0	0
9:45 AM	13	38	10	0	0	0	0	5	68	2	0	0	0	4
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
TOTAL VOLUMES :	129	375	101	0	0	0	0	78	1169	53	0	0	0	9
APPROACH %'s :	21.32%	61.98%	16.69%	0.00%	0.00%	0.00%	0.00%	5.96%	89.30%	4.05%	0.00%	0.00%	0.00%	0.69%
PEAK HR VOL :	55	132	35	0	0	0	0	38	476	20	0	0	0	1
PEAK HR FACTOR :	0.859	0.717	0.795	0.000	0.000	0.000	0.000	0.731	0.881	0.625	0.000	0.000	0.000	0.250
				0.816							0.910			

AM	NORTHBOUND2 N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	SOUTHBOUND2 S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	WESTBOUND2 W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	201
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	263
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	317
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	345
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	304
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	305
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	324
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	282
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	212
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	240
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0	3	3279
APPROACH %'s :								0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	57.14%	0.00%	42.86%	
PEAK HR :																						TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1286
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.932

PM

PM	NORTHBOUND NL	NT	NR	NU	NT2	NR2	NU2	SOUTHBOUND SL	ST	SR	SU	SL2	ST2	SU2
	0	1	1	0	0	0	0	0	1	1	0	0	0	0
4:00 PM	7	15	24	0	0	0	0	8	10	25	0	0	0	0
4:15 PM	8	15	21	0	0	0	0	12	7	28	0	0	0	0
4:30 PM	12	10	20	0	0	0	0	6	9	28	0	0	0	0
4:45 PM	11	6	17	0	0	0	0	14	5	29	0	0	0	0
5:00 PM	15	15	27	0	0	1	0	7	14	27	0	0	0	0
5:15 PM	9	12	21	0	0	1	0	8	10	28	0	0	0	0
5:30 PM	12	13	27	0	0	0	0	18	15	27	0	0	0	0
5:45 PM	11	8	36	0	0	2	0	10	18	33	0	0	0	0
6:00 PM	14	7	18	0	1	0	0	12	11	33	0	0	0	0
6:15 PM	6	11	13	0	0	1	0	6	9	38	0	0	0	0
6:30 PM	11	8	10	0	0	1	0	14	8	15	0	0	0	0
6:45 PM	10	8	21	0	0	0	0	10	11	19	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
TOTAL VOLUMES :	126	128	255	0	1	6	0	125	127	330	0	0	0	0
APPROACH %'s :	24.42%	24.81%	49.42%	0.00%	0.19%	1.16%	0.00%	21.48%	21.82%	56.70%	0.00%	0.00%	0.00%	0.00%
PEAK HR :	05:00 PM - 06:00 PM													
PEAK HR VOL :	47	48	111	0	0	4	0	43	57	115	0	0	0	0
PEAK HR FACTOR :	0.783	0.800	0.771	0.000	0.000	0.500	0.000	0.597	0.792	0.871	0.000	0.000	0.000	0.000
				0.905							0.881			

PM	EASTBOUND EL	ET	ER	EU	EL2	ET2	ER2	WESTBOUND WL	WT	WR	WU	WL2	WR2	WU2
	1	1	0	0	0	0	0	1	1	0	0	0	0	0
4:00 PM	20	72	11	0	0	0	0	10	39	3	0	0	0	0
4:15 PM	21	108	15	0	0	1	0	12	32	8	0	0	1	0
4:30 PM	24	92	16	0	0	0	0	6	44	7	0	0	0	0
4:45 PM	29	111	17	0	0	1	0	18	50	9	0	0	0	0
5:00 PM	36	111	27	0	0	0	0	13	28	3	0	0	0	0
5:15 PM	30	99	21	0	1	0	0	19	55	10	0	0	0	0
5:30 PM	31	125	17	0	0	0	1	19	42	8	0	0	0	1
5:45 PM	31	107	25	0	0	0	0	14	47	9	0	0	0	0
6:00 PM	28	103	23	0	0	0	0	10	38	10	0	0	0	0
6:15 PM	31	97	19	0	0	0	0	17	40	7	0	0	0	0
6:30 PM	31	83	33	0	0	0	0	11	30	5	1	0	0	0
6:45 PM	28	81	15	0	0	0	0	11	49	3	0	0	0	0
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
TOTAL VOLUMES :	340	1189	239	0	1	2	1	160	494	82	1	0	1	1
APPROACH %'s :	19.19%	67.10%	13.49%	0.00%	0.06%	0.11%	0.06%	21.65%	66.85%	11.10%	0.14%	0.00%	0.14%	0.14%
PEAK HR VOL :	128	442	90	0	1	0	1	65	172	30	0	0	0	1
PEAK HR FACTOR :	0.889	0.884	0.833	0.000	0.250	0.000	0.250	0.855	0.782	0.750	0.000	0.000	0.000	0.250
				0.951							0.798			

PM	NORTHBOUND2 N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	SOUTHBOUND2 S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	WESTBOUND2 W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	244
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	291
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	275
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	317
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	324
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	324
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	356
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	351
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	308
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	296
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	261
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	266
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	3613
APPROACH %'s :								0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%								
PEAK HR :																						TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1355
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.952

National Data & Surveying Services

Intersection Turning Movement Count

Location: Borregas Ave/Sunnyvale Ave & Maude Ave
City: Sunnyvale
Control: Signalized

Project ID: 20-08052-001
Date: 2/6/2020

Cars

AM

NS/EW Streets:	Borregas Ave/Sunnyvale Ave							Borregas Ave/Sunnyvale Ave						
	NORTHBOUND							SOUTHBOUND						
AM	0	1	1	0	0	0	0	0	1	1	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
7:00 AM	17	3	9	0	0	0	0	2	13	36	0	0	0	0
7:15 AM	16	1	13	0	0	0	0	3	6	52	0	0	0	0
7:30 AM	20	6	17	0	0	0	0	10	16	52	0	0	0	0
7:45 AM	19	12	23	0	0	0	0	21	7	43	0	0	0	0
8:00 AM	33	13	13	0	0	1	0	7	9	54	0	0	0	0
8:15 AM	31	10	16	0	0	0	0	5	7	67	0	0	0	0
8:30 AM	31	6	14	0	0	2	0	3	9	65	0	0	0	0
8:45 AM	23	7	9	0	0	1	0	0	9	76	0	0	0	0
9:00 AM	31	11	6	0	0	0	0	2	5	67	0	0	0	0
9:15 AM	23	10	12	0	0	1	0	4	5	45	0	0	0	0
9:30 AM	14	5	7	0	0	1	0	3	4	37	0	0	0	0
9:45 AM	17	7	14	0	1	0	0	5	7	43	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
TOTAL VOLUMES :	275	91	153	0	1	6	0	65	97	637	0	0	0	0
APPROACH %'s :	52.28%	17.30%	29.09%	0.00%	0.19%	1.14%	0.00%	8.14%	12.14%	79.72%	0.00%	0.00%	0.00%	0.00%
PEAK HR :	07:45 AM - 08:45 AM													
PEAK HR VOL :	114	41	66	0	0	3	0	36	32	229	0	0	0	0
PEAK HR FACTOR :	0.86	0.788	0.717	0.000	0.000	0.375	0.000	0.429	0.889	0.854	0.000	0.000	0.000	0.000
				0.933							0.940			

NS/EW Streets:	Maude Ave							Maude Ave						
	EASTBOUND							WESTBOUND						
AM	1	1	0	0	0	0	0	1	1	0	0	0	0	0
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
7:00 AM	9	14	7	0	0	0	0	1	42	5	0	0	0	0
7:15 AM	5	31	9	0	0	0	0	4	43	8	0	0	0	0
7:30 AM	9	31	5	0	0	0	0	5	83	3	0	0	0	0
7:45 AM	16	46	6	0	0	0	0	10	106	6	0	0	0	0
8:00 AM	12	26	8	0	0	0	0	12	117	8	0	0	0	1
8:15 AM	11	39	9	0	0	0	0	9	132	3	0	0	0	0
8:30 AM	16	20	10	0	0	0	0	5	113	3	0	0	0	0
8:45 AM	11	23	5	0	0	0	0	2	133	1	0	0	0	0
9:00 AM	10	38	8	0	0	0	0	6	128	1	0	0	0	2
9:15 AM	10	27	8	0	0	0	0	4	116	7	0	0	0	2
9:30 AM	5	33	10	0	0	0	0	3	72	5	0	0	0	0
9:45 AM	13	37	7	0	0	0	0	4	66	1	0	0	0	4
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
TOTAL VOLUMES :	127	365	92	0	0	0	0	65	1151	51	0	0	0	9
APPROACH %'s :	21.75%	62.50%	15.75%	0.00%	0.00%	0.00%	0.00%	5.09%	90.20%	4.00%	0.00%	0.00%	0.00%	0.71%
PEAK HR VOL :	55	131	33	0	0	0	0	36	468	20	0	0	0	1
PEAK HR FACTOR :	0.859	0.712	0.825	0.000	0.000	0.000	0.000	0.750	0.886	0.625	0.000	0.000	0.000	0.250
				0.805							0.911			

	NORTHBOUND2							SOUTHBOUND2							WESTBOUND2							
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	257
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	315
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	314
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	339
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	297
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	300
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	316
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	275
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	201
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	228
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	3191
APPROACH %'s :								0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	60.00%	
																						TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1265
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.933

PM

	NORTHBOUND							SOUTHBOUND						
PM	0	1	1	0	0	0	0	0	1	1	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
4:00 PM	7	15	23	0	0	0	0	8	10	24	0	0	0	0
4:15 PM	8	15	20	0	0	0	0	12	7	28	0	0	0	0
4:30 PM	12	10	20	0	0	0	0	6	9	28	0	0	0	0
4:45 PM	11	6	16	0	0	0	0	14	5	29	0	0	0	0
5:00 PM	15	14	27	0	0	1	0	7	14	27	0	0	0	0
5:15 PM	7	11	20	0	0	1	0	8	10	27	0	0	0	0
5:30 PM	12	13	27	0	0	0	0	18	15	27	0	0	0	0
5:45 PM	11	8	35	0	0	2	0	10	18	33	0	0	0	0
6:00 PM	14	6	18	0	1	0	0	12	11	33	0	0	0	0
6:15 PM	6	11	12	0	0	1	0	6	9	36	0	0	0	0
6:30 PM	11	8	10	0	0	1	0	13	8	15	0	0	0	0
6:45 PM	10	8	20	0	0	0	0	10	11	19	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
TOTAL VOLUMES :	124	125	248	0	1	6	0	124	127	326	0	0	0	0
APPROACH %'s :	24.60%	24.80%	49.21%	0.00%	0.20%	1.19%	0.00%	21.49%	22.01%	56.50%	0.00%	0.00%	0.00%	0.00%
PEAK HR :	05:00 PM - 06:00 PM													
PEAK HR VOL :	45	46	109	0	0	4	0	43	57	114	0	0	0	0
PEAK HR FACTOR :	0.75	0.821	0.779	0.000	0.000	0.500	0.000	0.597	0.792	0.864	0.000	0.000	0.000	0.000
				0.895							0.877			

	EASTBOUND							WESTBOUND						
PM	1	1	0	0	0	0	0	1	1	0	0	0	0	0
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
4:00 PM	19	72	11	0	0	0	0	10	38	3	0	0	0	0
4:15 PM	21	106	15	0	0	1	0	11	31	8	0	0	1	0
4:30 PM	24	92	16	0	0	0	0	6	44	7	0	0	0	0
4:45 PM	29	111	16	0	0	1	0	18	49	9	0	0	0	0
5:00 PM	36	111	27	0	0	0	0	12	28	3	0	0	0	0
5:15 PM	30	99	21	0	1	0	0	19	55	10	0	0	0	0
5:30 PM	31	124	17	0	0	0	1	18	41	8	0	0	0	1
5:45 PM	31	107	25	0	0	0	0	13	46	9	0	0	0	0
6:00 PM	28	103	23	0	0	0	0	10	38	9	0	0	0	0
6:15 PM	31	97	18	0	0	0	0	17	40	7	0	0	0	0
6:30 PM	31	83	33	0	0	0	0	10	30	5	1	0	0	0
6:45 PM	28	81	15	0	0	0	0	11	48	3	0	0	0	0
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
TOTAL VOLUMES :	339	1186	237	0	1	2	1	155	488	81	1	0	1	1
APPROACH %'s :	19.20%	67.16%	13.42%	0.00%	0.06%	0.11%	0.06%	21.32%	67.13%	11.14%	0.14%	0.00%	0.14%	0.14%
PEAK HR VOL :	128	441	90	0	1	0	1	62	170	30	0	0	0	1
PEAK HR FACTOR :	0.889	0.889	0.833	0.000	0.250	0.000	0.250	0.816	0.773	0.750	0.000	0.000	0.000	0.250
				0.950							0.783			

	NORTHBOUND2							SOUTHBOUND2							WESTBOUND2							
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	286
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	275
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	314
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	322
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	319
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	353
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	348
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	306
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	292
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	259
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	264
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	3578
APPROACH %'s :								0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%								
																						TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1342
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.950

National Data & Surveying Services

Intersection Turning Movement Count

Location: Borregas Ave/Sunnyvale Ave & Maude Ave
City: Sunnyvale
Control: Signalized

Project ID: 20-08052-001
Date: 2/6/2020

HT

AM

NS/EW Streets:	Borregas Ave/Sunnyvale Ave							Borregas Ave/Sunnyvale Ave						
	NORTHBOUND							SOUTHBOUND						
AM	0	1	1	0	0	0	0	0	1	1	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
7:00 AM	0	0	1	0	0	0	0	0	0	1	0	0	0	0
7:15 AM	1	0	1	0	0	0	0	1	1	0	0	0	0	0
7:30 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	0	2	0	0	0	0	0	0	1	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0
9:00 AM	1	1	1	0	0	0	0	0	0	1	0	0	0	0
9:15 AM	1	0	1	0	0	0	0	0	1	1	0	0	0	0
9:30 AM	2	0	1	0	0	0	0	0	0	1	0	0	0	0
9:45 AM	2	0	0	0	0	0	0	0	0	1	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
TOTAL VOLUMES :	11	2	9	0	0	0	0	1	3	6	0	0	0	0
APPROACH %'s :	50.00%	9.09%	40.91%	0.00%	0.00%	0.00%	0.00%	10.00%	30.00%	60.00%	0.00%	0.00%	0.00%	0.00%
PEAK HR :	07:45 AM - 08:45 AM													
PEAK HR VOL :	3	0	4	0	0	0	0	0	0	1	0	0	0	0
PEAK HR FACTOR :	0.750	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000
				0.583							0.250			

NS/EW Streets:	Maude Ave							Maude Ave						
	EASTBOUND							WESTBOUND						
AM	1	1	0	0	0	0	0	1	1	0	0	0	0	0
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
7:00 AM	0	3	0	0	0	0	0	2	0	1	0	0	0	0
7:15 AM	0	2	1	0	0	0	0	1	1	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	3	1	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	1	2	0	0	0	0	0
8:15 AM	0	0	2	0	0	0	0	0	3	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	2	0	0	0	0	0
8:45 AM	1	0	2	0	0	0	0	0	1	0	0	0	0	0
9:00 AM	0	2	0	0	0	0	0	2	0	0	0	0	0	0
9:15 AM	1	0	0	0	0	0	0	1	1	0	0	0	0	0
9:30 AM	0	1	1	0	0	0	0	1	4	0	0	0	0	0
9:45 AM	0	1	3	0	0	0	0	1	2	1	0	0	0	0
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
TOTAL VOLUMES :	2	10	9	0	0	0	0	13	18	2	0	0	0	0
APPROACH %'s :	9.52%	47.62%	42.86%	0.00%	0.00%	0.00%	0.00%	39.39%	54.55%	6.06%	0.00%	0.00%	0.00%	0.00%
PEAK HR VOL :	0	1	2	0	0	0	0	2	8	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.500	0.667	0.000	0.000	0.000	0.000	0.000
				0.375							0.833			

	NORTHBOUND2							SOUTHBOUND2							WESTBOUND2							
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	10
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	12
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	88
APPROACH %'s :															0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
																						TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750

PM

	NORTHBOUND							SOUTHBOUND						
PM	0	1	1	0	0	0	0	0	1	1	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
4:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	2	1	1	0	0	0	0	0	0	1	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2
TOTAL VOLUMES :	2	3	7	0	0	0	0	1	0	4	0	0	0	0
APPROACH %'s :	16.67%	25.00%	58.33%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	80.00%	0.00%	0.00%	0.00%	0.00%
PEAK HR :	05:00 PM - 06:00 PM													
PEAK HR VOL :	2	2	2	0	0	0	0	0	0	1	0	0	0	0
PEAK HR FACTOR :	0.25	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000
				0.375							0.250			

	EASTBOUND							WESTBOUND						
PM	1	1	0	0	0	0	0	1	1	0	0	0	0	0
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
4:00 PM	1	0	0	0	0	0	0	0	1	0	0	0	0	0
4:15 PM	0	2	0	0	0	0	0	1	1	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	1	1	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2
TOTAL VOLUMES :	1	3	2	0	0	0	0	5	6	1	0	0	0	0
APPROACH %'s :	16.67%	50.00%	33.33%	0.00%	0.00%	0.00%	0.00%	41.67%	50.00%	8.33%	0.00%	0.00%	0.00%	0.00%
PEAK HR VOL :	0	1	0	0	0	0	0	3	2	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.750	0.500	0.000	0.000	0.000	0.000	0.000
				0.250							0.625			

	NORTHBOUND2							SOUTHBOUND2							WESTBOUND2							
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
																						TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.650

National Data & Surveying Services

Intersection Turning Movement Count

Location: Borregas Ave/Sunnyvale Ave & Maude Ave
City: Sunnyvale
Control: Signalized

Project ID: 20-08052-001
Date: 2/6/2020

Bikes

NS/EW Streets: Borregas Ave/Sunnyvale Ave | Borregas Ave/Sunnyvale Ave | Maude Ave | Maude Ave | | | | |

AM

	NORTHBOUND							SOUTHBOUND							EASTBOUND							WESTBOUND							NORTHBOUND2							SOUTHBOUND2							WESTBOUND2							
	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
7:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
7:30 AM	1	7	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
7:45 AM	0	6	0	0	0	0	0	1	2	2	0	0	0	0	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
8:00 AM	2	10	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
8:15 AM	0	10	1	0	0	0	0	0	3	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
8:30 AM	4	13	0	0	0	1	0	0	6	2	0	0	0	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
8:45 AM	2	13	0	0	0	0	0	0	1	3	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
9:00 AM	2	4	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
9:15 AM	0	3	0	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
9:30 AM	1	5	0	0	0	1	0	0	1	2	0	0	0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
9:45 AM	3	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
TOTAL VOLUMES :	15	76	2	0	0	2	0	2	22	24	0	0	0	0	14	2	0	0	0	0	0	6	15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	183
APPROACH %'s :	15.79%	80.00%	2.11%	0.00%	0.00%	2.11%	0.00%	4.17%	45.83%	50.00%	0.00%	0.00%	0.00%	0.00%	87.50%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	62.50%	12.50%	0.00%	0.00%	0.00%	0.00%																					
PEAK HR :	07:45 AM - 08:45 AM																																															TOTAL
PEAK HR VOL :	6	39	1	0	0	1	0	1	15	6	0	0	0	0	9	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
PEAK HR FACTOR :	0.375	0.750	0.250	0.000	0.000	0.250	0.000	0.250	0.625	0.750	0.000	0.000	0.000	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.636
				0.653							0.688							0.450							0.500																						

PM

	NORTHBOUND							SOUTHBOUND							EASTBOUND							WESTBOUND							NORTHBOUND2							SOUTHBOUND2							WESTBOUND2							
	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NT2	NR2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	N2T	N2R	N2U	N2L2	N2T2	N2R2	N2U2	S2L	S2T	S2U	S2L2	S2T2	S2R2	S2U2	W2L	W2R	W2U	W2L2	W2T2	W2R2	W2U2	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
4:15 PM	0	0	0	0	0	0	0	0	3	2	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
4:30 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	0	0	0	0	3	2	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
5:00 PM	0	0	1	0	0	0	0	0	11	2	0	0	0	0	2	2	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
5:15 PM	0	1	1	0	0	0	0	1	8	3	0	0	0	0	4	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
5:30 PM	0	5	3	0	0	0	0	0	19	0	0	0	0	0	3	0	2	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
5:45 PM	0	0	0	0	0	0	0	0	13	8	0	0	0	0	3	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
6:00 PM	0	0	0	0	0	0	0	0	7	5	0	0	0	0	3	2	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
6:15 PM	0	0	1	0	0	0	0	0	12	3	0	0	0	0	0	2	3	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
6:30 PM	0	5	0	0	0	0	0	1	5	1	0	0	0	0	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
6:45 PM	0	4	3	0	0	0	0	0	3	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
TOTAL VOLUMES :	0	16	9	0	0	0	0	2	92	28	0	0	0	0	19	12	16	0	0	0	1	4	8	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	211
APPROACH %'s :	0.00%	64.00%	36.00%	0.00%	0.00%	0.00%	0.00%	1.64%	75.41%	22.95%	0.00%	0.00%	0.00%	0.00%	39.58%	25.00%	33.33%	0.00%	0.00%	0.00%	2.08%	28.57%	57.14%	7.14%	7.14%	0.00%	0.00%	0.00%																					
PEAK HR :	05:00 PM - 06:00 PM																																														TOTAL
PEAK HR VOL :	0	6	5	0	0	0	0	1	51	13	0	0	0	0	12	6	6	0	0	0	1	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108
PEAK HR FACTOR :	0.00	0.300	0.417	0.000	0.000	0.000	0.000	0.250	0.671	0.406	0.000	0.000	0.000	0.000	0.750	0.500	0.500	0.000	0.000	0.000	0.250	0.750	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
				0.344							0.774							0.893							0.625							0.500														

National Data & Surveying Services

Intersection Turning Movement Count

Location: Borregas Ave/Sunnyvale Ave & Maude Ave
City: Sunnyvale
Project ID: 20-08052-001
Date: 2/6/2020

Pedestrians (Crosswalks)

NS/EW Streets:	Borregas Ave/Sunnyvale Ave		Borregas Ave/Sunnyvale Ave		Maude Ave		Maude Ave								
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2		SOUTH LEG 2		EAST LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	EB	WB	NB	SB	TOTAL
7:00 AM	2	0	0	4	0	2	0	1	3	0	3	5	2	0	22
7:15 AM	4	0	1	0	1	1	5	0	5	1	1	0	4	1	24
7:30 AM	1	0	3	0	0	1	2	4	1	0	4	1	1	0	18
7:45 AM	7	2	10	0	2	14	1	0	16	2	10	2	15	2	83
8:00 AM	1	6	3	5	13	5	0	2	1	9	0	2	4	11	62
8:15 AM	0	0	2	1	0	1	0	1	0	0	3	0	0	0	8
8:30 AM	0	2	2	0	1	0	1	0	1	1	1	1	1	1	12
8:45 AM	0	1	1	0	1	2	2	0	3	2	2	3	2	2	21
9:00 AM	1	1	0	0	0	0	1	2	2	3	1	2	1	3	17
9:15 AM	0	1	0	0	0	0	0	0	2	4	2	1	1	2	13
9:30 AM	0	1	0	0	2	1	0	1	3	0	3	2	2	0	15
9:45 AM	0	0	0	0	0	4	0	0	4	1	1	2	0	0	12
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	EB	WB	NB	SB	TOTAL
TOTAL VOLUMES :	16	14	22	10	20	31	12	11	41	23	31	21	33	22	307
APPROACH %'s :	53.33%	46.67%	68.75%	31.25%	39.22%	60.78%	52.17%	47.83%	64.06%	35.94%	59.62%	40.38%	60.00%	40.00%	
PEAK HR :	07:45 AM - 08:45 AM														TOTAL
PEAK HR VOL :	8	10	17	6	16	20	2	3	18	12	14	5	20	14	165
PEAK HR FACTOR :	0.286	0.417	0.425	0.300	0.308	0.357	0.500	0.375	0.281	0.333	0.350	0.625	0.333	0.318	0.497
	0.500		0.575		0.500		0.625		0.417		0.396		0.500		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2		SOUTH LEG 2		EAST LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	EB	WB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	2	0	1	1	0	1	5	1	0	11
4:15 PM	3	0	0	0	1	0	3	1	2	2	1	0	2	2	17
4:30 PM	0	1	0	0	1	1	0	1	2	1	0	4	3	1	15
4:45 PM	0	2	0	0	2	0	2	0	2	4	1	5	2	4	24
5:00 PM	4	0	0	0	1	1	1	1	3	2	1	3	3	2	22
5:15 PM	3	4	4	0	0	1	0	0	4	2	3	3	4	2	30
5:30 PM	6	4	2	0	1	1	1	1	3	3	4	3	2	4	35
5:45 PM	2	3	1	2	4	1	3	0	3	3	2	3	4	2	33
6:00 PM	6	0	1	1	2	4	2	0	3	2	3	4	4	3	35
6:15 PM	1	0	4	0	2	0	1	1	3	4	3	1	3	3	26
6:30 PM	4	4	5	1	0	1	1	0	2	4	6	1	2	4	35
6:45 PM	0	1	1	1	2	0	0	1	1	2	2	2	1	3	17
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	EB	WB	NB	SB	TOTAL
TOTAL VOLUMES :	29	19	18	5	16	12	14	7	29	29	27	34	31	30	300
APPROACH %'s :	60.42%	39.58%	78.26%	21.74%	57.14%	42.86%	66.67%	33.33%	50.00%	50.00%	44.26%	55.74%	50.82%	49.18%	
PEAK HR :	05:00 PM - 06:00 PM														TOTAL
PEAK HR VOL :	15	11	7	2	6	4	5	2	13	10	10	12	13	10	120
PEAK HR FACTOR :	0.625	0.688	0.438	0.250	0.375	1.000	0.417	0.500	0.813	0.833	0.625	1.000	0.813	0.625	0.857
	0.650		0.563		0.500		0.583		0.958		0.786		0.958		

Appendix B: Parking Survey

Prepared by National Data & Surveying Services

Parking Study

Project: 20-8051 **Date:** 2/4/2020
City: Sunnyvale **Day:** Tuesday

Segment	Street	Limits	Side	Space Type	Restriction	Space#	11:00 AM	3:00 PM	8:00 PM	1:00 AM	Notes
1	Maude Ave	Borregas & Sunnvyale	North	Regular	No Restriction	5	1	1	0	0	
2			South	Regular	No Restriction	6	0	0	0	0	
3		Sunnyvale & Bayview	North	Regular	No Restriction	21	9	9	3	4	
				Green Curb	12 Minute Parking (9am to 8pm)	2	0	0	0	0	
4			South	Regular	No Restriction	11	8	5	3	0	
				Diagonal	No Restriction	10	8	7	3	6	1 Car Parked Illegaly in No Parking at 11:00 (Not Included in Occupancy)
5	Murphy Ave (North)	Maude & 369/368 Murphy	West	Regular	No Restriction	15	7	8	9	9	
6			East	Regular	No Restriction	17	4	6	12	12	
7		369/368 Murphy & 333/334 Murphy	West	Regular	No Restriction	18	5	6	9	12	
8			East	Regular	No Restriction	16	6	10	11	10	
9		333/334 Murphy & Arques	West	Regular	No Restriction	19	6	8	13	16	
10			East	Regular	No Restriction	21	7	8	15	17	
11	Sunnyvale Ave	Maude & Hazelton	West	Regular	No Restriction	18	14	8	10	9	
12			East	Regular	No Restriction	9	7	1	2	2	
				Passenger Loading	No Restriction	4	0	0	0	0	
13		Hazelton & Taylor	West	Regular	No Restriction	7	3	1	3	3	
14			East	Regular	No Restriction	5	1	1	1	1	
15		Taylor & Arques	West	Regular	No Restriction	22	5	6	8	9	
16			East	Regular	No Restriction	21	5	5	8	10	
43		Arques & California	West	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular		3	1	1	1	1	
				No Parking	No Parking Any Time	-	-	-	-	-	
44			East	No Parking	No Parking Any Time	-	-	-	-	-	
45		California & Hendy	West	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular	NP 6am-8am, 4pm-6pm	15	1	0	1	0	
				No Parking	No Parking Any Time	-	-	-	-	-	
46			East	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular	No Parking 6am - 8 am, 4pm - 6pm	12	0	1	9	3	
				No Parking	No Parking Any Time	-	-	-	-	-	
47		Hendy & Evelyn	West	No Parking	No Parking Any Time	-	-	-	-	-	
48			East	No Parking	No Parking Any Time	-	-	-	-	-	
17	Bayview Ave	Maude & Hazelton	West	Regular	No Restriction	27	17	13	17	18	
18			East	Regular	No Restriction	19	8	6	12	14	
				ADA	No Restriction	1	0	0	0	0	
21		Hazelton & Taylor	West	Regular	No Restriction	5	2	2	3	4	
22			East	Regular	No Restriction	6	0	0	2	3	
33		Taylor & Arques	West	Regular	No Restriction	21	3	7	6	8	
34			East	Regular	No Restriction	21	8	5	5	6	
19	Hazelton Ave	Sunnyvale & Bayview	North	Regular	No Restriction	29	11	10	4	5	
20			South	Regular	No Restriction	26	10	7	10	10	
23	Taylor Ave	Sunnyvale & Schroeder	North	Regular	No Restriction	7	2	0	2	3	
24			South	Regular	No Restriction	7	1	1	2	2	
25		Schroeder & Jackson	North	Regular	No Restriction	7	1	3	2	3	
26			South	Regular	No Restriction	7	1	1	2	2	
27		Jackson & Bayview	North	Regular	No Restriction	9	2	3	2	3	
28			South	Regular	No Restriction	7	1	1	3	4	

Prepared by National Data & Surveying Services

Parking Study

Project: 20-8051 **Date:** 2/4/2020
City: Sunnyvale **Day:** Tuesday

29	**Schroeder St**	**Taylor & Arques**	**West**	Regular	No Restriction	**21**	7	8	10	12	
30			**East**	Regular	No Restriction	**20**	6	9	10	11	
31	**Jackson St**	**Taylor & Arques**	**West**	Regular	No Restriction	**21**	6	8	6	8	
32			**East**	Regular	No Restriction	**20**	7	5	8	9	
35	**Arques Ave**	**Murphy & Sunnyvale**	**North**	Regular	No Vehicles over 6 FT	**8**	0	0	0	0	
36			**South**	Regular	No Vehicles over 6 FT	**10**	1	0	0	1	
37		**Sunnyvale & Schroeder**	**North**	Regular	No Vehicles over 6 FT	**6**	3	3	2	2	
38			**South**	Regular	No Vehicles over 6 FT	**7**	0	0	2	0	
39		**Schroeder & Jackson**	**North**	Regular	No Vehicles over 6 FT	**5**	0	0	1	1	
40			**South**	Regular	No Vehicles over 6 FT	**8**	0	0	0	2	
41		**Jackson & Bayview**	**North**	Regular	No Vehicles over 6 FT	**6**	2	2	2	1	
42			**South**	Regular	No Vehicles over 6 FT	**9**	2	2	0	0	
49	**Hendy Ave**	**Murphy & Sunnyvale**	**North**	Regular		**11**	1	2	1	1	
50			**South**	Regular	3 HR From 8am-6pm, Except Sat, Sun + Holidays	**9**	0	1	1	3	
51	**Murphy Ave (South)**	**North of California**	**West**	Regular		**23**	19	23	15	10	
52			**East**	Regular		**15**	0	3	8	9	
53		**California & Beemer**	**West**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**11**	8	11	11	11	
54			**East**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**9**	7	8	8	7	
55		**Beemer & Hendy**	**West**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**14**	10	11	10	8	
56			**East**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**13**	11	14	9	9	
				ADA		**1**	1	1	0	0	

Prepared by National Data & Surveying Services

Parking Study

Project: 20-8051 **Date:** 2/5/2020
City: Sunnyvale **Day:** Wednesday

Segment	Street	Limits	Side	Space Type	Restriction	Space#	11:00 AM	3:00 PM	8:00 PM	1:00 AM	Notes
1	Maude Ave	Borregas & Sunnvyale	North	Regular	No Restriction	5	1	0	0	0	
2			South	Regular	No Restriction	6	0	1	0	0	
3		Sunnyvale & Bayview	North	Regular	No Restriction	21	13	10	7	4	
				Green Curb	12 Minute Parking (9am to 8pm)	2	0	0	0	0	
4			South	Regular	No Restriction	11	4	3	3	0	
				Diagonal	No Restriction	10	9	8	4	6	1 Car Parked Illegaly in No Parking at 11:00 (Not Included in Occupancy)
5	Murphy Ave (North)	Maude & 369/368 Murphy	West	Regular	No Restriction	15	8	8	7	8	
6			East	Regular	No Restriction	17	3	4	10	13	
7		369/368 Murphy & 333/334 Murphy	West	Regular	No Restriction	18	4	7	11	11	
8			East	Regular	No Restriction	16	7	9	12	12	
9		333/334 Murphy & Arques	West	Regular	No Restriction	19	8	5	14	14	
10			East	Regular	No Restriction	21	7	7	18	19	
11	Sunnyvale Ave	Maude & Hazelton	West	Regular	No Restriction	18	13	10	10	11	
12			East	Regular	No Restriction	9	6	0	0	1	
				Passenger Loading	No Restriction	4	0	0	0	0	
13		Hazelton & Taylor	West	Regular	No Restriction	7	2	4	4	4	
14			East	Regular	No Restriction	5	1	0	1	3	
15		Taylor & Arques	West	Regular	No Restriction	22	4	8	9	9	
16			East	Regular	No Restriction	21	7	5	8	9	
43	Sunnyvale Ave	Arques & California	West	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular			1	0	1	1	
				No Parking	No Parking Any Time	-	-	-	-	-	
44			East	No Parking	No Parking Any Time	-	-	-	-	-	
45		California & Hendy	West	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular	NP 6am-8am, 4pm-6pm	15	1	0	0	1	
				No Parking	No Parking Any Time	-	-	-	-	-	
46			East	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular	No Parking 6am - 8 am, 4pm - 6pm	12	0	0	4	2	
				No Parking	No Parking Any Time	-	-	-	-	-	
47		Hendy & Evelyn	West	No Parking	No Parking Any Time	-	-	-	-	-	
48			East	No Parking	No Parking Any Time	-	-	-	-	-	
17	Bayview Ave	Maude & Hazelton	West	Regular	No Restriction	27	17	13	12	17	
18			East	Regular	No Restriction	19	8	10	11	14	
				ADA	No Restriction	1	0	0	0	0	
21	Bayview Ave	Hazelton & Taylor	West	Regular	No Restriction	5	2	2	4	4	
22			East	Regular	No Restriction	6	1	2	2	4	
33	Bayview Ave	Taylor & Arques	West	Regular	No Restriction	21	6	5	4	6	
34			East	Regular	No Restriction	21	5	8	5	8	
19	Hazelton Ave	Sunnyvale & Bayview	North	Regular	No Restriction	29	12	10	2	3	
20			South	Regular	No Restriction	26	13	12	11	11	
23	Taylor Ave	Sunnyvale & Schroeder	North	Regular	No Restriction	7	1	0	2	3	
24			South	Regular	No Restriction	7	1	1	1	2	
25		Schroeder & Jackson	North	Regular	No Restriction	7	2	1	4	5	
26			South	Regular	No Restriction	7	2	1	2	2	
27		Jackson & Bayview	North	Regular	No Restriction	9	3	3	4	4	
28			South	Regular	No Restriction	7	2	2	3	4	

Prepared by National Data & Surveying Services

Parking Study

Project: 20-8051 **Date:** 2/5/2020
City: Sunnyvale **Day:** Wednesday

29	**Schroeder St**	**Taylor & Arques**	**West**	Regular	No Restriction	**21**	8	7	7	10	
30			**East**	Regular	No Restriction	**20**	7	9	7	11	
31	**Jackson St**	**Taylor & Arques**	**West**	Regular	No Restriction	**21**	8	5	6	9	
32			**East**	Regular	No Restriction	**20**	7	5	6	9	
35	**Arques Ave**	**Murphy & Sunnyvale**	**North**	Regular	No Vehicles over 6 FT	**8**	1	0	0	0	
36			**South**	Regular	No Vehicles over 6 FT	**10**	0	0	0	0	
37		**Sunnyvale & Schroeder**	**North**	Regular	No Vehicles over 6 FT	**6**	2	3	1	1	
38			**South**	Regular	No Vehicles over 6 FT	**7**	0	0	0	2	
39		**Schroeder & Jackson**	**North**	Regular	No Vehicles over 6 FT	**5**	1	1	1	1	
40			**South**	Regular	No Vehicles over 6 FT	**8**	1	1	1	1	
41		**Jackson & Bayview**	**North**	Regular	No Vehicles over 6 FT	**6**	0	0	0	0	
42			**South**	Regular	No Vehicles over 6 FT	**9**	1	0	1	1	
49	**Hendy Ave**	**Murphy & Sunnyvale**	**North**	Regular		**11**	1	2	2	2	
50			**South**	Regular	3 HR From 8am-6pm, Except Sat, Sun + Holidays	**9**	4	3	2	3	
51	**Murphy Ave (South)**	**North of California**	**West**	Regular		**23**	23	24	20	21	
52			**East**	Regular		**15**	12	12	8	12	
53		**California & Beemer**	**West**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**11**	9	6	8	9	
54			**East**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**9**	5	3	8	9	
55		**Beemer & Hendy**	**West**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**14**	8	10	8	9	
56			**East**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**13**	8	8	6	9	
				ADA		**1**	1	1	1	0	

Prepared by National Data & Surveying Services

Parking Study

Project: 20-8051 **Date:** 2/6/2020
City: Sunnyvale **Day:** Thursday

Segment	Street	Limits	Side	Space Type	Restriction	Space#	11:00 AM	3:00 PM	8:00 PM	1:00 AM	Notes
1	Maude Ave	Borregas & Sunnvyale	North	Regular	No Restriction	5	1	1	1	1	
2			South	Regular	No Restriction	6	0	0	0	0	
3		Sunnyvale & Bayview	North	Regular	No Restriction	21	8	8	6	3	
				Green Curb	12 Minute Parking (9am to 8pm)	2	0	0	0	0	
4			South	Regular	No Restriction	11	1	5	3	0	
				Diagonal	No Restriction	10	10	5	4	0	
5	Murphy Ave (North)	Maude & 369/368 Murphy	West	Regular	No Restriction	15	10	9	9	12	
6			East	Regular	No Restriction	17	5	8	13	13	
7		369/368 Murphy & 333/334 Murphy	West	Regular	No Restriction	18	5	7	11	10	
8			East	Regular	No Restriction	16	8	8	9	11	
9		333/334 Murphy & Arques	West	Regular	No Restriction	19	6	6	13	15	
10			East	Regular	No Restriction	21	11	10	11	19	
11	Sunnyvale Ave	Maude & Hazelton	West	Regular	No Restriction	18	14	13	13	12	
12			East	Regular	No Restriction	9	5	2	0	0	
				Passenger Loading	No Restriction	4	1	0	0	0	
13		Hazelton & Taylor	West	Regular	No Restriction	7	1	3	3	3	
14			East	Regular	No Restriction	5	0	1	3	2	
15		Taylor & Arques	West	Regular	No Restriction	22	6	5	9	10	
16			East	Regular	No Restriction	21	5	5	8	9	
43	Sunnyvale Ave	Arques & California	West	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular		3	0	2	2	0	
				No Parking	No Parking Any Time	-	-	-	-	-	
44			East	No Parking	No Parking Any Time	-	-	-	-	-	
45		California & Hendy	West	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular	NP 6am-8am, 4pm-6pm	15	14	0	0	1	
				No Parking	No Parking Any Time	-	-	-	-	-	
46			East	No Parking	No Parking Any Time	-	-	-	-	-	
				Regular	No Parking 6am - 8 am, 4pm - 6pm	12	12	0	0	5	
				No Parking	No Parking Any Time	-	-	-	-	-	
47		Hendy & Evelyn	West	No Parking	No Parking Any Time	-	-	-	-	-	
48			East	No Parking	No Parking Any Time	-	-	-	-	-	
17	Bayview Ave	Maude & Hazelton	West	Regular	No Restriction	27	14	9	14	17	
18			East	Regular	No Restriction	19	12	11	15	15	
				ADA	No Restriction	1	0	0	0	0	
21	Bayview Ave	Hazelton & Taylor	West	Regular	No Restriction	5	3	2	3	3	
22			East	Regular	No Restriction	6	2	2	5	5	
33	Bayview Ave	Taylor & Arques	West	Regular	No Restriction	21	4	4	5	6	
34			East	Regular	No Restriction	21	8	6	6	7	
19	Hazelton Ave	Sunnyvale & Bayview	North	Regular	No Restriction	29	2	11	1	1	
20			South	Regular	No Restriction	26	10	9	8	11	
23	Taylor Ave	Sunnyvale & Schroeder	North	Regular	No Restriction	7	3	3	1	2	
24			South	Regular	No Restriction	7	2	2	2	2	
25		Schroeder & Jackson	North	Regular	No Restriction	7	1	3	1	4	
26			South	Regular	No Restriction	7	2	4	1	2	
27		Jackson & Bayview	North	Regular	No Restriction	9	3	2	4	5	
28			South	Regular	No Restriction	7	2	2	4	4	

Prepared by National Data & Surveying Services

Parking Study

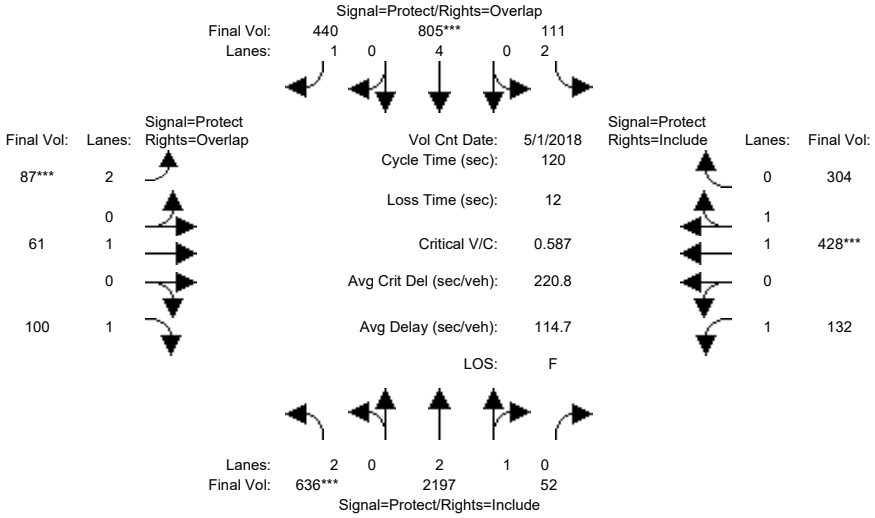
Project: 20-8051 **Date:** 2/6/2020
City: Sunnyvale **Day:** Thursday

29	**Schroeder St**	**Taylor & Arques**	**West**	Regular	No Restriction	**21**	7	9	7	11	
30			**East**	Regular	No Restriction	**20**	4	4	10	10	
31	**Jackson St**	**Taylor & Arques**	**West**	Regular	No Restriction	**21**	7	8	10	9	
32			**East**	Regular	No Restriction	**20**	7	6	9	10	
35	**Arques Ave**	**Murphy & Sunnyvale**	**North**	Regular	No Vehicles over 6 FT	**8**	2	0	1	0	
36			**South**	Regular	No Vehicles over 6 FT	**10**	0	0	0	0	
37		**Sunnyvale & Schroeder**	**North**	Regular	No Vehicles over 6 FT	**6**	3	3	1	1	
38			**South**	Regular	No Vehicles over 6 FT	**7**	0	0	1	0	
39		**Schroeder & Jackson**	**North**	Regular	No Vehicles over 6 FT	**5**	0	0	1	1	
40			**South**	Regular	No Vehicles over 6 FT	**8**	0	0	1	1	
41		**Jackson & Bayview**	**North**	Regular	No Vehicles over 6 FT	**6**	0	1	2	1	
42			**South**	Regular	No Vehicles over 6 FT	**9**	1	0	2	1	
49	**Hendy Ave**	**Murphy & Sunnyvale**	**North**	Regular		**11**	4	1	1	3	
50			**South**	Regular	3 HR From 8am-6pm, Except Sat, Sun + Holidays	**9**	9	7	2	3	
51	**Murphy Ave (South)**	**North of California**	**West**	Regular		**23**	24	22	16	21	
52			**East**	Regular		**15**	12	14	10	13	
53		**California & Beemer**	**West**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**11**	6	6	7	8	
54			**East**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**9**	4	5	6	8	
55		**Beemer & Hendy**	**West**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**14**	9	10	9	9	
56			**East**	Regular	7 HR 8am-6pm, Except Sat, Sun + Holidays	**13**	5	9	12	9	
				ADA		**1**	0	0	0	0	

Appendix C: Traffix Analysis Sheets

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex AM

Intersection #1: Mathilda Ave / Maude Ave

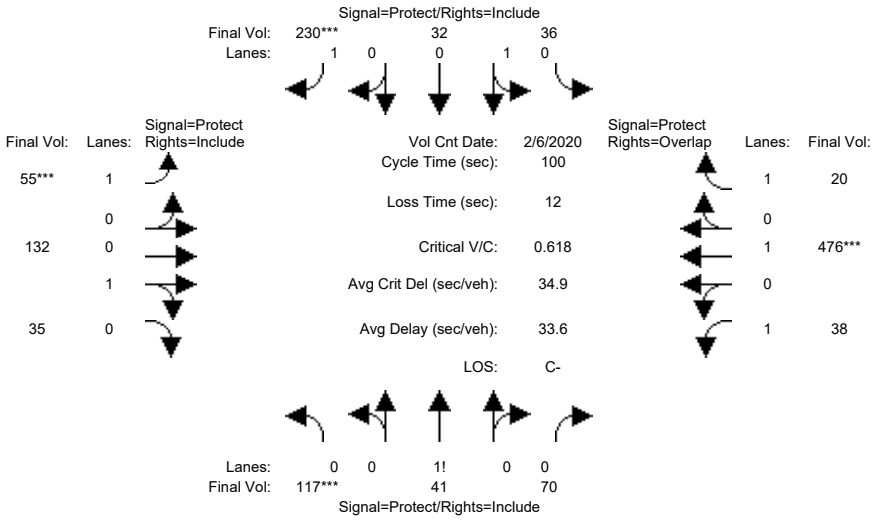


Street Name:	Mathilda Avenue						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	13	58	58	13	58	58	28	21	21	28	21	21
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 May 2018 << 8:45 AM - 9:45 AM												
Base Vol:	636	2197	52	111	805	440	87	61	100	132	428	304
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:	636	2197	52	111	805	440	87	61	100	132	428	304
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	636	2197	52	111	805	440	87	61	100	132	428	304
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	636	2197	52	111	805	440	87	61	100	132	428	304
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	636	2197	52	111	805	440	87	61	100	132	428	304
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:	636	2197	52	111	805	440	87	61	100	132	428	304
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.98	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.92	0.99	0.95
Lanes:	2.00	2.93	0.07	2.00	4.00	1.00	2.00	1.00	1.00	1.00	1.15	0.85
Final Sat.:	3150	5470	129	3150	7600	1750	3150	1900	1750	1750	2162	1536
Capacity Analysis Module:												
Vol/Sat:	0.20	0.40	0.40	0.04	0.11	0.25	0.03	0.03	0.06	0.08	0.20	0.20
Crit Moves:	****				****		****				****	
Green Time:	11.8	52.7	52.7	11.8	52.7	78.2	25.5	19.1	30.9	25.5	19.1	19.1
Volume/Cap:	2.05	0.91	0.91	0.36	0.24	0.39	0.13	0.20	0.22	0.36	1.24	1.24
Uniform Del:	59.5	34.7	34.7	55.6	23.2	10.7	42.1	48.2	38.6	44.3	55.5	55.5
IncremntDel:	483.6	5.8	5.8	0.7	0.0	0.2	0.1	0.3	0.3	0.6	124	123.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	543.1	40.5	40.5	56.3	23.2	10.9	42.2	48.5	38.8	44.9	179	179.2
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:	543.1	40.5	40.5	56.3	23.2	10.9	42.2	48.5	38.8	44.9	179	179.2
LOS by Move:	F	D	D	E+	C	B+	D	D	D+	D	F	F
HCM2k95thQ:	1581	1298	1298	142	242	410	87	111	171	245	1091	1091

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex AM

Intersection #2: Borregas Ave-Sunnyvale Ave / Maude Ave

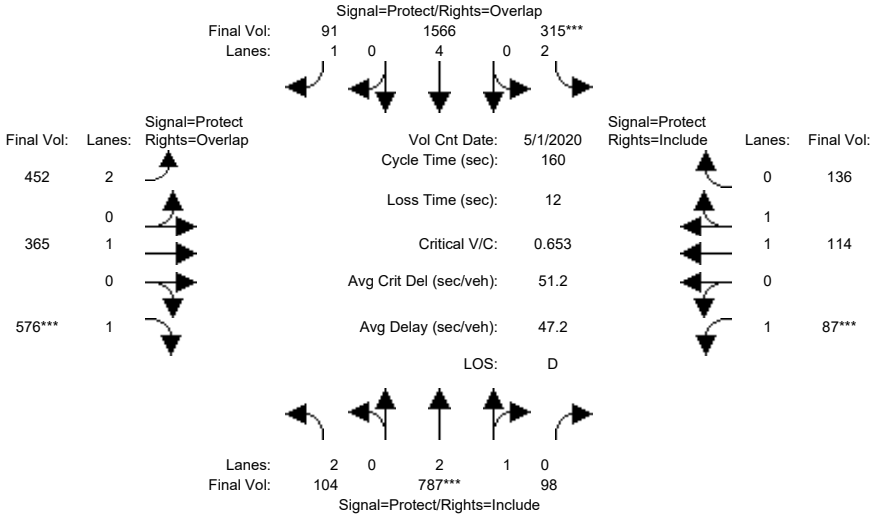


Street Name:	Borregas Ave-Sunnyvale Ave						Maude Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 6 Feb 2020 << 7:45 AM - 8:45 AM												
Base Vol:	117	41	70	36	32	230	55	132	35	38	476	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	117	41	70	36	32	230	55	132	35	38	476	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	117	41	70	36	32	230	55	132	35	38	476	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	117	41	70	36	32	230	55	132	35	38	476	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	117	41	70	36	32	230	55	132	35	38	476	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	117	41	70	36	32	230	55	132	35	38	476	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	0.51	0.18	0.31	0.53	0.47	1.00	1.00	0.79	0.21	1.00	1.00	1.00
Final Sat.:	898	315	537	953	847	1750	1750	1423	377	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.13	0.04	0.04	0.13	0.03	0.09	0.09	0.02	0.25	0.01
Crit Moves:	****					****	****				****	
Green Time:	19.8	22.5	22.5	17.3	20.0	20.0	10.0	24.1	24.1	24.1	38.1	55.5
Volume/Cap:	0.66	0.58	0.58	0.22	0.19	0.66	0.31	0.39	0.39	0.09	0.66	0.02
Uniform Del:	36.9	34.5	34.5	35.5	33.2	36.8	41.8	31.8	31.8	29.5	25.5	10.0
IncremntDel:	4.5	2.1	2.1	0.4	0.3	4.5	1.0	0.6	0.6	0.1	2.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.5	36.6	36.6	35.9	33.5	41.3	42.8	32.3	32.3	29.6	27.7	10.0
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:	41.5	36.6	36.6	35.9	33.5	41.3	42.8	32.3	32.3	29.6	27.7	10.0
LOS by Move:	D	D+	D+	D+	C-	D	D	C-	C-	C	C	B+
HCM2k95thQ:	380	352	352	101	96	382	101	231	231	51	571	15

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex PM

Intersection #1: Mathilda Ave / Maude Ave

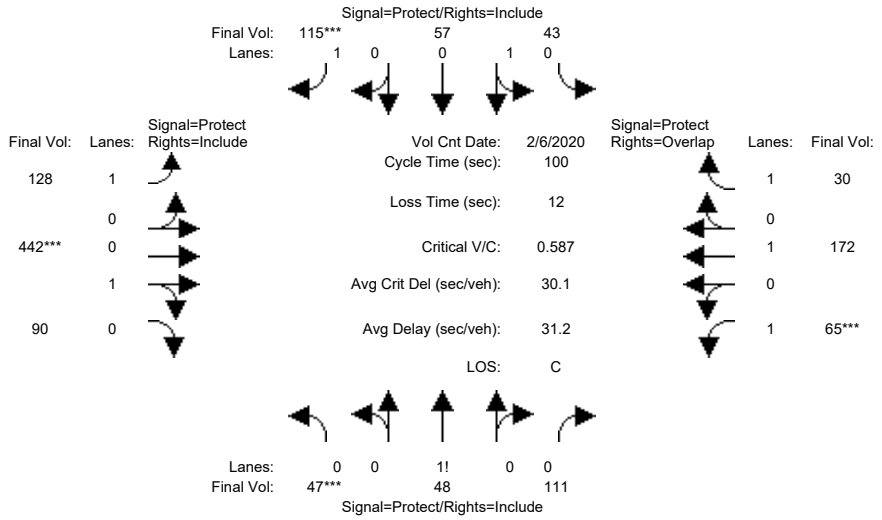


Street Name:	Mathilda Avenue						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 May 2020 << 4:30 PM - 5:30 PM												
Base Vol:	104	787	98	315	1566	91	452	365	576	87	114	136
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:	104	787	98	315	1566	91	452	365	576	87	114	136
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	787	98	315	1566	91	452	365	576	87	114	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	787	98	315	1566	91	452	365	576	87	114	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	787	98	315	1566	91	452	365	576	87	114	136
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:	104	787	98	315	1566	91	452	365	576	87	114	136
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.66	0.34	2.00	4.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	3150	4979	620	3150	7600	1750	3150	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.16	0.16	0.10	0.21	0.05	0.14	0.19	0.33	0.05	0.06	0.08
Crit Moves:		****		****					****	****		
Green Time:	11.1	38.7	38.7	24.5	52.2	105.4	53.3	69.9	81.0	12.2	28.9	28.9
Volume/Cap:	0.48	0.65	0.65	0.65	0.63	0.08	0.43	0.44	0.65	0.65	0.33	0.43
Uniform Del:	71.7	54.6	54.6	63.7	45.8	9.8	41.6	31.4	29.1	71.9	57.2	58.3
IncremntDel:	1.6	1.2	1.2	3.2	0.5	0.0	0.3	0.4	1.7	11.0	0.3	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	73.3	55.7	55.7	66.9	46.3	9.8	41.8	31.7	30.8	82.9	57.4	58.8
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:	73.3	55.7	55.7	66.9	46.3	9.8	41.8	31.7	30.8	82.9	57.4	58.8
LOS by Move:	E	E+	E+	E	D	A	D	C	C	F	E+	E+
HCM2k95thQ:	175	612	612	445	714	85	469	545	931	271	240	315

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex PM

Intersection #2: Borregas Ave-Sunnyvale Ave / Maude Ave

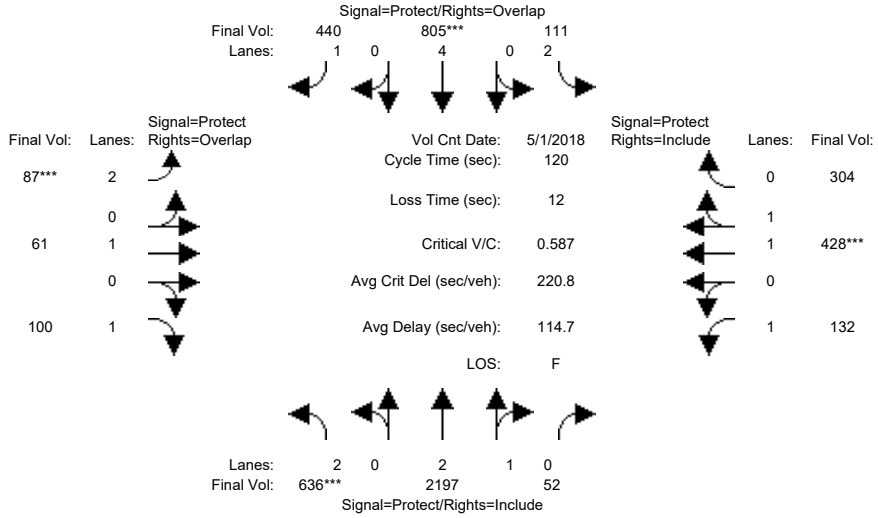


Street Name:	Borregas Ave-Sunnyvale Ave						Maude Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 6 Feb 2020 << 5:00 PM - 6:00 PM												
Base Vol:	47	48	111	43	57	115	128	442	90	65	172	30
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	48	111	43	57	115	128	442	90	65	172	30
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	48	111	43	57	115	128	442	90	65	172	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	48	111	43	57	115	128	442	90	65	172	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	48	111	43	57	115	128	442	90	65	172	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	48	111	43	57	115	128	442	90	65	172	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	0.23	0.23	0.54	0.43	0.57	1.00	1.00	0.83	0.17	1.00	1.00	1.00
Final Sat.:	399	408	943	774	1026	1750	1750	1495	305	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.06	0.06	0.07	0.07	0.30	0.30	0.04	0.09	0.02
Crit Moves:	****					****		****		****		
Green Time:	19.2	16.2	16.2	13.7	10.7	10.7	29.1	48.1	48.1	10.0	29.1	42.8
Volume/Cap:	0.61	0.73	0.73	0.40	0.52	0.61	0.25	0.61	0.61	0.37	0.31	0.04
Uniform Del:	37.0	39.8	39.8	39.4	42.2	42.7	27.1	19.1	19.1	42.1	27.7	16.7
IncremntDel:	3.4	9.2	9.2	1.1	2.5	6.0	0.3	1.3	1.3	1.3	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.4	49.1	49.1	40.5	44.7	48.6	27.4	20.4	20.4	43.4	28.0	16.7
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:	40.4	49.1	49.1	40.5	44.7	48.6	27.4	20.4	20.4	43.4	28.0	16.7
LOS by Move:	D	D	D	D	D	D	C	C+	C+	D	C	B
HCM2k95thQ:	341	382	382	167	187	231	164	583	583	122	206	30

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #1: Mathilda Ave / Maude Ave

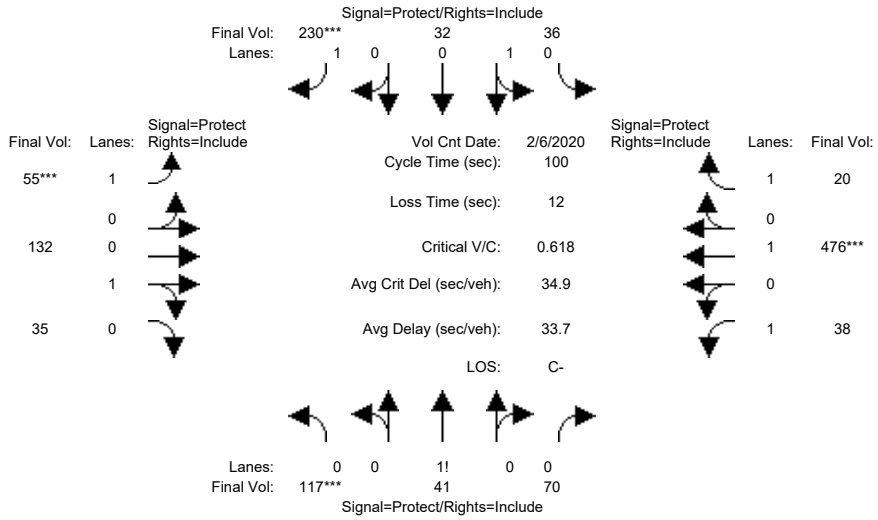


Street Name:	Mathilda Avenue						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	13	58	58	13	58	58	28	21	21	28	21	21
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 May 2018 << 8:45 AM - 9:45 AM												
Base Vol:	636	2197	52	111	805	440	87	61	100	132	428	304
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:	636	2197	52	111	805	440	87	61	100	132	428	304
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	636	2197	52	111	805	440	87	61	100	132	428	304
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	636	2197	52	111	805	440	87	61	100	132	428	304
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	636	2197	52	111	805	440	87	61	100	132	428	304
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:	636	2197	52	111	805	440	87	61	100	132	428	304
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.98	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.92	0.99	0.95
Lanes:	2.00	2.93	0.07	2.00	4.00	1.00	2.00	1.00	1.00	1.00	1.15	0.85
Final Sat.:	3150	5470	129	3150	7600	1750	3150	1900	1750	1750	2162	1536
Capacity Analysis Module:												
Vol/Sat:	0.20	0.40	0.40	0.04	0.11	0.25	0.03	0.03	0.06	0.08	0.20	0.20
Crit Moves:	****				****		****				****	
Green Time:	11.8	52.7	52.7	11.8	52.7	78.2	25.5	19.1	30.9	25.5	19.1	19.1
Volume/Cap:	2.05	0.91	0.91	0.36	0.24	0.39	0.13	0.20	0.22	0.36	1.24	1.24
Uniform Del:	59.5	34.7	34.7	55.6	23.2	10.7	42.1	48.2	38.6	44.3	55.5	55.5
IncremntDel:	483.6	5.8	5.8	0.7	0.0	0.2	0.1	0.3	0.3	0.6	124	123.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	543.1	40.5	40.5	56.3	23.2	10.9	42.2	48.5	38.8	44.9	179	179.2
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:	543.1	40.5	40.5	56.3	23.2	10.9	42.2	48.5	38.8	44.9	179	179.2
LOS by Move:	F	D	D	E+	C	B+	D	D	D+	D	F	F
HCM2k95thQ:	1581	1298	1298	142	242	410	87	111	171	245	1091	1091

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #2: Borregas Ave-Sunnyvale Ave / Maude Ave

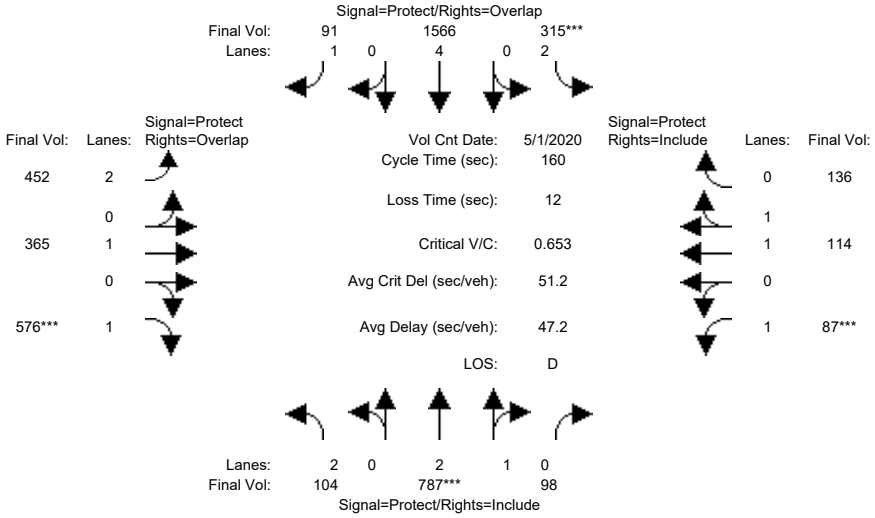


Street Name:	Borregas Ave-Sunnyvale Ave						Maude Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 6 Feb 2020 << 7:45 AM - 8:45 AM												
Base Vol:	117	41	70	36	32	230	55	132	35	38	476	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	117	41	70	36	32	230	55	132	35	38	476	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	117	41	70	36	32	230	55	132	35	38	476	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	117	41	70	36	32	230	55	132	35	38	476	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	117	41	70	36	32	230	55	132	35	38	476	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	117	41	70	36	32	230	55	132	35	38	476	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	0.51	0.18	0.31	0.53	0.47	1.00	1.00	0.79	0.21	1.00	1.00	1.00
Final Sat.:	898	315	537	953	847	1750	1750	1423	377	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.13	0.04	0.04	0.13	0.03	0.09	0.09	0.02	0.25	0.01
Crit Moves:	****					****	****				****	
Green Time:	19.8	22.5	22.5	17.3	20.0	20.0	10.0	24.1	24.1	24.1	38.1	38.1
Volume/Cap:	0.66	0.58	0.58	0.22	0.19	0.66	0.31	0.39	0.39	0.09	0.66	0.03
Uniform Del:	36.9	34.5	34.5	35.5	33.2	36.8	41.8	31.8	31.8	29.5	25.5	19.3
IncremntDel:	4.5	2.1	2.1	0.4	0.3	4.5	1.0	0.6	0.6	0.1	2.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.5	36.6	36.6	35.9	33.5	41.3	42.8	32.3	32.3	29.6	27.7	19.4
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:	41.5	36.6	36.6	35.9	33.5	41.3	42.8	32.3	32.3	29.6	27.7	19.4
LOS by Move:	D	D+	D+	D+	C-	D	D	C-	C-	C	C	B-
HCM2k95thQ:	380	352	352	101	96	382	101	231	231	51	571	21

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #1: Mathilda Ave / Maude Ave

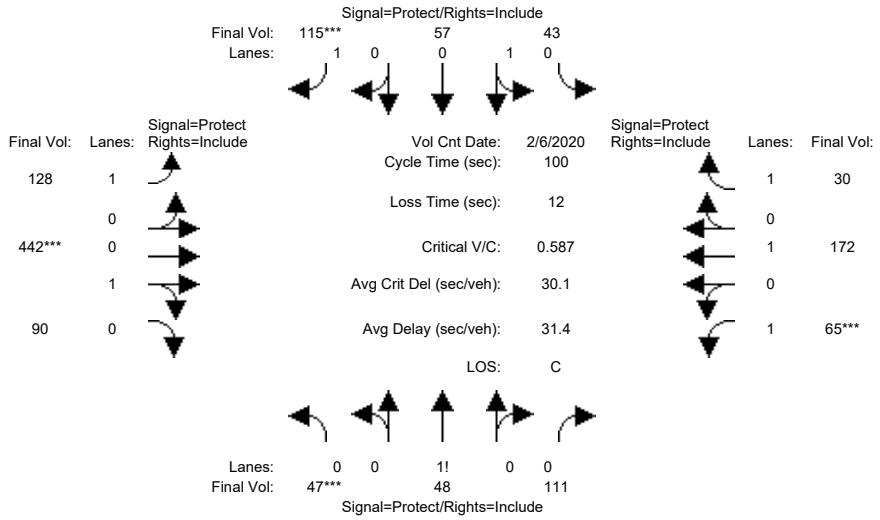


Street Name:	Mathilda Avenue						Maude Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 May 2020 << 4:30 PM - 5:30 PM												
Base Vol:	104	787	98	315	1566	91	452	365	576	87	114	136
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:	104	787	98	315	1566	91	452	365	576	87	114	136
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	787	98	315	1566	91	452	365	576	87	114	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	787	98	315	1566	91	452	365	576	87	114	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	787	98	315	1566	91	452	365	576	87	114	136
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:	104	787	98	315	1566	91	452	365	576	87	114	136
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.66	0.34	2.00	4.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	3150	4979	620	3150	7600	1750	3150	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.16	0.16	0.10	0.21	0.05	0.14	0.19	0.33	0.05	0.06	0.08
Crit Moves:		****		****					****	****		
Green Time:	11.1	38.7	38.7	24.5	52.2	105.4	53.3	69.9	81.0	12.2	28.9	28.9
Volume/Cap:	0.48	0.65	0.65	0.65	0.63	0.08	0.43	0.44	0.65	0.65	0.33	0.43
Uniform Del:	71.7	54.6	54.6	63.7	45.8	9.8	41.6	31.4	29.1	71.9	57.2	58.3
IncremntDel:	1.6	1.2	1.2	3.2	0.5	0.0	0.3	0.4	1.7	11.0	0.3	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	73.3	55.7	55.7	66.9	46.3	9.8	41.8	31.7	30.8	82.9	57.4	58.8
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:	73.3	55.7	55.7	66.9	46.3	9.8	41.8	31.7	30.8	82.9	57.4	58.8
LOS by Move:	E	E+	E+	E	D	A	D	C	C	F	E+	E+
HCM2k95thQ:	175	612	612	445	714	85	469	545	931	271	240	315

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #2: Borregas Ave-Sunnyvale Ave / Maude Ave



Street Name:	Borregas Ave-Sunnyvale Ave						Maude Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	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: >> Count Date: 6 Feb 2020 << 5:00 PM - 6:00 PM												
Base Vol:	47	48	111	43	57	115	128	442	90	65	172	30
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	48	111	43	57	115	128	442	90	65	172	30
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	48	111	43	57	115	128	442	90	65	172	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	48	111	43	57	115	128	442	90	65	172	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	48	111	43	57	115	128	442	90	65	172	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	48	111	43	57	115	128	442	90	65	172	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.95	0.95	0.92	1.00	0.92
Lanes:	0.23	0.23	0.54	0.43	0.57	1.00	1.00	0.83	0.17	1.00	1.00	1.00
Final Sat.:	399	408	943	774	1026	1750	1750	1495	305	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.06	0.06	0.07	0.07	0.30	0.30	0.04	0.09	0.02
Crit Moves:	****					****		****		****		
Green Time:	19.2	16.2	16.2	13.7	10.7	10.7	29.1	48.1	48.1	10.0	29.1	29.1
Volume/Cap:	0.61	0.73	0.73	0.40	0.52	0.61	0.25	0.61	0.61	0.37	0.31	0.06
Uniform Del:	37.0	39.8	39.8	39.4	42.2	42.7	27.1	19.1	19.1	42.1	27.7	25.6
IncremntDel:	3.4	9.2	9.2	1.1	2.5	6.0	0.3	1.3	1.3	1.3	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.4	49.1	49.1	40.5	44.7	48.6	27.4	20.4	20.4	43.4	28.0	25.6
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:	40.4	49.1	49.1	40.5	44.7	48.6	27.4	20.4	20.4	43.4	28.0	25.6
LOS by Move:	D	D	D	D	D	D	C	C+	C+	D	C	C
HCM2k95thQ:	341	382	382	167	187	231	164	583	583	122	206	37

Note: Queue reported is the distance per lane in feet.

Appendix D: Collision History Data

City of Sunnyvale

From 1/1/2016 to 12/31/2019

Total Collisions: 22
Injury Collisions: 9
Fatal Collisions: 0

Collision Summary Report

1/31/20

MATHILDA AVENUE & MAUDE AVENUE

CR16-770 **2/1/2016** **17:50** Monday MATHILDA AVENUE - MAUDE AVENUE 80' Direction: North Dark - Street Ligh Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 62 2010 FORD EXPEDITION Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Stopped In Road Male Age: 43 1998 MITSUBISHI SPYDER Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-3961 **6/4/2016** **01:16** Saturday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Dark - Street Ligh Clear Pty at Fault:0
Hit Object Fixed Object Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Left Turn Male Age: 2000 BMW 323I Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: Violation Unknown

CR16-4853 **7/8/2016** **22:13** Friday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Dark - Street Ligh Clear Pty at Fault:0
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 2015 CHRYSLER 200 Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: Violation Not Stated Cell Phone Not In Use
Party 2 Driver North Stopped In Road Male Age: 33 2010 TOYOTA YARIS Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-5790 **8/13/2016** **11:30** Saturday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Left Turn Male Age: 20 1998 FORD MUSTANG Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: Sleepy - Fatigued Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-5986 **8/19/2016** **23:44** Friday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Dark - Street Ligh Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453A Hit & Run: No Other Visible Injury # Inj: 2 # Killed: 0

Party 1 Driver West Making Left Turn Female Age: 26 2014 HONDA ACCORD Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 29 1998 JEEP WRANGLER Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-6326 **8/31/2016** **19:55** Wednesday MATHILDA AVENUE - MAUDE AVENUE 40' Direction: North Dusk - Dawn Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658A Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver North Changing Lanes Female Age: 24 2012 LEXUS CT200 Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Proceeding Straight Male Age: 25 2016 HARLEY SOFT TAIL Motorcycle
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - Yes Cell Phone Not In Use

MATHILDA AVENUE & MAUDE AVENUE

CR16-7266	**10/4/2016**	**08:45**	Tuesday	MATHILDA AVENUE - MAUDE AVENUE			0'	Direction: Not Stated	Daylight	Clear	Pty at Fault:1		
	Sideswipe		Other Motor Vehicle	Not Stated			21453	Hit & Run: No	Other Visible Injury		# Inj: 2	# Killed: 0	
Party 1 Driver	East	Making Left Turn	Male	Age: 39	2013 HONDA	ACCORD	Passenger Car, Station Wagon, Jeep						
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Lap/Shoulder Harness Used	Cell Phone Not In Use							
Party 2 Driver	North	Proceeding Straight	Female	Age: 32	2014 BMW	X5	Sport Utility Vehicle						
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Lap/Shoulder Harness Used	Cell Phone Not In Use							
CR16-8658	**11/21/2016**	**21:08**	Monday	MATHILDA AVENUE - MAUDE AVENUE			0'	Direction: Not Stated	Dark - Street Ligh	Clear	Pty at Fault:1		
	Broadside		Other Motor Vehicle	Not Stated			21450A	Hit & Run: No	Complaint of Pain		# Inj: 1	# Killed: 0	
Party 1 Driver	East	Proceeding Straight	Male	Age: 66	1993 FORD	ECONOLINE	Passenger Car, Station Wagon, Jeep						
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Unknown	Cell Phone Not In Use							
Party 2 Driver	West	Making Left Turn	Male	Age: 29	2009 TOYOTA	COROLLA	Passenger Car, Station Wagon, Jeep						
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Lap/Shoulder Harness Used	Cell Phone Not In Use							
CR16-9358	**12/17/2016**	**18:54**	Saturday	MAUDE AVENUE - MATHILDA AVENUE			0'	Direction: Not Stated	Dark - Street Ligh	Clear	Pty at Fault:1		
	Rear-End		Other Motor Vehicle	Unsafe Speed			22350	Hit & Run: Felony	Complaint of Pain		# Inj: 2	# Killed: 0	
Party 1 Driver	East	Proceeding Straight	Male	Age: 33	2012 MAZDA	MODEL 3							
Veh Type:		Sobriety: HBD Under Influence	Assoc Factor: Violation		Lap/Shoulder Harness Used								
Party 2 Driver	East	Stopped In Road	Male	Age: 47	1997 HONA	ACCORD	Passenger Car, Station Wagon, Jeep						
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Lap/Shoulder Harness Used								
Party 3 Driver	East	Stopped In Road	Female	Age: 25	2007 HYUNDAI		Passenger Car, Station Wagon, Jeep						
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Lap/Shoulder Harness Used								
Party 4 Driver	East	Stopped In Road	Male	Age: 51	1994 PORSCHE								
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Lap/Shoulder Harness Used								
CR16-9459	**12/21/2016**	**15:18**	Wednesday	MAUDE AVENUE - MATHILDA AVENUE			0'	Direction: Not Stated	Daylight	Clear	Pty at Fault:1		
	Sideswipe		Other Motor Vehicle	Improper Turning			22107	Hit & Run: Misde	Property Damage Only		# Inj: 0	# Killed: 0	
Party 1 Driver	West	Proceeding Straight	Male	Age:			Two Axle Tank Truck						
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Not Stated								
Party 2 Driver	East	Proceeding Straight	Female	Age: 45	2016 MERCEDES-BENZ	C300	Passenger Car, Station Wagon, Jeep						
Veh Type:		Sobriety: Impairment Not Kno	Assoc Factor: None Apparent		Lap/Shoulder Harness Used	Cell Phone Not In Use							
CR17-3185	**4/24/2017**	**10:30**	Monday	MATHILDA AVENUE - MAUDE AVENUE			0'	Direction: Not Stated	Daylight	Clear	Pty at Fault:1		
	Rear-End		Other Motor Vehicle	Unsafe Speed			22350	Hit & Run: Misde	Property Damage Only		# Inj: 0	# Killed: 0	
Party 1 Driver	South	Proceeding Straight	Male	Age:			Passenger Car, Station Wagon, Jeep				No Injury		
Veh Type:		Sobriety: Impairment Not Kno	Assoc Factor:		Not Stated								
Party 2 Driver	South	Stopped In Road	Male	Age: 49	2016 BMW	228I	Passenger Car, Station Wagon, Jeep				No Injury		
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Lap/Shoulder Harness Used	Cell Phone Not In Use							
CR17-3450	**5/4/2017**	**22:19**	Thursday	MATHILDA AVENUE - MAUDE AVENUE			0'	Direction: Not Stated	Dark - Street Ligh	Clear	Pty at Fault:1		
	Broadside		Motor Vehicle on Othe	Other Improper Driving			21453A	Hit & Run: No	Complaint of Pain		# Inj: 2	# Killed: 0	
Party 1 Driver	South	Other Unsafe Turning	Female	Age: 65	2002 MERCEDES-BENZ	C-CLASS	Passenger Car, Station Wagon, Jeep				Complaint of Pain		
Veh Type:		Sobriety: Impairment Not Kno	Assoc Factor: Violation		Lap/Shoulder Harness Used	Cell Phone Not In Use							
Party 2 Driver	South	Other Unsafe Turning	Female	Age: 29	2015 HONDA	ACCORD	Passenger Car, Station Wagon, Jeep				No Injury		
Veh Type:		Sobriety: HNBD	Assoc Factor: Violation		Lap/Shoulder Harness Used	Cell Phone Not In Use							
Party 3 Driver	East	Stopped In Road	Male	Age: 44	1998 TOYOTA	BLACK	Passenger Car, Station Wagon, Jeep				Complaint of Pain		
Veh Type:		Sobriety: HNBD	Assoc Factor: None Apparent		Lap/Shoulder Harness Used	Cell Phone Not In Use							

CR17-3939 **5/22/2017** **10:00** Monday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver North Proceeding Straight Female Age: 43 2014 TOYOTA SIENNA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Stopped In Road Female Age: 57 2015 MERCEDES-BENZ SPRINTER 3500 Tour Bus Complaint of Pain
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-4309 **6/4/2017** **18:15** Sunday MAUDE AVENUE - MATHILDA AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 41 2003 HONDA CR-V Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 57 2006 FORD TAURUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-5013 **6/29/2017** **11:20** Thursday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Not Stated 22350CVC Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Slowing / Stopping Male Age: 64 2013 TOYOTA PRIUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Stopped In Road Male Age: 30 2014 MITSUBISHI OUTLANDER Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-5888 **7/29/2017** **17:45** Saturday MATHILDA AVENUE - MAUDE AVENUE 30' Direction: North Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Stopped In Road Male Age: CHEVROLET SUBURBAN No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: Inattention Not Stated Cell Phone Not In Use
Party 2 Driver North Slowing / Stopping Male Age: 68 2014 VOLKSWAGEN PASSAT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver North Proceeding Straight Female Age: 17 2016 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-6327 **8/15/2017** **07:40** Tuesday MATHILDA AVENUE - MAUDE AVENUE 32' Direction: North Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Age: No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor:
Party 2 Driver North Stopped In Road Male Age: 25 2016 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-10148 **12/19/2017** **22:36** Tuesday MATHILDA AVENUE - MAUDE AVENUE 10' Direction: South Dark - Street Ligh Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Felony Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 22 2010 INFINITI G37 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HBD Not Under Influ Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Stopped In Road Male Age: 27 2017 AUDI Q7 Passenger Car, Station Wagon, Jeep Complaint of Pain
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR18-1503 **2/22/2018** **07:25** Thursday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Other Hazardous Movement 21451A Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

MATHILDA AVENUE & MAUDE AVENUE

Party 1 Driver North Proceeding Straight Male Age: 50 2017 SUBARU LEGACY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Making Left Turn Female Age: 62 2015 MITSUBISHI MIRAGE Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR18-2485 **3/28/2018** **17:45** Wednesday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658A Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver Changing Lanes Age: No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: Not Stated
Party 2 Driver South Stopped In Road Female Age: 34 2013 TOYOTA PRIUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR18-7970 **10/4/2018** **09:16** Thursday MAUDE AVENUE - MATHILDA AVENUE 50' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 17 2004 ACURA TSX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Female Age: 46 2012 FIAT 500 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver West Stopped In Road Male Age: 42 2015 HYUNDAI SONATA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR18-8363 **10/16/2018** **21:33** Tuesday MATHILDA AVENUE - MAUDE AVENUE 0' Direction: Not Stated Dark - Street Ligh Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453A Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 29 2017 MAZDA CX-3 Passenger Car, Station Wagon, Jeep Other Visible Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver S TO Making Left Turn Male Age: 53 1997 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Settings for Query:

Street: MATHILDA AVENUE
Cross Street: MAUDE AVENUE
Intersection Related: True
Sorted By: Date and Time

City of Sunnyvale

From 1/1/2016 to 12/31/2019

Total Collisions: 4
Injury Collisions: 2
Fatal Collisions: 0

Collision Summary Report

1/31/20

BORREGAS AVENUE & MAUDE AVENUE

CR16-3354 **5/12/2016** **21:58** Thursday MAUDE AVENUE - BORREGAS AVENUE 15' Direction: West Dark - Street Ligh Clear Pty at Fault:0
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Stopped In Road Female Age: 33 2014 HONDA BLACK Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Slowing / Stopping Female Age: 32 2011 MAZDA 3 Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver West Stopped In Road Male Age: 29 1999 ACURA TL Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-6709 **9/14/2016** **09:00** Wednesday BORREGAS AVENUE - MAUDE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Vehicle - Pedestrian Pedestrian Ped R/W Violation 21950A Hit & Run: Felony Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver South Proceeding Straight Age: Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Unknown Cell Phone Not In Use
Party 2 Pedestrian East Female Age: 13 Pedestrian
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR18-4201 **5/25/2018** **17:00** Friday MAUDE AVENUE - BORREGAS AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Parked Motor Vehicle Unknown 20002A Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Stopped In Road Male Age: 29 1997 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Unknown Cell Phone Not In Use
Party 2 Parked Vehicle West Proceeding Straight Age: 2002 FORD RANGER Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Not Required

CR19-2980 **4/11/2019** **14:33** Thursday MAUDE AVENUE - BORREGAS AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Head-On Other Motor Vehicle Traffic Signals and Signs 21453A Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 34 2010 TOYOTA PRIUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Inattention Lap/Shoulder Harness Used Cell Phone Handheld In Use
Party 2 Driver East Making Left Turn Female Age: 67 2014 FORD FUSION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Handsfree In Use

Settings for Query:

Street: BORREGAS AVENUE
Cross Street: MAUDE AVENUE
Intersection Related: True
Sorted By: Date and Time

City of Sunnyvale

From 1/1/2016 to 12/31/2019

Total Collisions: 0
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

1/31/20

SUNNYVALE AVENUE & MAUDE AVENUE

Settings for Query:

Street: SUNNYVALE AVENUE
Cross Street: MAUDE AVENUE
Intersection Related: True
Sorted By: Date and Time

City of Sunnyvale

From 1/1/2016 to 12/31/2019

Total Collisions: 31
Injury Collisions: 13
Fatal Collisions: 0

Collision Summary Report

1/31/20

SUNNYVALE AVENUE from MAUDE AVENUE to EVELYN AVENUE

CR16-177 **1/8/2016** **23:07** Friday SUNNYVALE AVENUE - CALIFORNIA AVENUE 0' Direction: Not Stated Dark - Street Ligh Raining Pty at Fault:0
Vehicle - Pedestrian Pedestrian Unknown Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver South Making Left Turn Male Age: 67 2009 TOYOTA YARIS Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Pedestrian East Male Age: 31 Pedestrian
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR16-3252 **5/9/2016** **08:12** Monday SUNNYVALE AVENUE - HAZELTON AVENUE 200' Direction: North Daylight Clear Pty at Fault:1
Other Bicycle Unsafe Starting or Backing 22106 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Backing Female Age: 44 2011 TOYOTA Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Bicyclist North Proceeding Straight Male Age: 52 Bicycle
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR16-6044 **8/22/2016** **11:33** Monday SUNNYVALE AVENUE - HENDY AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:0
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Female Age: 56 2005 TOYOTA SIENNA Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Male Age: 54 1996 HONDA ACCORD Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-6125 **8/25/2016** **08:50** Thursday SUNNYVALE AVENUE - ANCHOR BAY TERRACE 67' Direction: South Daylight Clear Pty at Fault:1
Hit Object Fixed Object Other Hazardous Movement 21663 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Left Turn Male Age: 25 2006 CADILLAC CTS Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-7138 **9/29/2016** **19:46** Thursday SUNNYVALE AVENUE - ARQUES AVENUE 40' Direction: South Dark - Street Ligh Clear Pty at Fault:1
Sideswipe Bicycle Driving Under Influence 23152B Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Bicyclist South Making Left Turn Male Age: 62 Bicycle
Veh Type: Sobriety: HBD Under Influence Assoc Factor: None Apparent Unknown Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Male Age: 55 2015 HONDA CR-V Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HBD Not Under Influ Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-7359 **10/7/2016** **17:36** Friday SUNNYVALE AVENUE - CALIFORNIA AVENUE 126' Direction: North Dusk - Dawn Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 29 2015 HONDA CRV Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver South Stopped In Road Male Age: 34 2014 ACURA MDX Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR16-8567 **11/18/2016** **17:19** Friday SUNNYVALE AVENUE - EVELYN AVENUE 0' Direction: Not Stated Dark - Street Ligh Clear Pty at Fault:1
Rear-End Bicycle Improper Turning 22107 Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver North Making Right Turn Female Age: 26 2013 JAGUAR XF Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Bicyclist North Proceeding Straight Male Age: 26 2016 RALEIGH MERIT 1 Bicycle
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Not Stated Cell Phone Not In Use
Party 3 Bicyclist North Proceeding Straight Female Age: 46 2017 RALEIGH REVERE Bicycle
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR17-257 **1/9/2017** **23:00** Monday SUNNYVALE AVENUE - EVELYN AVENUE 180' Direction: North Dark - Street Ligh Cloudy Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Changing Lanes Male Age: 66 2014 WSTR 4900FA Three or More Axle Truck
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-526 **1/20/2017** **14:05** Friday SUNNYVALE AVENUE - EVELYN AVENUE 0' Direction: Not Stated Daylight Cloudy Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver South Passing Other Vehicle Male Age: 71 2003 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 56 2016 FORD EDGE Sport Utility Vehicle
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver South Stopped In Road Male Age: 51 2010 INTERNATIONAL LT Two Axle Truck
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-5420 **7/13/2017** **18:15** Thursday EVELYN AVENUE - SUNNYVALE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver Proceeding Straight Male Age: No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor:
Party 2 Driver East Proceeding Straight Female Age: 37 2010 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-5740 **7/24/2017** **16:30** Monday HENDY AVENUE - SUNNYVALE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Head-On Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 30 2014 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Under Drug Influenc Assoc Factor: Violation Unknown
Party 2 Driver West Making Left Turn Male Age: 56 1995 JEEP GRAND CHERO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used

CR17-6517 **8/20/2017** **20:50** Sunday SUNNYVALE AVENUE - HAZELTON AVENUE 0' Direction: Not Stated Dark - Street Ligh Clear Pty at Fault:0
Broadside Other Motor Vehicle Improper Passing 21750 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver South Crossed Into Opposing Lane Female Age: 22 2003 INFINITI G35 Passenger Car, Station Wagon, Jeep Complaint of Pain
Veh Type: Sobriety: HNBD Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Making Left Turn Male Age: 43 2010 FORD TRANSIT CONN Mini Van No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Parked Vehicle North Parked Age: 1999 HONDA ODYSSEY Mini Van No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR17-6613 **8/23/2017** **17:12** Wednesday EVELYN AVENUE - SUNNYVALE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Other Bicycle Improper Turning 22107 Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver EAST Making Right Turn Female Age: 38 2003 HONDA CR-V Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Bicyclist East Proceeding Straight Male Age: 25 BIANCHI IMPULSO Bicycle Other Visible Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR17-6714 **8/27/2017** **01:20** Sunday SUNNYVALE AVENUE - ARQUES AVENUE 477' Direction: North Dark - Street Ligh Clear Pty at Fault:1
Rear-End Parked Motor Vehicle Driving Under Influence 23152A Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 36 2000 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HBD Under Influence Assoc Factor: None Apparent Unknown Cell Phone Not In Use
Party 2 Parked Vehicle North Parked Age: 2014 SUBARU FORESTER Sport Utility Vehicle No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR17-7016 **9/4/2017** Monday SUNNYVALE AVENUE - MAUDE AVENUE 282' Direction: South Daylight Clear Pty at Fault:1
Sideswipe Parked Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Age: Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor:
Party 2 Parked Vehicle South Parked Age: 2011 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use

CR17-8030 **10/7/2017** **14:56** Saturday SUNNYVALE AVENUE - EVELYN AVENUE 39' Direction: South Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 39 1998 TOYOTA SIENNA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Stopped In Road Female Age: 72 2004 VOLKSWAGEN TOUREG Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-8540 **10/22/2017** **23:20** Sunday CALIFORNIA AVENUE - SUNNYVALE AVENUE 0' Direction: Not Stated Dark - Street Ligh Clear Pty at Fault:1
Head-On Other Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Left Turn Age: 1998 SAAB 900 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 58 2017 HYUNDAI SONATA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR17-10235 **12/22/2017** **15:24** Friday SUNNYVALE AVENUE - MAUDE AVENUE 227' Direction: South Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Driving Under Influence 23152A Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 34 2016 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Sobriety: HBD Under Influence Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Stopped In Road Male Age: 55 UPS TRUCK Other Commercial No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR18-485 **1/18/2018** **18:00** Thursday SUNNYVALE AVENUE - CALIFORNIA AVENUE 0' Direction: Not Stated Dark - Street Ligh Cloudy Pty at Fault:1
Vehicle - Pedestrian Pedestrian Ped R/W Violation 21950A Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Left Turn Female Age: 39 2014 FORD CMAX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Pedestrian North Male Age: 35 Pedestrian No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR18-1204 **2/11/2018** **14:41** Sunday CALIFORNIA AVENUE - SUNNYVALE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453A Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 34 2014 TOYOTA RAV4 EV Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 40 2015 NISSAN XTERRA Passenger Car, Station Wagon, Jeep Complaint of Pain
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR18-2649 **4/3/2018** **18:37** Tuesday CALIFORNIA AVENUE - SUNNYVALE AVENUE 0' Direction: Not Stated Daylight Pty at Fault:
Rear-End Bicycle Not Stated 21804A Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Bicyclist West Making Right Turn Male Age: 52 SCHWIN BICYCLE Bicycle Other Visible Injury
Veh Type: Sobriety: HNBD Assoc Factor: Violation Not Stated Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Male Age: 54 2010 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR18-2868 **4/11/2018** **15:54** Wednesday SUNNYVALE AVENUE - CALIFORNIA AVENUE 330' Direction: North Daylight Clear Pty at Fault:1
Sideswipe Parked Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 39 2002 DODGE RAM 1500 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Parked Vehicle South Parked Age: 2004 FRHT FIRE ENGINE Fire Truck No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Not Stated

CR18-3562 **5/3/2018** **16:13** Thursday SUNNYVALE AVENUE - ARQUES AVENUE 140' Direction: North Daylight Clear Pty at Fault:
Broadside Parked Motor Vehicle Not Stated 21650 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Female Age: 31 1998 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Under Drug Influenc Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Parked Vehicle Age: 2009 TOYOTA COROLLA No Injury
Veh Type: Sobriety: Assoc Factor: Not Stated

CR18-8771 **10/30/2018** **17:35** Tuesday SUNNYVALE AVENUE - TAYLOR AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Vehicle - Pedestrian Pedestrian Ped R/W Violation 21950A Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver West Making Right Turn Female Age: 47 2012 NISSAN FRONTIER Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Pedestrian North Proceeding Straight Female Age: 56 Pedestrian Other Visible Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Not Stated Cell Phone Not In Use

CR18-9069 **11/8/2018** Thursday SUNNYVALE AVENUE - MAUDE AVENUE 327' Direction: South Pty at Fault:1
Parked Motor Vehicle Unknown Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver Age: No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor:
Party 2 Parked Vehicle South Parked Age: 2013 TOYOTA PRIUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use

CR18-9796 **12/4/2018** **01:37** Tuesday SUNNYVALE AVENUE - ARQUES AVENUE 200' Direction: North Dark - Street Ligh Clear Pty at Fault:1
Broadside Parked Motor Vehicle Driving Under Influence 23152A Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

SUNNYVALE AVENUE from MAUDE AVENUE to EVELYN AVENUE

Party 1 Driver North Other Unsafe Turning Male Age: 31 2001 FORD MUSTANG Passenger Car, Station Wagon, Jeep Other Visible Injury
Veh Type: Sobriety: HBD Under Influence Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Parked Vehicle North Parked Age: 2005 CHRYSLER PT CRUISER Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Not Stated
Party 3 Parked Vehicle North Parked Age: 1998 CHEVROLET TRUCK Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Not Stated
Party 4 Parked Vehicle North Parked Age: 2014 SUBARU FORESTER Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Not Stated

CR18-9846 **12/5/2018** **09:46** Wednesday SUNNYVALE AVENUE - ARQUES AVENUE 0' Direction: Not Stated Daylight Cloudy Pty at Fault:1
Broadside Motor Vehicle on Othe Traffic Signals and Signs 21453A Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Female Age: 40 2016 NISSAN LEAF Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used
Party 2 Driver East Proceeding Straight Female Age: 62 2016 LEXUS RX350 Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used

CR19-921 **2/1/2019** **12:26** Friday SUNNYVALE AVENUE - CALIFORNIA AVENUE 226' Direction: North Daylight Cloudy Pty at Fault:1
Sideswipe Parked Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Female Age: 18 1996 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Defective Vehicle E Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Parked Vehicle South Parked Age: 2012 FIAT 5CC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use

CR19-951 **2/2/2019** **11:03** Saturday CALIFORNIA AVENUE - SUNNYVALE AVENUE 0' Direction: Not Stated Daylight Cloudy Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453A Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 56 2014 HONDA INSIGHT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Male Age: 23 1996 MERCURY VILLAGER Mini Van No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

CR19-983 **2/4/2019** **01:00** Monday SUNNYVALE AVENUE - CALIFORNIA AVENUE 0' Direction: Not Stated Dark - Street Ligh Raining Pty at Fault:1
Vehicle - Pedestrian Pedestrian Pedestrian Violation 21950B Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver East Making Right Turn Male Age: 48 2004 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HBD Impairment Un Assoc Factor: None Apparent Unknown
Party 2 Pedestrian North Male Age: 66 Pedestrian Other Visible Injury
Veh Type: Sobriety: HBD Under Influence Assoc Factor: None Apparent Not Required

CR19-3466 **4/26/2019** **17:11** Friday CALIFORNIA AVENUE - SUNNYVALE AVENUE 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453A Hit & Run: No Other Visible Injury # Inj: 2 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 44 2008 HONDA CIVIC Passenger Car, Station Wagon, Jeep Complaint of Pain
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 24 2016 FORD FIESTA Passenger Car, Station Wagon, Jeep Other Visible Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

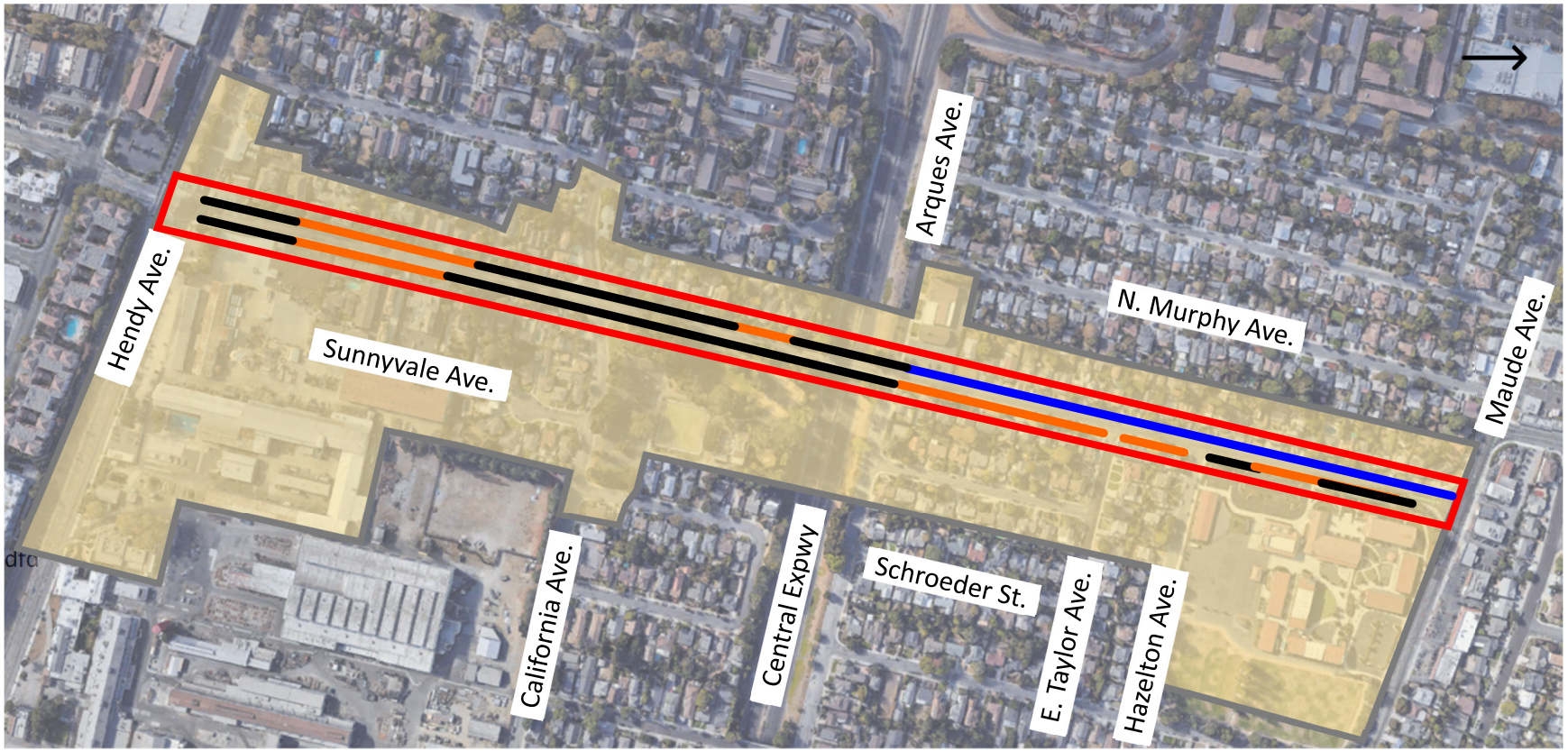
SUNNYVALE AVENUE from MAUDE AVENUE to EVELYN AVENUE

Segment Length: 0.76 miles (4,009')

Settings for Query:

Segment: SUNNYVALE AVENUE between MAUDE AVENUE and EVELYN AVENUE
Include Intersection Related at Limit 1 (MAUDE AVENUE): True
Include Intersection Related at Limit 2 (EVELYN AVENUE): True
Include Intersection Related at Intermediate Intersections: True
Sorted By: Date and Time

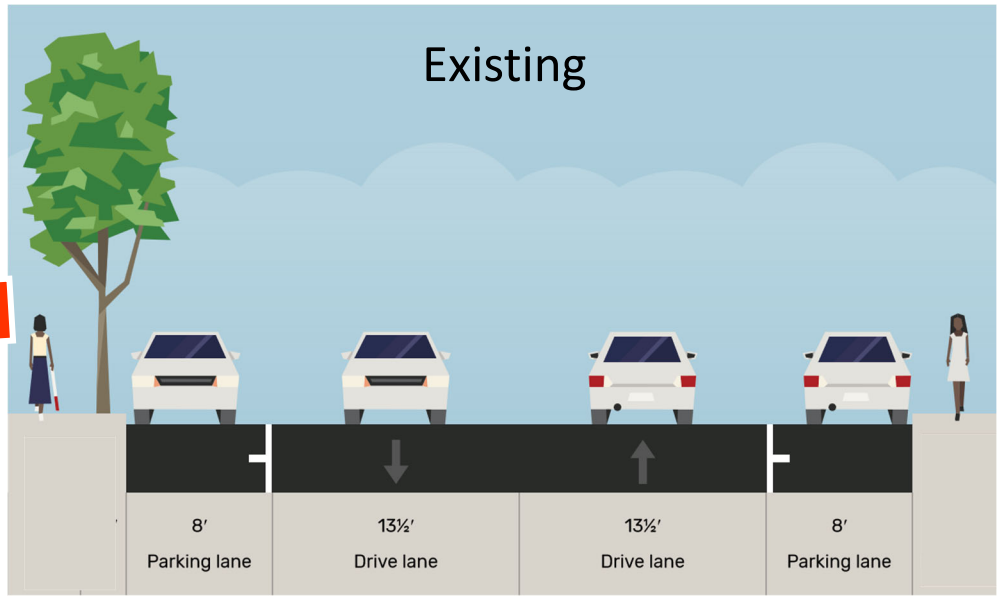
Sunnyvale Avenue On-Street Parking Study Area

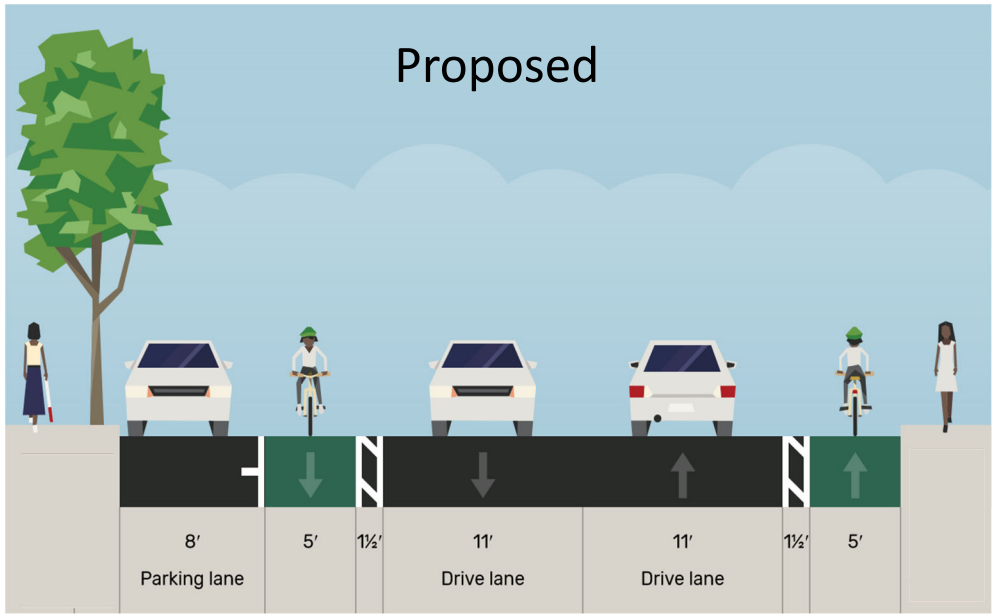


Legend

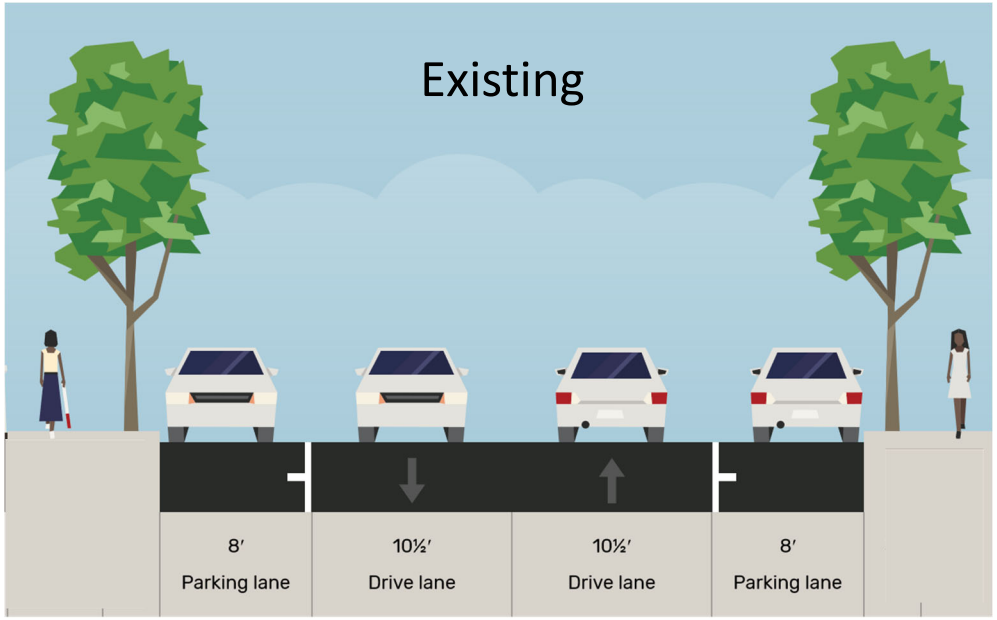
- Project Limits
- On-street parking to remain
- On-street parking proposed to be removed
- No Existing On-Street Parking
- Mailer Notification Area

Proposed Bicycle Improvements on Sunnyvale Avenue
Between Maude Avenue and Arques Avenue





Proposed Bicycle Improvements on Sunnyvale Avenue
Between Arques Avenue and Hendy Avenue



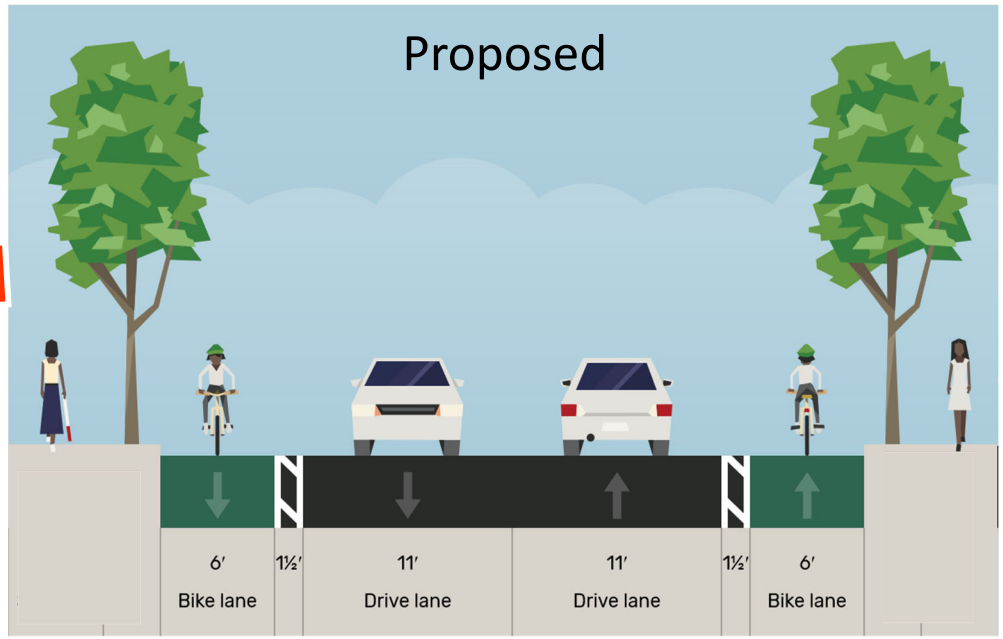


Table 5.1 - Sunnyvale Avenue Existing On-Street Parking Observation Summary

Study Area	Available Spaces	Number of Parked Vehicles Observed – Average of Three Days Tuesday February 4 – Thursday February 6, 2020			
		11 a.m.	3 p.m.	8 p.m.	1 a.m.
Sunnyvale Avenue between Maude Avenue & Hazelton Avenue					
West Side	18	14 (78%)	11 (61%)	11 (61%)	11 (61%)
East Side	13	7 (54%)	1 (8%)	1 (8%)	1 (8%)
Sunnyvale Avenue between Hazelton Avenue & E. Taylor Avenue					
West Side	7	2 (29%)	3 (43%)	4 (57%)	4 (57%)
East Side	5	1 (20%)	1 (20%)	2 (40%)	2 (40%)
Sunnyvale Avenue between E. Taylor Avenue & Arques Avenue					
West Side	22	5 (23%)	7 (32%)	9 (41%)	10 (45%)
East Side	21	6 (29%)	5 (24%)	8 (38%)	10 (48%)
Sunnyvale Avenue between Maude Avenue & Arques Avenue - Total					
West Side	**47**	**21 (45%)**	**21 (45%)**	**24 (51%)**	**25 (53%)**
East Side	**39**	**14 (36%)**	**7 (18%)**	**11 (28%)**	**13 (33%)**

Study Area	Available Spaces	Number of Parked Vehicles Observed – Average of Three Days Tuesday February 4 – Thursday February 6, 2020			
		11 a.m.	3 p.m.	8 p.m.	1 a.m.
Sunnyvale Avenue between Arques Avenue & California Avenue					
West Side	3	1 (33%)	1 (33%)	2 (67%)	1 (33%)
East Side	No On-Street Parking Allowed				
Sunnyvale Avenue between California Avenue and Hendy Avenue					
West Side	15	6 (40%)	0 (0%)	1 (7%)	1 (7%)
East Side	12	4 (33%)	1 (8%)	4 (33%)	3 (25%)
Sunnyvale Avenue between Arques Avenue and Hendy Avenue - Total					
West Side	**18**	**7 (39%)**	**1 (6%)**	**3 (17%)**	**2 (11%)**
East Side	**12**	**4 (33%)**	**1 (8%)**	**4 (33%)**	**3 (25%)**

Figure 5.1 - Sunnyvale Avenue Existing On-Street Parking Observation Summary – 1 a.m.

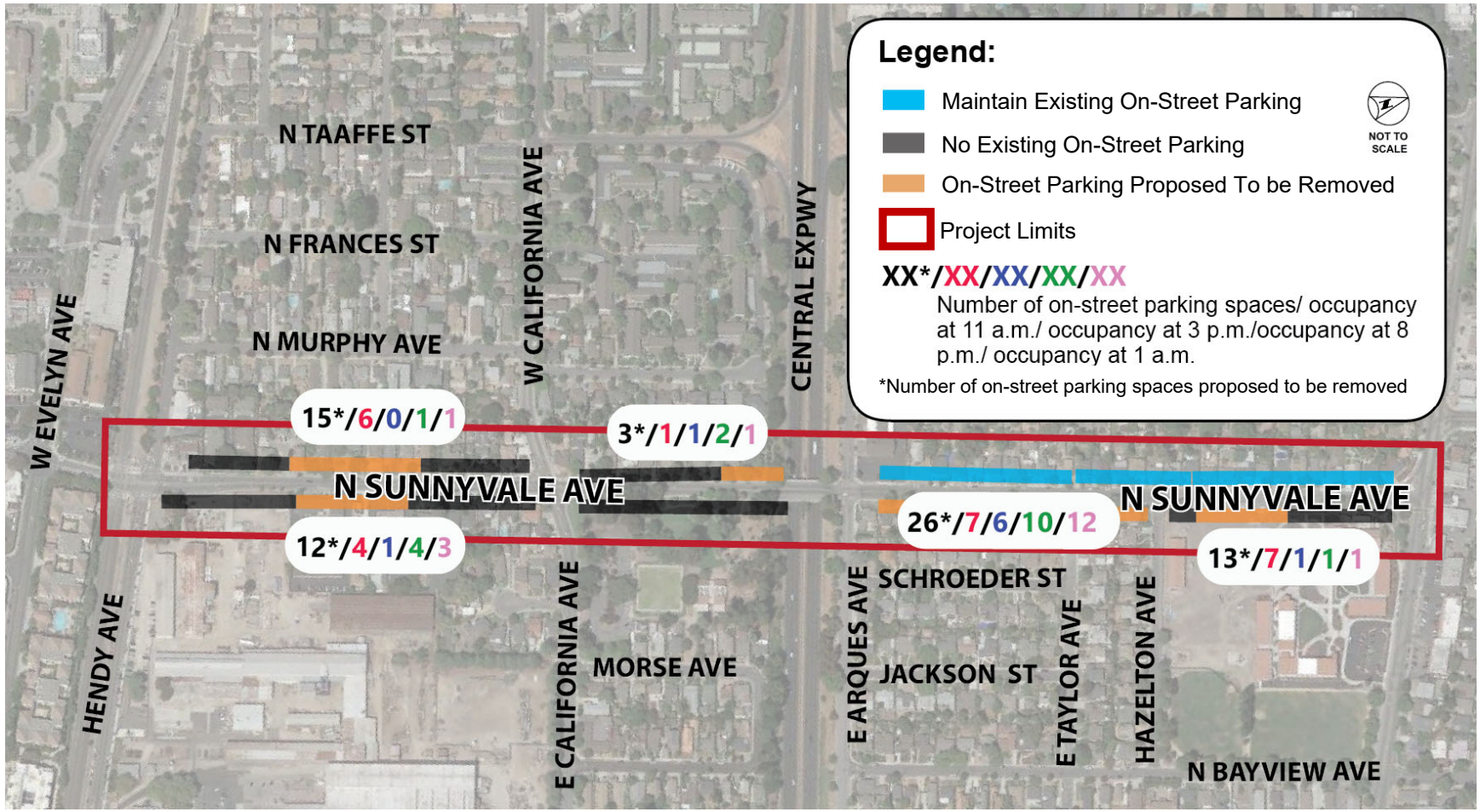


Table 5.2 and Figure 5.2 - Sunnyvale Avenue Proposed On-Street Parking Removal

Study Area	Number of Spaces Proposed to be Removed	Average Number of On-Street Parking Observed at 1 a.m.
Between Maude Avenue & Arques Avenue		
East Side	39	13
Between Arques Avenue & Hendy Avenue		
West Side	18	2
East Side	12	3
Total	**69**	**18**

Parked vehicles proposed to be relocated

Figure 5.3 - Sunnyvale Avenue On-Street Parking Study – 1 a.m.

Legend

- Project Limits
- On-street parking to remain
- On-street parking proposed to be removed
- No Existing On-Street Parking
- XX — Number of Spaces Unoccupied
- XX — Number of Spaces Occupied/Vehicles to be Displaced

Kimley»Horn

MEMORANDUM

To:	Lillian Tsang, P.E. and Austin Bondy-Villa, E.I.T. City of Sunnyvale
From:	Adam Dankberg, P.E. Kimley-Horn and Associates, Inc.
Date:	September 9, 2021
Subject:	Sunnyvale Safe Routes to School Outreach Summary

Overview

In 2020, the City of Sunnyvale completed the Sunnyvale Safe Routes to School (SRTS) Study ("Study") to identify improvements on Sunnyvale Avenue between Hendy and Maude Avenues that would improve access to local schools and downtown Sunnyvale, improve bicycle safety and connectivity along the Sunnyvale Avenue Corridor, and complete a high priority project identified in the City's Active Transportation Plan. The Study recommended the removal of several on-street parking areas to create buffered bike lanes in both directions along Sunnyvale Avenue.

In July 2021, the City solicited public feedback on the identified improvements. Outreach and engagement efforts included two main components: a virtual public meeting and an online survey. An informational postcard was mailed to residents along Sunnyvale Avenue and nearby streets, notifying community stakeholders of both feedback tools. This memorandum summarizes the results of these activities.

Mailer Preparation and Distribution

A postcard was developed to provide the public with notice of the July 29th outreach meeting and promote interest in the project survey. Design and distribution of the postcard took place during the month of June. The postcard, shown in **Figure 1** and **Figure 2**, was optimized for digital and printed purposes. It included background information on the project and community meeting, as well as a QR code and short URLs directing recipients to the virtual meeting and survey location. The postcard was distributed to 432 addresses along Sunnyvale Avenue and nearby streets, as shown in **Figure 3**.

Figure 1: *Front side of postcard*

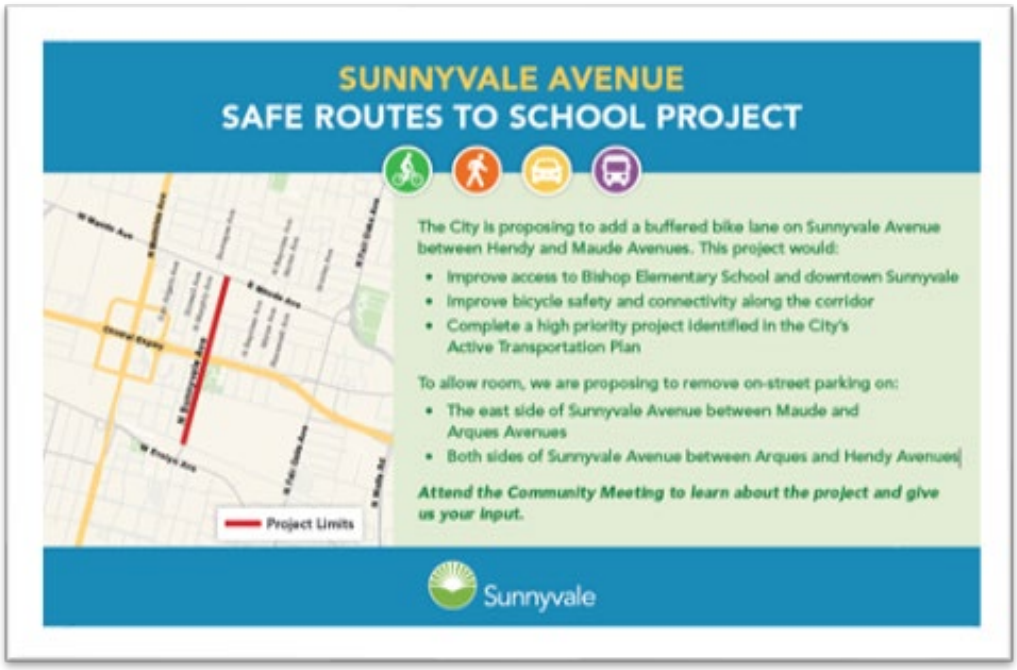


Figure 2: *Back side of postcard*

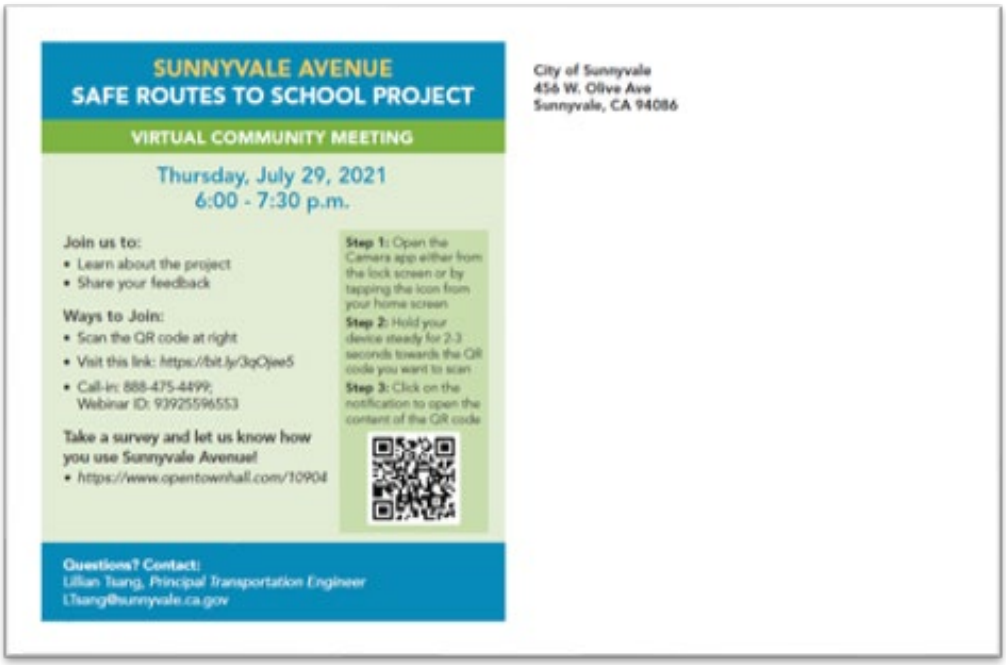


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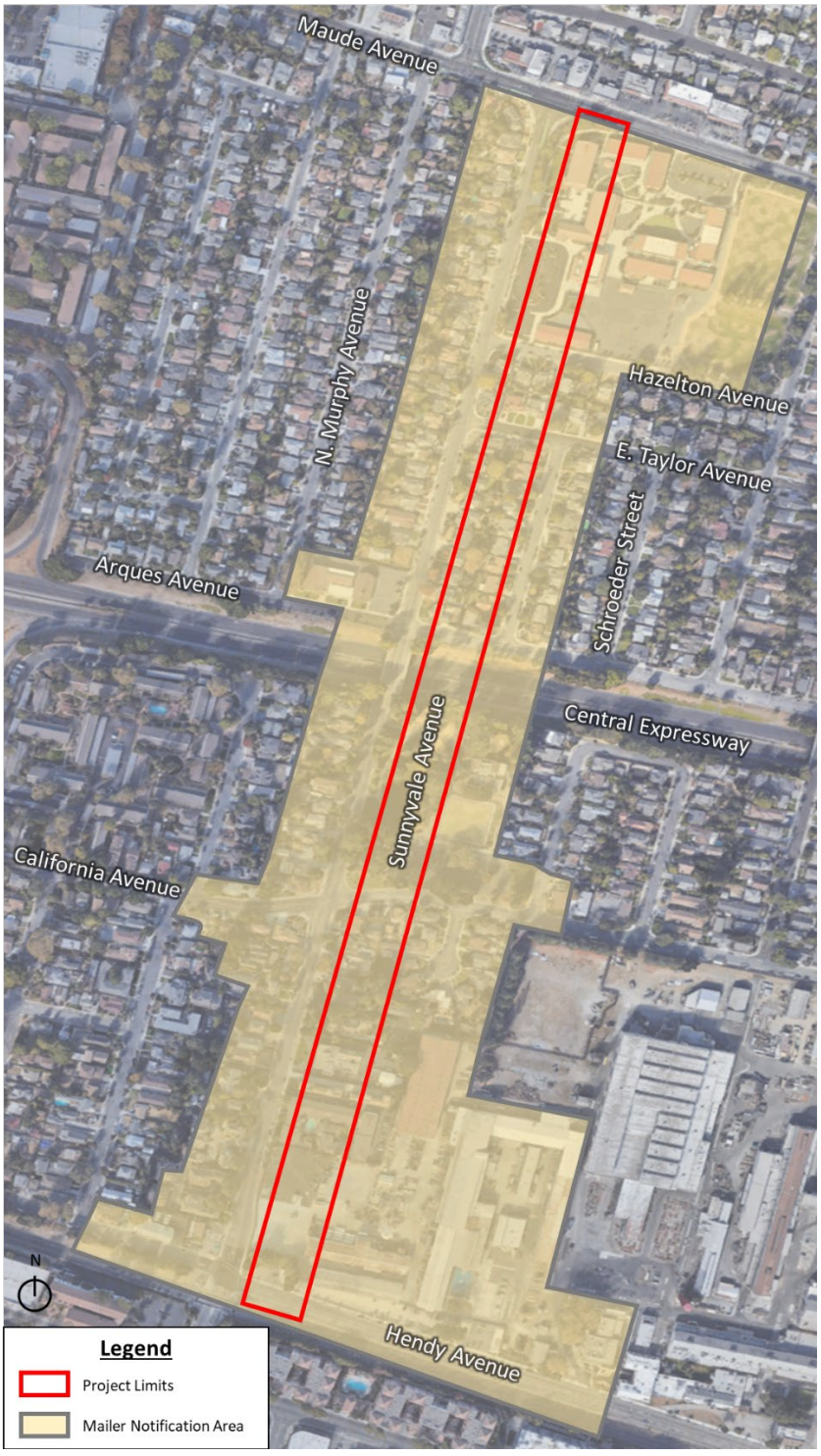
Figure 3: *Postcard notification area*



Outreach Meeting

An online public outreach meeting was held on July 29, 2021 to inform the community about the project and solicit community feedback on the SRTS improvements identified for Sunnyvale Avenue. Meeting panelists included staff from the City of Sunnyvale and Kimley-Horn.

The meeting provided attendees with an overview of the project, existing needs and safety conditions, proposed modifications and anticipated impacts, next steps and a Q&A session. A copy of the meeting presentation slides can be found in **Appendix A**. Sixteen people attended the community meeting and provided feedback. Some of the attendees voiced displeasure with the loss of on-street parking, citing concerns related to safety, convenience, and other personal factors. Other attendees were enthusiastic about the project and focused on the benefits that the project would bring, namely improved bicycle connectivity and encouraging further bicycle ridership.

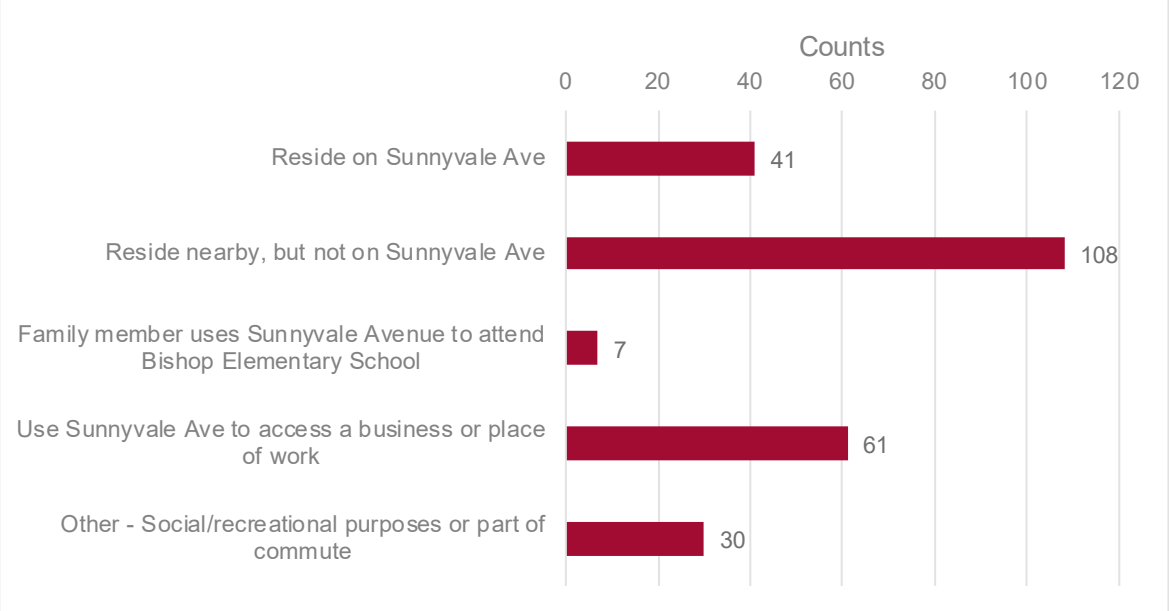
A list of Questions Asked was developed after the meeting to address some of the most commonly asked questions. This document is available on the City website and is provided in **Appendix B**.

Online Survey

The project team gathered public input by distributing an online survey available from July 12th – August 2nd. The survey received 179 unique responses.

Question 1A was designed to identify the survey respondent's connection to the study area. **Figure 4** shows that 41 respondents indicated that they live on Sunnyvale Avenue, and 108 respondents indicated that they live in the area but not on Sunnyvale Avenue.

***Figure 4**: Survey respondent connection to Sunnyvale Avenue*



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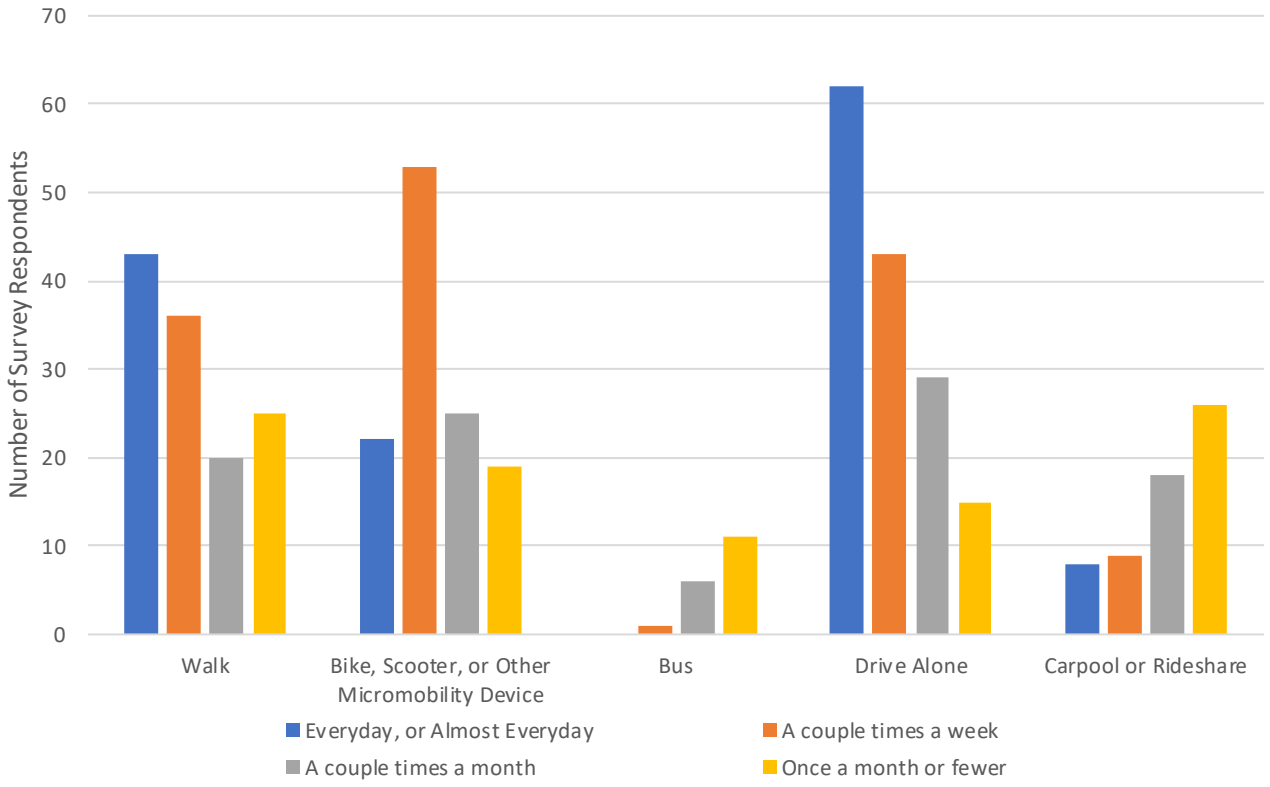
Question 1B asked survey respondents what modes of transportation they typically use to travel along Sunnyvale Avenue and how frequently they use each mode. The responses, shown in **Figure 5**, indicate that while driving alone is the most common mode for daily travel along Sunnyvale Avenue, many survey respondents walked and biked along Sunnyvale Avenue at least a couple of times a week.

Accounting for all frequency responses, 77% of respondents indicated that they drive alone along Sunnyvale Avenue and 57% of respondents walk, bike, or use some form of micromobility device. Transit, carpooling, and rideshare options were chosen as the least popular mode of travel through Sunnyvale Avenue.

Figure 5: *Mode use and frequency along Sunnyvale Avenue*



** Note: Respondents were able to pick more than one mode*

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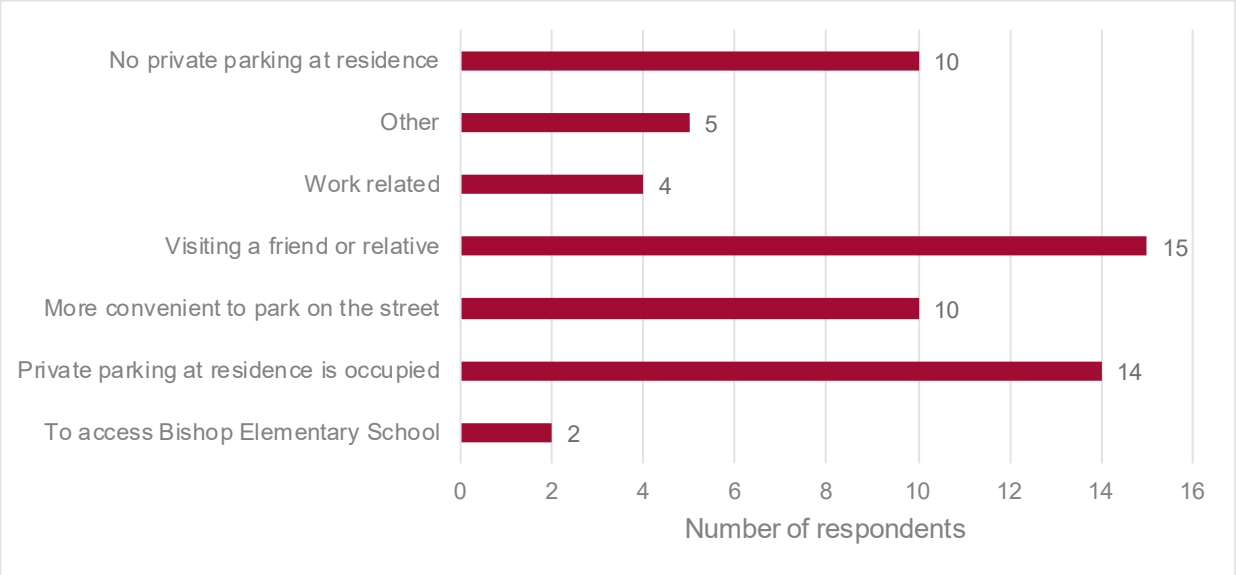
Questions 1C and 1D asked respondents if they park on Sunnyvale Avenue within the project area and their reasons for doing so. 36 respondents indicated that they park along Sunnyvale Avenue. **Figure 6** shows that out of the 36 respondents who utilize street parking along Sunnyvale Avenue, ten selected they did so because they did not have the option to use private parking at their place of residence since it was occupied. Ten respondents said that it was more convenient than using their own garage, space, or driveway.

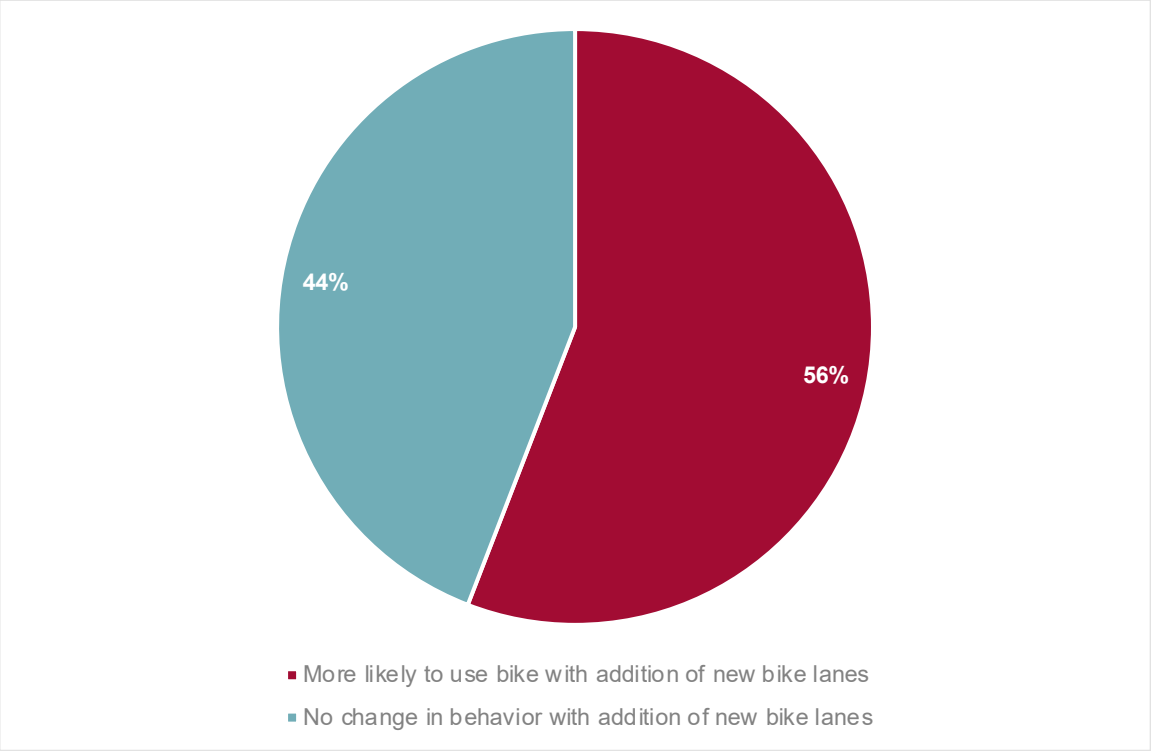
Figure 6: *Reason for parking on Sunnyvale Avenue*



** Note: Respondents were able to pick more than one reason*

Question 2 in the survey asks respondents if they were more likely to bike to local, social, and recreational destinations if bike lanes were provided on Sunnyvale Avenue; 100 out of the 179 respondents (or 56%) indicated they would as shown in **Figure 7**.

***Figure 7**: Bicycle use behavior change with addition of new bike lanes*



The last series of questions (3, 3A and 3B) ask respondents whether they have a family member that attend Bishop Elementary School and whether they would allow them to bike to school if new bike lanes were constructed. Out of the 16 respondents who stated they have children who currently attend Bishop Elementary School, seven (7) indicated they would allow their child to bike to school if new bike lanes were provided. A complete list of survey questions is provided in **Appendix C**.

Respondents were also allowed to express additional feedback by providing written comments at the end of the survey. Of the 179 respondents, 42 respondents provided written comments on the survey: 19 supported the removal of on-street parking to install Class IIB bicycle lanes, and 19 did not support the removal of on-street parking. The remaining four (4) responses were not directly related to the proposed project: two (2) respondents asked not to close Sunnyvale Avenue from vehicular traffic; one (1) respondent is in support of adding dedicated bicycle lanes, but wanted to include additional improvements; and one (1) provided comment not related to the proposed project.

Conclusions and Next Steps

An extensive amount of community input on the Sunnyvale Safe Routes to School project was received in July 2021 through the completion of an online survey and a virtual public community meeting. Input received through both feedback mechanisms was mixed. A majority of the sixteen attendees expressed strong concerns about safety and convenience associated with the removal of on-street parking, although some attendees expressed enthusiasm for improved safety and connectivity with the bicycle lanes. The online survey found that a majority of respondents felt that provision of a bicycle lane would encourage them to bicycle more and several indicated specifically that the provision of a bicycle lane would allow their children to bicycle to neighborhood schools. Open response feedback from the survey was nearly evenly split, with a slightly higher proportion of responses supporting rather than opposing the bicycle lane.

Study findings and recommendations will be presented to the Bicycle and Pedestrian Advisory Commission (BPAC) to make a recommendation to City Council on September 16, 2021 and to the City Council for approval on September 28, 2021.

Kimley»Horn

Appendix A: Community Meeting Presentation Slides

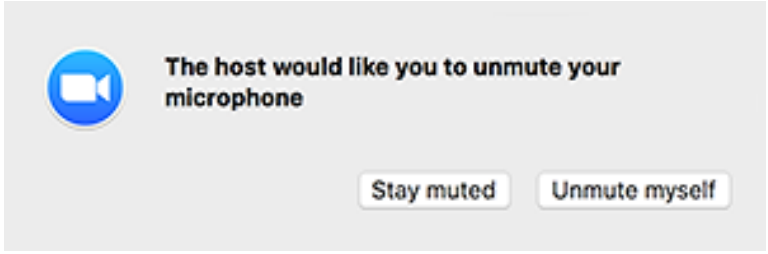
Sunnyvale | Kimley»Horn

Sunnyvale Safe Routes to School Improvements on Sunnyvale Avenue

Online Public Outreach Meeting
July 29, 2021

How to Participate Today
To Provide Comments or Ask a Question

Unmute/Mute: If the host gives you permission, you can unmute and all participants will be able to hear you talk. If the host allows you to talk, you will receive this notification - click "unmute myself"



Raise Hand: Raise your hand in the webinar to indicate that you want to make a comment.

Q&A: Open the Q&A window, allowing you to ask questions.

- By Phone:
  - **Dial *9** to Raise Hand
  - **Dial *6** to Unmute

Agenda

Purpose of Meeting: Introduce project and solicit community feedback

- **Introductions**
- Project Overview and Needs
- On-Street Parking Study
- Collision Analysis
- Online Survey
- Next Steps
- Questions and Comments

Project Team

Lillian Tsang
City of Sunnyvale

Austin Bondy-Villa
City of Sunnyvale

Adam Dankberg
Kimley-Horn

Hamza Syed
Kimley-Horn

Public's Role

- Let us know how you use Sunnyvale Avenue
  - via the Online Survey
- Provide feedback and comments
  - At the Outreach Meeting
  - via the Online survey
  - via email to Ltsang@sunnyvale.ca.gov
  - Attend the Bicycle & Pedestrian Advisory Commission Meeting
  - Attend the City Council Meeting

Agenda

Purpose of Meeting: Introduce project and solicit community feedback

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- **Project Overview and Needs**
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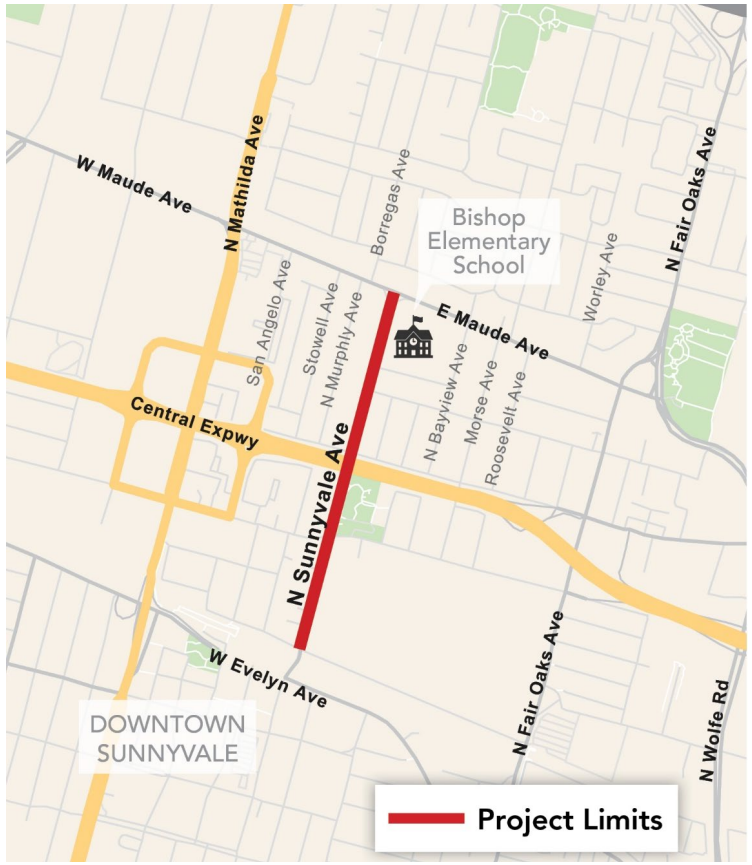
Project Overview and Needs

Project Limits – Sunnyvale Avenue between Maude and Hendy Avenues



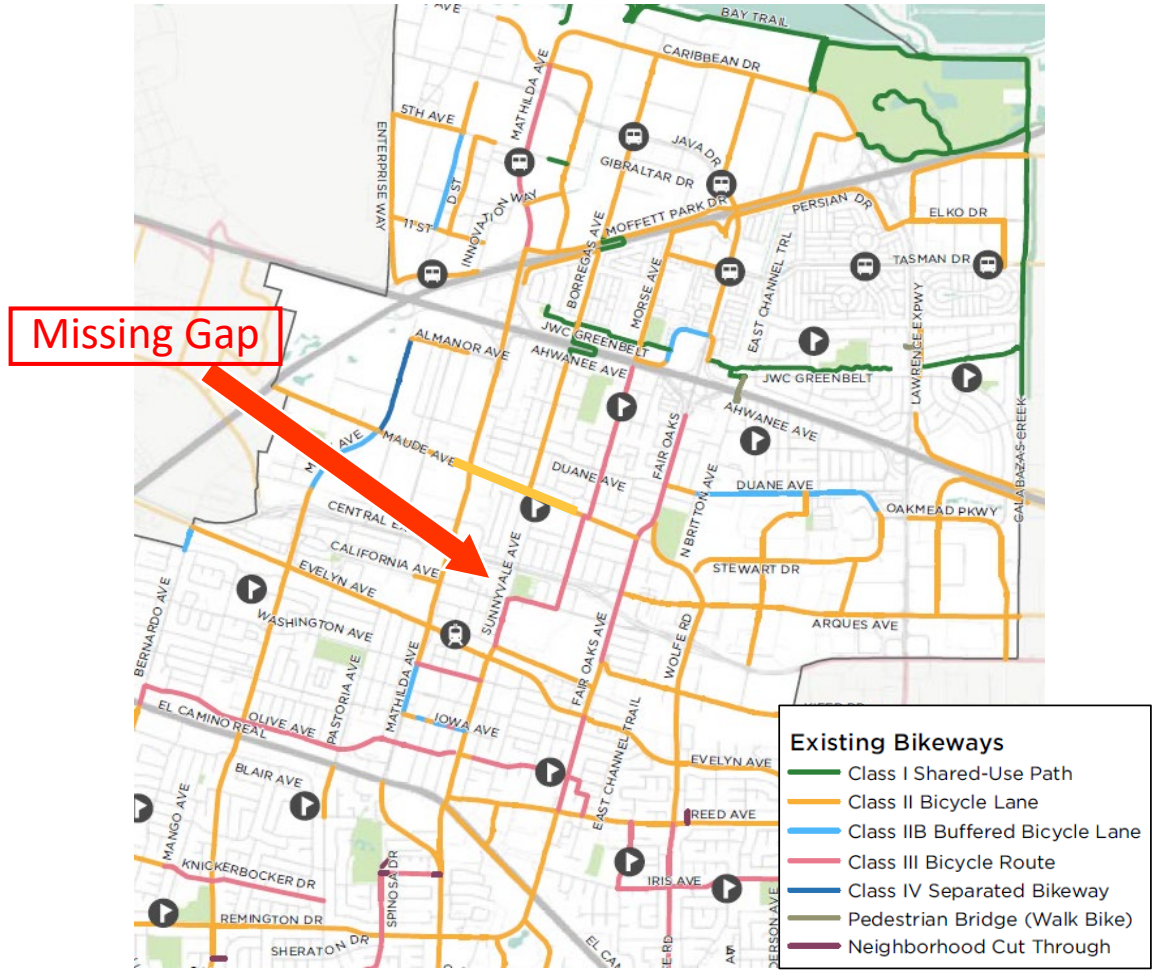
The purpose of the study is to:

- Improve access to Bishop Elementary School and downtown Sunnyvale
- Improve bicycle safety and connectivity along Sunnyvale Avenue Corridor

Project Overview and Needs

Existing Bicycle Bikeway

- To the north – Moffett Park Specific Plan Area and Bay Trail
- To the south – Downtown/El Camino Real employment and retail area
- Connection to schools
  - Bishop Elementary School
  - Columbia Middle School



Project Overview and Needs

Bicycle Activity on Sunnyvale Ave

- Sunnyvale Ave is already a heavily utilized bicycle corridor

Period	Northbound	Southbound
Sunnyvale/Arques		
AM Peak Hour	74	31
PM Peak Hour	45	52
Sunnyvale/Hendy		
AM Peak Hour	64	33
PM Peak Hour	22	64

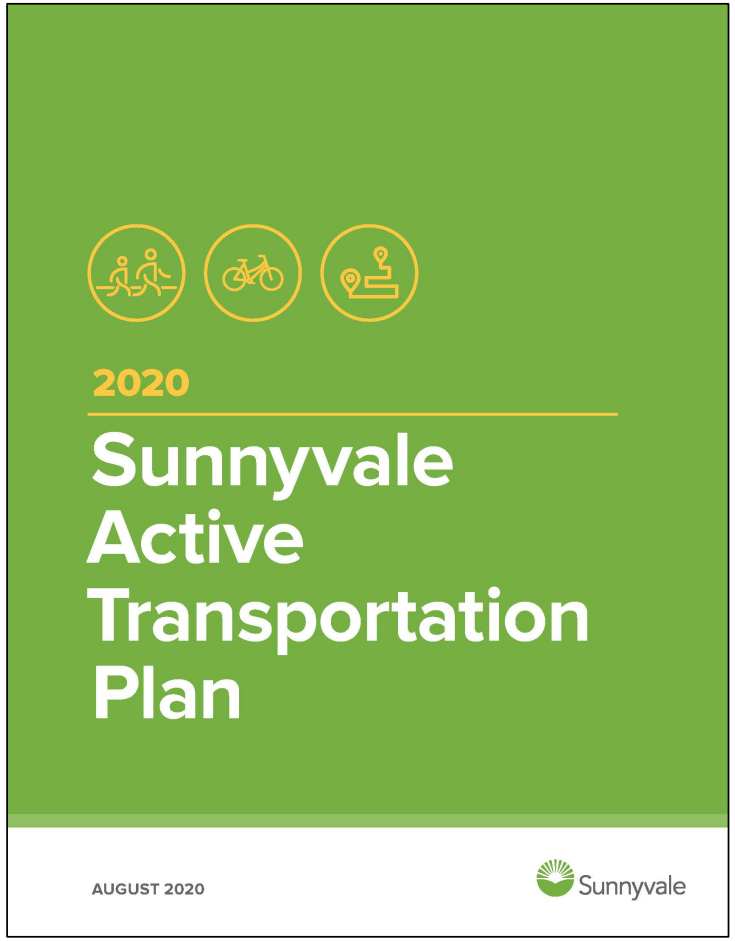
Note: Bicycle counts from 2019

Source: Strava Heat Map, depicting bicycle user route choice
Darker blue colors indicate routes with higher utilization

Project Overview and Needs

Active Transportation Plan (ATP)

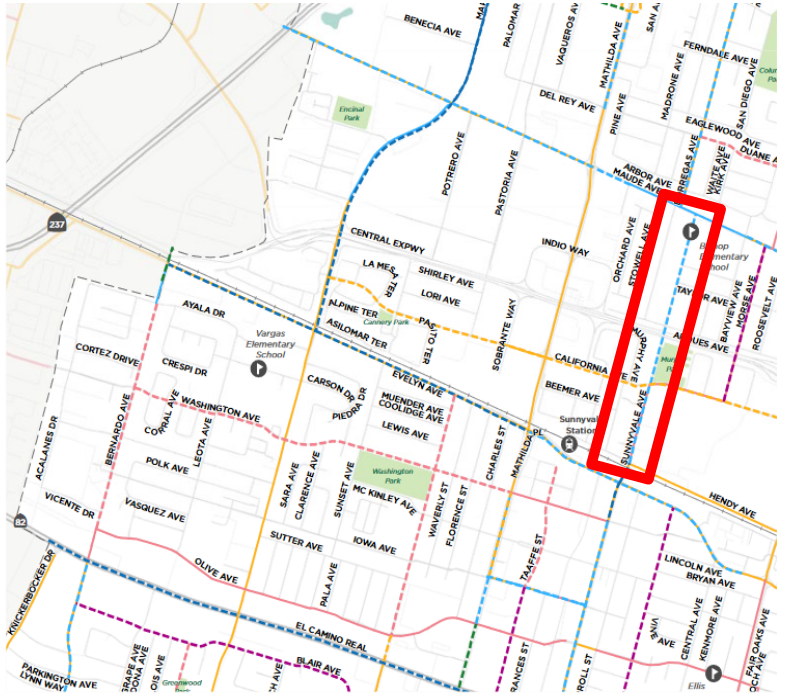
- Adopted by City Council on August 25, 2020
  - Bicycle Plan
  - Pedestrian Plan
  - Safe Routes to School Plan
  - To create a safe, connected and efficient citywide walking and bicycling network



Project Overview and Needs

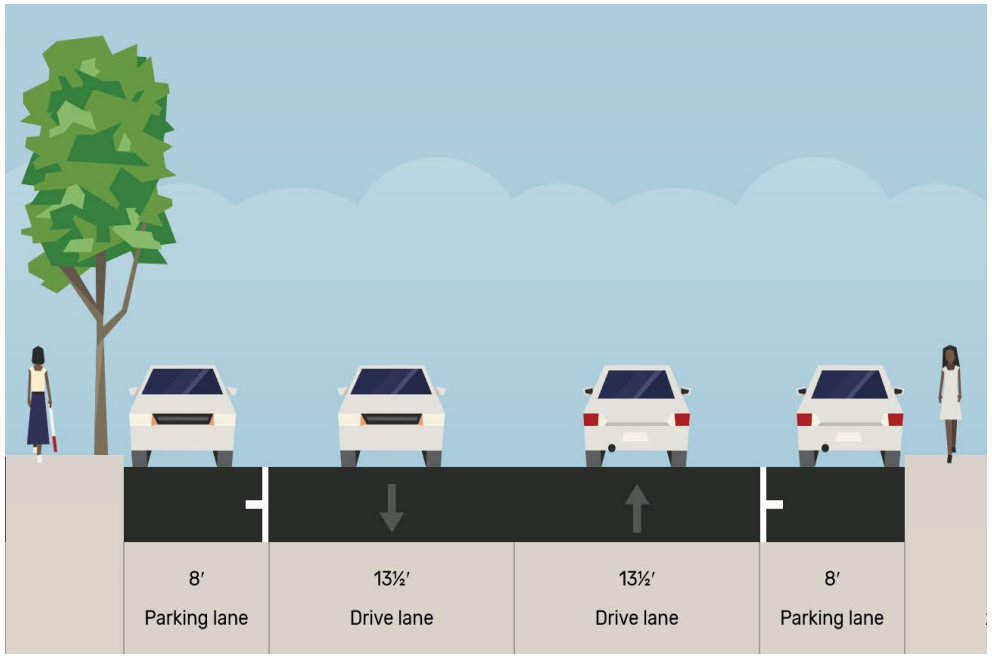
Active Transportation Plan (ATP)

- Recommended Bikeway on Sunnyvale Avenue
  - Proposed Class IIB Buffered Bicycle Lane
- Complete a high priority project identified in City's Active Transportation Plan
  - Community Identified Need
  - Equity
  - Access to Key Destinations
  - Collision Reduction

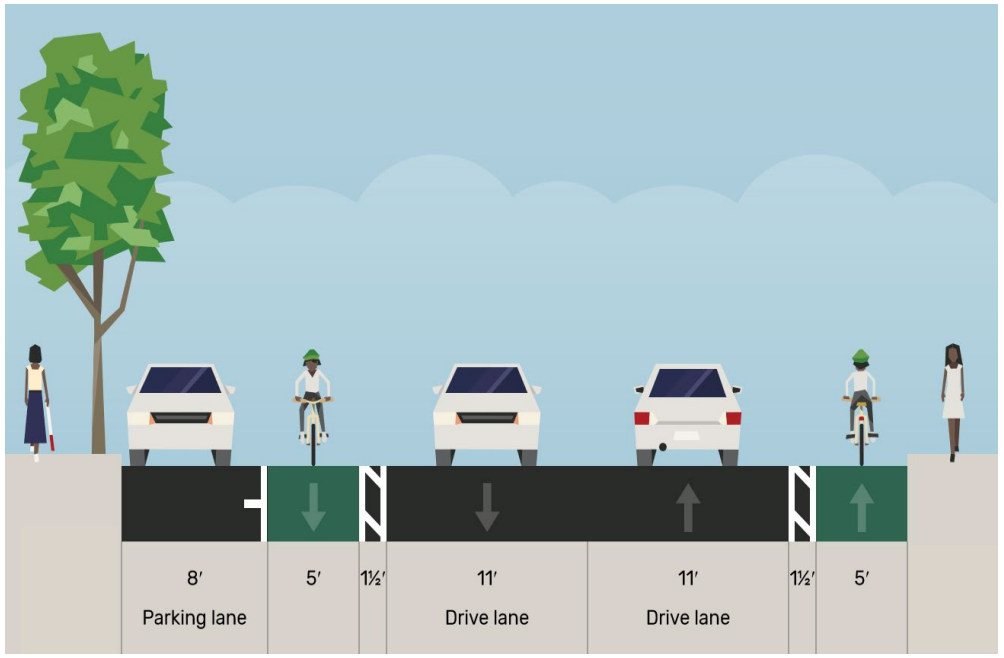


Sunnyvale Avenue between Maude Avenue and Arques Avenue Proposed Bicycle Improvements

Existing

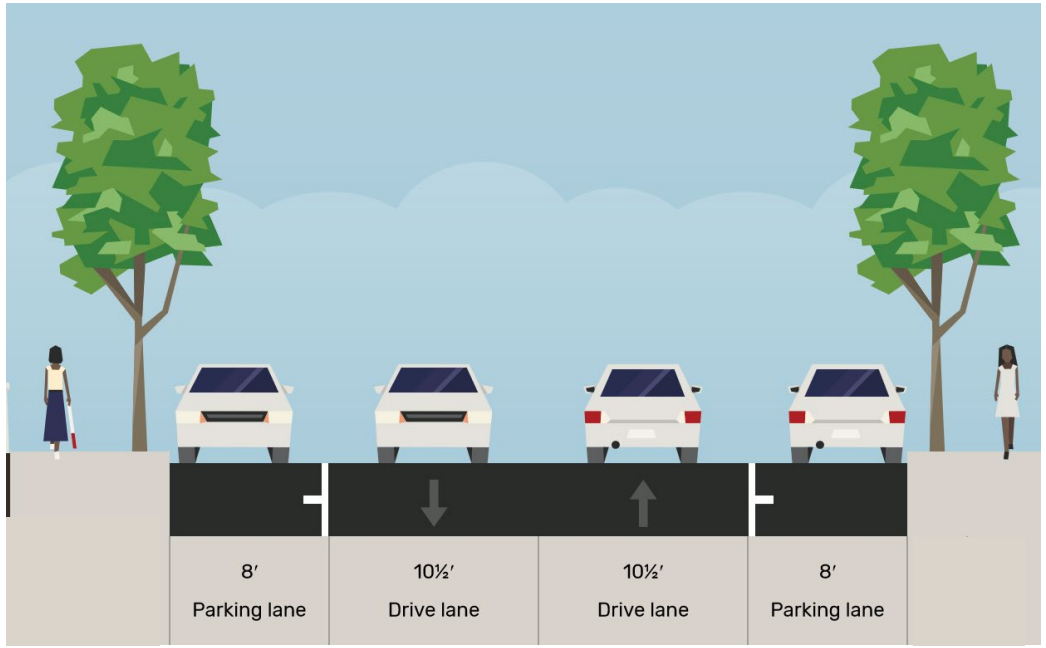


Proposed

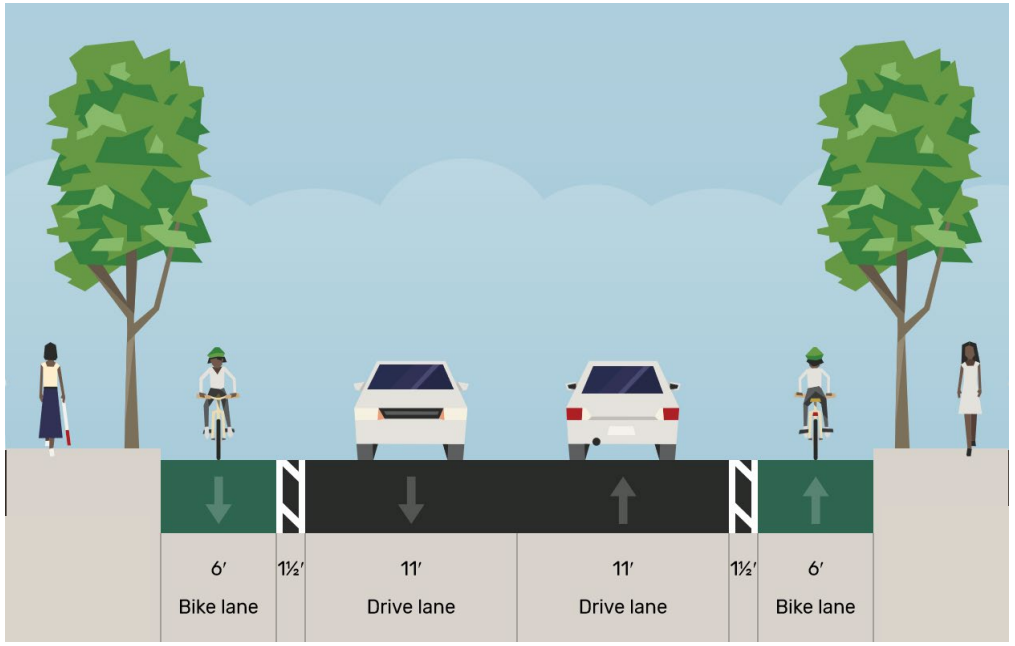


Sunnyvale Avenue between Arques Avenue to Hendy Avenue Proposed Bicycle Improvements

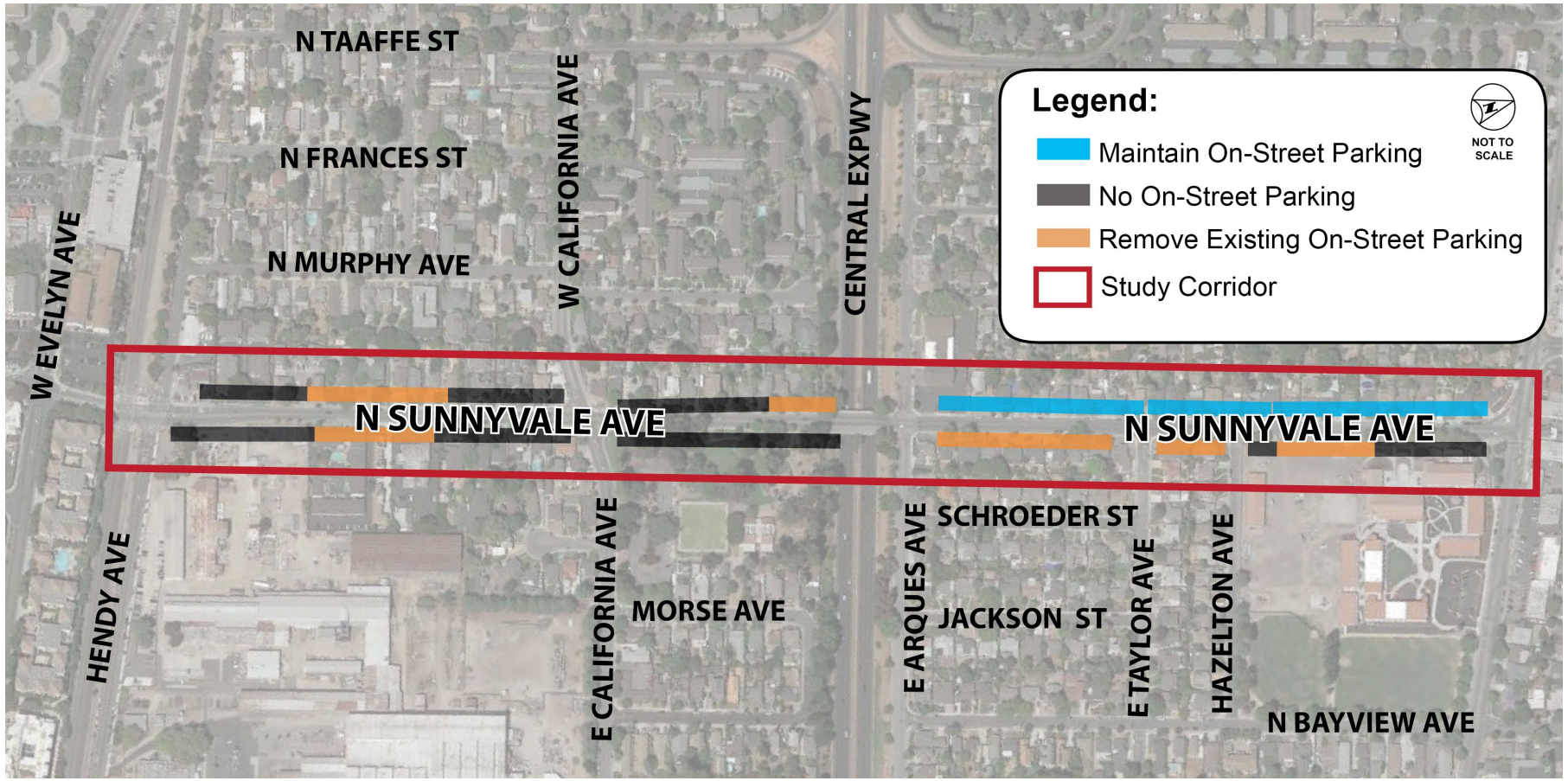
Existing



Proposed



Areas of Parking Modification

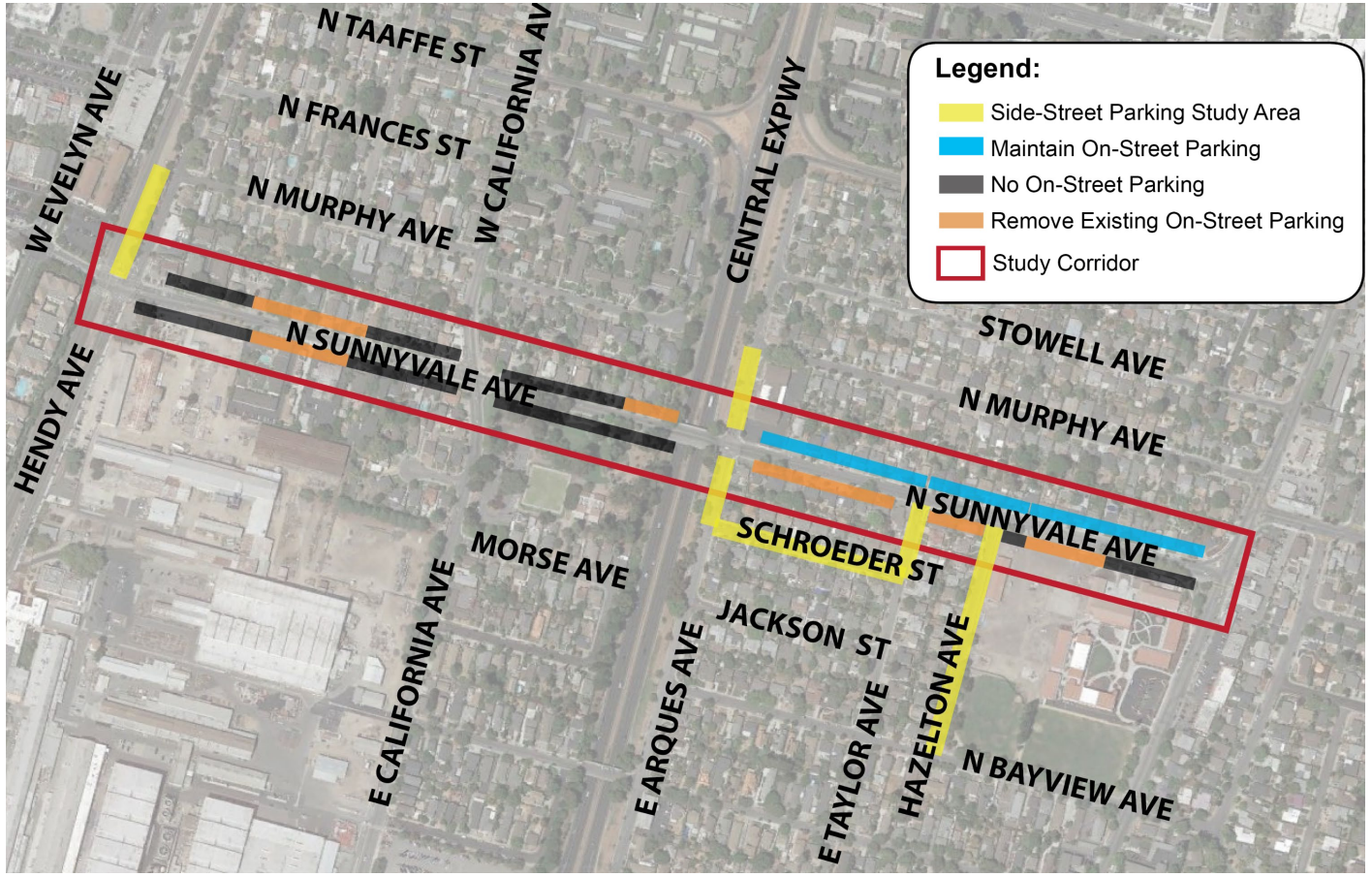


Agenda

Purpose of Meeting: Introduce project and solicit community feedback

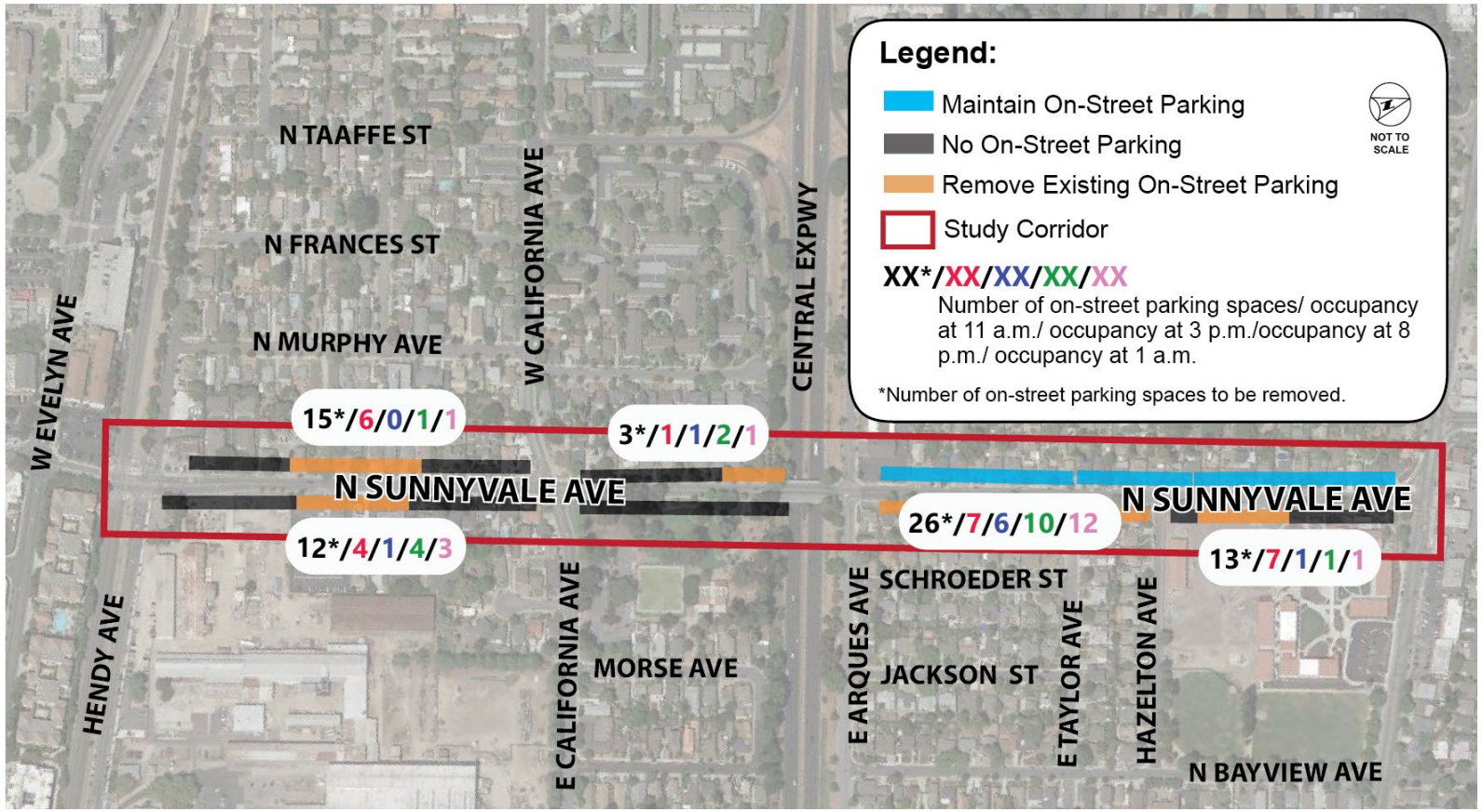
- Introductions
- Project Overview and Needs
- **On-Street Parking Study**
- Collision Analysis
- Online Survey
- Next Steps
- Questions and Comments

Sunnyvale Avenue On-Street Parking Study Area



- Collected Data:
  - Tuesday – Thursday, February 4 - 6, 2020
- Throughout the Day:
  - 11 AM
  - 3 PM
  - 8 PM
  - 1 AM

Sunnyvale Avenue On-Street Parking Study Summary



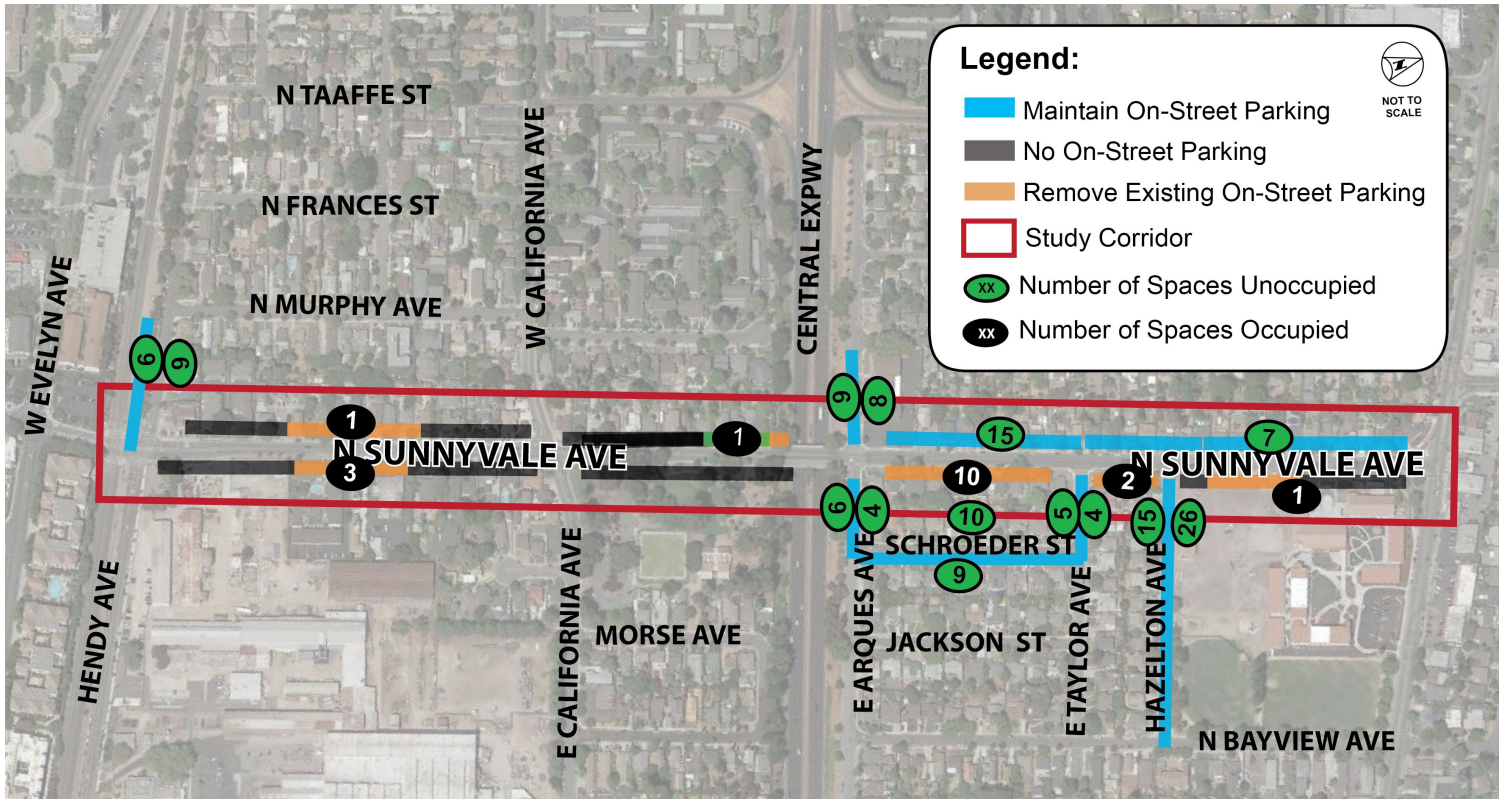
- Peak occupancy occurs at 1 AM
  - Mostly Residential Land Use
  - When Most Residents are Home
  - Data shown – average of three days of observation

Sunnyvale Avenue On-Street Parking Study Summary

	# Spaces Proposed to be Removed	# On-Street Parking Observed within Removal Area 1 AM
Between Maude Avenue and Arques Avenue		
East Side	39	13
Between Arques Avenue and Hendy Avenue		
West Side	18	2
East Side	12	3
Total	69	**18**

Parked vehicles that would be relocated

Sunnyvale Avenue On-Street Parking Study Summary – 1 AM



The surrounding roadway network can accommodate parked vehicles displaced from Sunnyvale Avenue.

Vehicles would be shifted around the corner to side-streets, or in some cases across the street.

Agenda

Purpose of Meeting: Introduce project and solicit community feedback

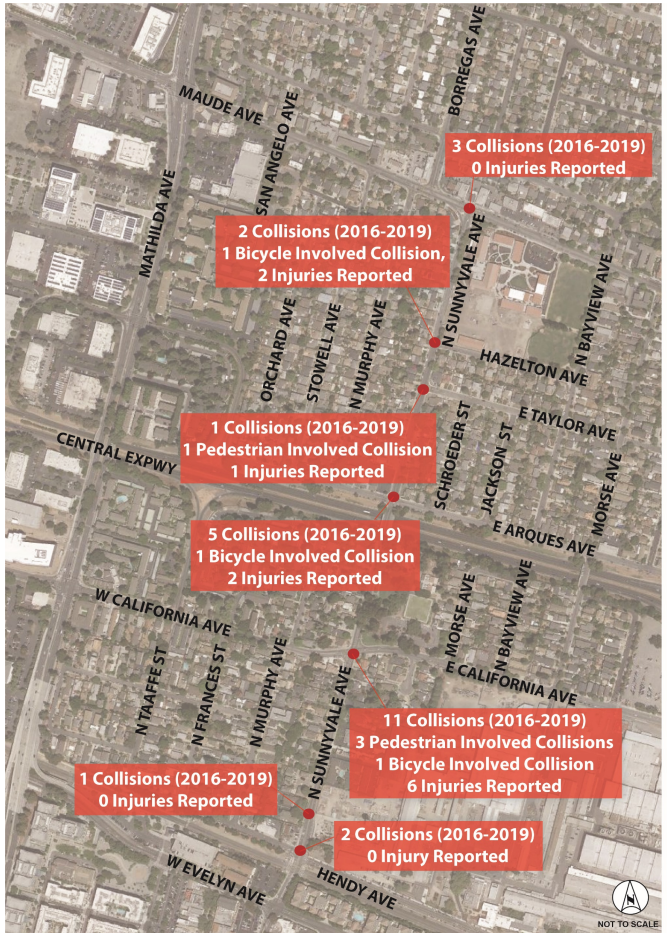
- Introductions
- Project Overview and Needs
- On-Street Parking Study
- **Collision Analysis**
- Online Survey
- Next Steps
- Questions and Comments

Collision Analysis – 2016 to 2019

- 25 collisions along Sunnyvale Avenue
- 7 involved bicyclists or pedestrians

Primary Collison Factor	Sunnyvale Avenue Corridor	
Improper Turning	5	20%
Pedestrian Violation	3	12%
Traffic Signals & Signs	4	16%
Unsafe Lane Change	2	8%
Unsafe Speed	2	8%
Driving Under the Influence	4	16%
Not Stated/Unknown	5	20%
Total	25 (100%)	

Source: City of Sunnyvale Department of Public Safety Crossroads Collision Database (2016-2019)

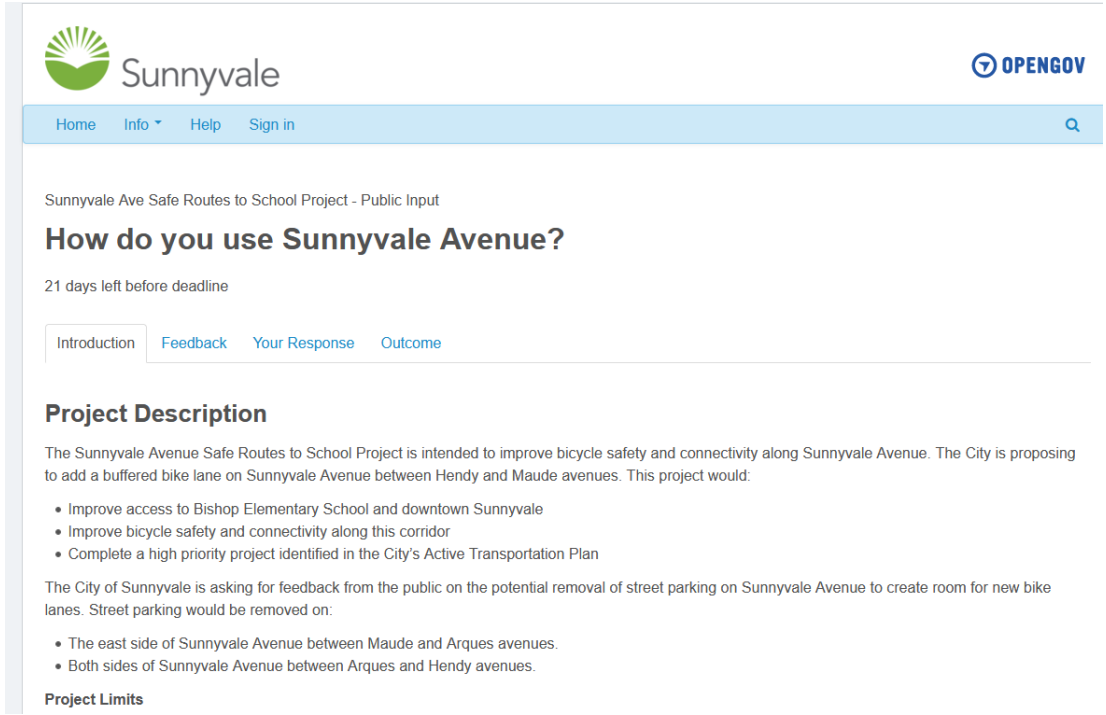


Agenda

Purpose of Meeting: Introduce project and solicit community feedback

- Introductions
- Project Overview and Needs
- On-Street Parking Study
- Collision Analysis
- **Online Survey**
- Next Steps
- Questions and Survey

Online Survey



Open now through **August 2, 2021**

https://www.opentownhall.com/10904

Agenda

Purpose of Meeting: Introduce project and solicit community feedback

- Introductions
- Project Overview and Needs
- On-Street Parking Study
- Collision Analysis
- Online Survey
- **Next Steps**
- Questions and Comments

Next Steps

Public Outreach Meeting

- Thursday July 29
  - Present project
  - Obtain input from Public

Online Survey

- Open through Monday Aug 2
  - Obtain input from Public

Bicycle and Pedestrian Advisory Commission

- Thursday Sept 16
  - Presents findings to BPAC

City Council

- Tuesday Sept 28
  - Presents findings to City Council
  - Receive directions on Next Steps

Agenda

Purpose of Meeting: Introduce project and solicit community feedback

- Introductions
- Project Overview and Needs
- On-Street Parking Study
- Collision Analysis
- Online Survey
- Next Steps
- **Questions & Comments**

How to Participate Today
To Provide Comments or Ask a Question

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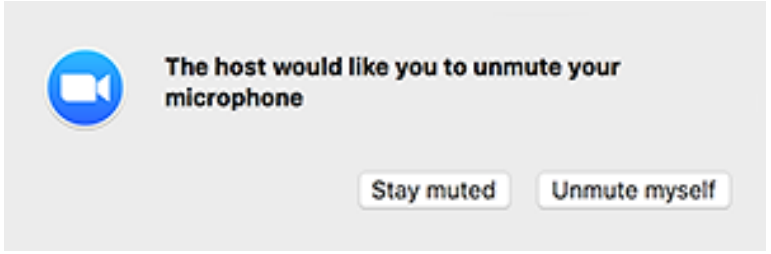

Raise Hand: Raise your hand in the webinar to indicate that you want to make a comment.

Q&A: Open the Q&A window, allowing you to ask questions.

- By Phone:
  - **Dial *9** to Raise Hand
  - **Dial *6** to Unmute

Questions or Comments?

Lillian Tsang, Principal Transportation Engineer

Ltsang@sunnyvale.ca.gov

408-730-7556

Project Information

Visit Sunnyvale.ca.gov

Search: “Transportation and Traffic Safety”

Online Survey

https://www.opentownhall.com/10904

Open now through **August 2, 2021**

Thank you!

Kimley»Horn

Appendix B: Questions Asked and Responses

Safe Routes to School Improvements Project on Sunnyvale Avenue

Community Public Outreach – Questions Asked

Compiled: August 2021

1. **What does this project include?**

The City is considering adding buffered bike lanes on Sunnyvale Avenue between Hendy and Maude avenues. To allow room to implement the bike lanes, this project is proposing to remove on-street parking on the east side of Sunnyvale Avenue between Maude and Arques avenues and both sides of Sunnyvale Avenue between Arques and Hendy avenues.

2. **Why is this project being considered?**

This project would improve access to Bishop Elementary School, Columbia Middle School, Murphy Park, and downtown Sunnyvale, providing students and residents alternatives to driving a car to improve health, decrease congestion and improving air quality. It would also improve bicycle safety and connectivity along the corridor. Providing buffered bike lanes was identified as a high priority project to connect north and south Sunnyvale in the City's recently approved Active Transportation Plan.

3. **What are the next steps for the proposed Sunnyvale Avenue Safe Routes to School project?**

You can still get involved with the project! The project will be presented to the Bicycle and Pedestrian Advisory Commission (BPAC) on September 16. The findings will be presented to City Council on September 28. Both meetings will include presentations and public comment periods.

4. **I can't attend the BPAC meeting or City Council meeting, how do I give my input?**

Questions and comments regarding the proposed project can be sent to Lillian Tsang: LTsang@sunnyvale.ca.gov

5. **Can you avoid parking removal by making Sunnyvale Avenue a one-way street?**

There are very few north-south roadways that cross both Central Expressway and the railroad tracks in this area. Making Sunnyvale Avenue a one-way street could significantly impact traffic circulation and emergency response times.

6. **Can you avoid parking removal by widening Sunnyvale Avenue and removing the park (landscape) strip?**

It is cost prohibitive to move the curb and gutter and reconstruct all of the residential driveways on the street. Additionally, portions of the corridor are narrower and do not have any park strip. Restriping the roadway as proposed would be the most cost-effective and would not involve any major construction.

7. **Why can't we just install some traffic calming measures such as roundabouts to maintain on-street parking?**

The goal of the project is to provide a dedicated bicycle facility for student and public use. Buffered bicycle lanes provide better safety due to bicyclist having an area of the roadway for their usage and having a buffer to provide some additional separation increases safety and comfort levels of users.

Installing traffic calming measure solely would still require bicyclists to share the lane with motorists and on more heavily traveled roadways such as Sunnyvale Avenue, motorists will be less inclined to stay behind bicyclists for the length of the street.

Per the City of Sunnyvale's City Council Policy 1.2.4 Traffic Calming and Neighborhood Traffic Calming Handbook, streets must be classified as "Residential" to be eligible for traffic calming measures; the City will not implement traffic calming measures on "arterial" or "residential collector" streets. Sunnyvale Avenue is a "Residential Collector" and therefore, is not eligible for traffic calming measures as implementing traffic calming measure would delay and slow down emergency vehicles responding to calls for service.

8. **Why can't we keep Sunnyvale Avenue the way it is and add bike lanes to another parallel street?**

There are very few north-south roadways that cross both Central Expressway and the railroad tracks in this area, so there are very limited options for providing connectivity on alternative streets. Additionally, there are no other signalized intersections between Mathilda Avenue and Fair Oaks Avenue along Maude Avenue, making access to or across Maude Avenue challenging for bicyclists to travel on parallel streets. Furthermore, directing bicyclists to other parallel streets will add out-of-direction travel for bicyclists and will increase travel time, which will make bicycling less attractive and the bike facilities on parallel streets likely will not get used. Also, in order to install bike lanes on parallel streets, on-street parking would need to be prohibited as well, similar to what is being proposed on Sunnyvale Avenue. Sunnyvale Avenue provides direct access to Bishop Elementary School, Murphy Park and downtown Sunnyvale, and it is already a heavily utilized corridor by bicyclists, therefore Staff believe Sunnyvale Avenue would be the most appropriate corridor to implement bicycle improvements. There is currently a gap in the bicycle network on Sunnyvale Avenue and adding bike lanes would provide network connectivity.

9. **Why do we even need bike lanes? Bikes can already ride on the street.**

Bike lanes are proven to improve the safety and comfort for bicyclists, which has been shown to increase the number of cyclists. Buffered bicycle lanes provide better safety due to bicyclist having an area of the roadway for their usage and having a buffer to provide some addition separation increases safety and comfort levels of users. Members of the community have expressed that with dedicated bike lanes, they would be more inclined to let their children bike to schools such as Columbia Middle School, Fremont High School, and Bishop Elementary School.

10. **I wouldn't feel comfortable walking home at night after parking further away from my house.**

Residents can park in their garage, driveway, or on the west side of Sunnyvale Avenue, in addition to around the corner. The longest block on the east side of Sunnyvale Avenue is between Arques Avenue and Taylor Avenue, which is 600 feet long. If a person did not choose to park across the street and lived mid-block, generally the longest walk would be approximately 300 feet.

11. **I missed the outreach event, how do I view the presentation?**

You can view the entire PowerPoint presentation under "Transportation Projects" at the following link:

https://sunnyvale.ca.gov/property/transportation/default.htm

Kimley»Horn

Appendix C: Survey Questions

Survey Questions

Please help us understand your preferred transportation mode(s) and need(s) by completing this survey.

Project Intro and Description

The Sunnyvale Avenue Safe Routes to School Project is intended to improve bicycle safety and connectivity along Sunnyvale Avenue. The City is proposing to add a buffered bike lane on Sunnyvale Avenue between Hendy and Maude avenues. This project would:

- Improve access to Bishop Elementary School and downtown Sunnyvale
- Improve bicycle safety and connectivity along this corridor
- Complete a high priority project identified in the City's Active Transportation Plan

The City of Sunnyvale is asking for feedback from the public on the potential removal of street parking on Sunnyvale Avenue to create room for new bike lanes. Street parking would be removed on:

- The east side of Sunnyvale Avenue between Maude and Arques Avenue
- Both sides of Sunnyvale Avenue between Arques and Hendy Avenue

Project Study Area

1A. Why do you use Sunnyvale Ave? (Select all that apply)

a. I'm a resident and live on Sunnyvale Avenue
b. I'm a resident and live in the area, but not on Sunnyvale Avenue
c. I use it to drop off my child(ren) at Bishop Elementary
d. I use it to access a business or my place of work
e. Other (fill in the blank)

1B. How often do you use the following modes of transportation along Sunnyvale Avenue in the project area (to downtown Sunnyvale, Murphy Park, or other destinations)? (Please select each option that applies)

Mode	**Everyday or Almost Everyday**	**A couple times a week**	**A couple times a month**	**Once a month or fewer**	**I don't use this mode**
Walk					
Bike/Scooter/Other Mobility Devices					
Take the bus					
Drive					
Rideshare (Uber/Lyft)					

1C. Do you park your vehicle on the street along Sunnyvale Avenue in the project area?

a. Yes
b. No

1D. If you park your vehicle on Sunnyvale Avenue in the study area, what is the reason for doing so? (Select all that apply)

a. I don't have any private parking at my residence (either a garage, space, or driveway)
b. It is more convenient for me to park on the street instead of on my private parking areas (either a garage, space, or driveway)
c. The private parking at my residence is occupied/used
d. To access Bishop Elementary School
e. To access a business or my place of work
f. To visit a friend or relative
g. Other

2. Would you be more likely to bike to places in the area (such as to downtown Sunnyvale, Murphy Park, or other destinations) if bike lanes were provided?
   a. Yes
   b. No

3. Do you have any children that attend Bishop Elementary?
    a. Yes
    b. No

3A. How does your child get to school at Bishop Elementary?

    a. Pick-up/drop-off in a vehicle
    b. Walk
    c. Bike/Scooter/Other Mobility Device
    d. Bus/Shuttle

3B. Would you consider letting your child bike to school at Bishop Elementary with new bike lanes?

    a. Yes
    b. No

4. What is your age?
    a. 16 or younger
    b. Between 17 and 29
    c. Between 30 and 49
    d. Between 50 and 64
    e. 65 or older
    f. Prefer not to answer

5. Comments (optional)

City of Sunnyvale

Agenda Item

21-0643 **Agenda Date:** 9/16/2021

REPORT TO BICYCLE AND PEDESTRIAN ADVISORY COMMISSION

SUBJECT

Discussion on VTA Measure B Education and Encouragement Program FY21-22 Potential Projects

2016 Measure B Bicycle & Pedestrian Education and Encouragement Program

The BIKE/PED E&E PROGRAM covers activities and the development and distribution of materials that are designed and intended to satisfy the following goals:

i. promote, educate, and/or encourage safe walking or bicycling for residents or visitors of every age and ability;
ii. communicate to residents and visitors the benefits of walking and bicycling; and
iii. communicate to school child

ELIGIBLE USE OF FUNDS

a. Organization and implementation of K-12 Safe Routes to Schools programs and activities.
b. Organization and implementation of Vision Zero programs. "Vision Zero" is defined by the Vision Zero Network Campaign as the "Strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all".
c. Organization and implementation of open streets events. "Open streets events" are defined by the Open Streets Project (an advocacy project and collaboration between 8 80 Cities and Street Plans) as "Programs that temporarily open streets to people by closing them to cars."
d. Creation and implementation of marketing to encourage mode shift towards active transportation.
e. Development and distribution of maps that promote places to walk or bike.
f. Education of walking and bicycling skills to adults and children.
g. Working with law enforcement officials to ensure common understanding and consistent application among law enforcement officials of traffic laws related to biking and walking.
h. Organization and implementation of broad or targeted safety campaigns to promote safe driving, walking, and bicycling behavior.*
i. Creation and distribution of marketing materials to encourage safe walking, biking, and driving.*
j. Purchase and distribution of bicycle helmets, lights, reflective vests, or other bicycle/pedestrian safety equipment to be used in education/encouragement activities.
k. Purchase and distribution of incentives for education/encouragement activities.
l. Organization and implementation of crosswalk stings or other activities that educate roadway users on traffic laws. Crosswalk stings are activities conducted by law enforcement to educate the public about crosswalk right of way laws that may or may not include citations.
m. Organization and implementation of special community events focused on achieving the BIKE/PED E&E PROGRAM goals, such as community rides or walks.
n. Energizer stations and other Bike to Work Day activities.
o. Implementation of valet bicycle parking.
p. Community-based bicycle/pedestrian surveys of facilities and surrounding areas to learn, observe, and identify bicycle and pedestrian hot spots.
q. Any other program or activity approved by VTA in writing.

*Any safety campaign or public service announcement targeted to motorists must focus on safe, responsible, and respectful motorist interactions with pedestrians and bicyclists.

City of Sunnyvale

Agenda Item

21-0475 **Agenda Date:** 9/16/2021

REPORT TO BICYCLE AND PEDESTRIAN ADVISORY COMMISSION

SUBJECT

BPAC 2022 Study Issue Sponsorship (Scenario 1)

BPAC 2022 Proposed Study Issues*

No.	Submitted Date	Study Issue Working Title	Summary of Scope	Staff Comments
1	12/8/2020	Bicycle and Pedestrian Infrastructure Bond Measure	The study will include consideration of financing options for the Active Transportation Plan (ATP). Given the City's constrained financial position, a new revenue source is needed to fund the projects included in the ATP. The study will review options to establish a funding source, most likely a new tax, to generate revenue needed to pay debt service on new bonds issued for the purposes of constructing ATP projects. The study will identify the process needed to establish a new tax, identify the amount of the tax needed to secure the debt necessary to construct the projects, and fund public polling to determine the likelihood of passage of a new tax by the voters. As this would be a special purpose tax, a two thirds majority is required for passage. As part of the study, staff will also explore the availability of Federal Grants or low interest loans (through the Transportation Infrastructure Financing and Innovation Act). The study will recommend a path forward to potentially provide funding through new revenues, and also identify potential funding options should a special tax fail at the ballot.	No staff comments.
2	2/22/2021	Parking Standards for Personal Electric Vehicles	This study issue will examine parking standards for Personal Electric Vehicles (PEVs, aka micro-mobility devices) such as e-bikes, scooters, e-skateboards, in commercial, office, and multi-family residential (R-3+) zoned areas. This study issue will evaluate the following: - The required number of PEV spaces per unit for residential developments or thousand square foot for office/commercial developments - Electric outlets requirements for PEV spaces - Pricing standards for charging stations - Number of required secured and unsecured spaces for PEVs - Fire safety requirements for PEV storage	The City has standards for secured and unsecured bicycle parking for new developments under the Sunnyvale Municipal Code. Secured bicycle parking spaces can be used for not only for bicycle parking but may also be used for PEV parking. Since personal transportation technologies are evolving rapidly, it will be difficult to set parking standards that would be applicable for all future PEV types.
3	4/16/2021	Roll In or Fully Enclosed Bike Parking Ordinance	The Study Issue would require staff to conduct outreach with retail/commercial developers to discuss the implications/issues of allowing customers to roll in their bikes or providing bike lockers or secure indoor bike storage; a market analysis may be required also. If changes are supported by the study, they will require modifications to the Sunnyvale Municipal Code which requires Planning Commission and City Council approval.	The City requires bike storage and Class I/Class II bicycle parking outside retail and commercial space and generally does not regulate the use of interior retail, commercial or office space. Secure bike parking is already required on most office developments for employees. The retail market, in particular, is changing and it may be difficult for retail tenants to use portions of their business for the access to and maintenance/control of the storage of public bicycles and other types of alternative transportation.

No.	Submitted Date	Study Issue Working Title	Summary of Scope	Staff Comments
4	4/20/2021	Simplify Sidewalk Riding Ordinance	The study will include a review of existing state laws, City Municipal Code, and adopted ordinances to identify what is currently mandated by the state law, and what kind of local ordinances can be adopted for the operations of bicycles and other personal mobility devices on the sidewalk. If bicycles and other personal mobility devices are allowed on sidewalk, the study will identify the appropriate speed for these devices focusing on pedestrian safety. If changes to the municipal code or adoption of new ordinances are supported by the study, they will require City Council approval. The study will also include a review of local ordinances and municipal codes adopted by other agencies. Furthermore, the study will include collision analysis involving bicycles and other mobility devices within the last five years in Sunnyvale. Lastly, the study will include public outreach to obtain feedback from the public on the study issue.	The city can only adopt local ordinances that are not already regulated or prohibited by state laws.

*The study issues have been proposed for future sponsorship

Toward the end of the calendar year, no later than October, boards and commissions will review the list of proposed study issues and officially vote on sponsorship for each individually listed study issue. Official sponsorship means that the study issue is approved for ranking with a majority vote of the board or commission. Staff will then prepare the sponsored study issue papers, including fiscal impact but not the staff recommendation.

The Study Issue Sponsorship Process can be found on the City website at www.sunnyvale.ca.gov by searching "Study Issues Overview".

Submit Study Issue Form by 8/8/2021 for sponsorship to take place in September 2021 (Scenario 1)

Submit Study Issue Form by 9/13/2021 for sponsorship to take place in October 2021 (Scenario 2)

City of Sunnyvale

Agenda Item

21-0294 **Agenda Date:** 9/16/2021

REPORT TO BICYCLE AND PEDESTRIAN ADVISORY COMMISSION

SUBJECT

BPAC 2021 Annual Work Plan

2021 Master Work Plan

Bicycle and Pedestrian Advisory Commission Annual Calendar

MEETING DATE	AGENDA ITEM/ISSUE
January 21	• Climate Action Playbook Progress Update (Presentation) • Ranking of 2021 Study Issues
February 18	• Discussion of Utility Bill Concepts • Discussion of TDA Funding
March 18	• Utility Bill Concept Designs • Council Ranking of Study Issues (Information item)
April 15	• Annual reporting on collisions involving pedestrians and cyclists (Presentation) • TDA Funding Recommendation • Maude Avenue Bike Lanes – Post Study • Annual Slurry Seal List (Information item)
May 20	• Review Recommended Budget
June 17	• Recognition of Service (Presentation) • Java Drive Road Diet (Presentation) • Lawrence Station Area Plan - Sense of Place Plan (Presentation) • Utility Bill Stuffer Update (Information item)
July 15	• Vision Zero Plan Progress Update (Presentation) • Lawrence Station Area Sidewalks and Bicycle Facilities – Willow Avenue Bicycle Improvement • Selection of Chair and Vice Chair
August 19	• Active Transportation Plan Progress Update (Presentation)
September 16	• Study Issues Sponsorship (for Scenario 1) • VTA Measure B Education and Encouragement Potential Projects
October 21	• Safe Routes to School Coordinator Update (Presentation) • Final month to Propose Study Issues • Study Issues Sponsorship (for Scenario 2, if necessary) • Review Sponsored Study Issues Write-up (for Scenario 1 only)
November 18	• Climate Action Playbook Progress Update (Presentation) • Approve 2022 Master Work Plan
December 16	• Final month to Approve 2022 Master Work Plan

MEETING DATE	AGENDA ITEM/ISSUE
	• Final month for Annual Review of Code of Ethics and Conduct for Elected and Appointed Officials

Additional items yet to be scheduled:

- Study Issues may be proposed at any meeting throughout the year
- Active Transportation Program Grant – Safe Route to School Project
- Active Transportation Program Grant – SNAIL & San Miguel Neighborhoods Active Transportation Improvements
- Bernardo Avenue Bicycle/Pedestrian Undercrossing
- Bicycle and Pedestrian Access Improvements at Sunnyvale Caltrain Station
- Caltrain Grade Separation (Mary Avenue and Sunnyvale Avenue crossings)
- El Camino Real Specific Plan
- Mary Avenue Freeway Overcrossing
- Moffett Park Specific Plan Update
- Stevens Creek Trail Extension Project
- Homestead Road Full-time Bike Lane Study

City of Sunnyvale

Agenda Item

21-0295 **Agenda Date:** 9/16/2021

REPORT TO BICYCLE AND PEDESTRIAN ADVISORY COMMISSION

SUBJECT

Active Items List September 2021

Item #	Item	PM	Due Date (Approx)	Status	Last Updated
1	Homestead Road Bike Lanes Study	Deen	2022	The City expects to release a Request for Proposals in fall 2021. The project is anticipated to begin in winter 2021.	8/19/2021
2	Utility Bill Insert	Tsang	Annual	The 2021 Utility Bill Insert was mailed out with the Utility Bill in July/August 2021.	8/19/2021
3	Bernardo Caltrain Under-crossing	Obeso	TBD	The project team is currently evaluating the different project options based on the feedback provided at the December 2020 Joint BPAC meeting. The project team is currently coordinating with Caltrain and County of Santa Clara on the options. The Caltrain Board of Directors approved the compatibility variance request at their June 3, 2021 meeting and the project team is beginning agreements with Caltrain staff. The modified project options will be presented at the future community public outreach meeting, which is planned for fall 2021.	8/19/2021
4	Caltrain Grade Separation Feasibility Study	Obeso	TBD	The City is currently refining concept designs and completing preliminary traffic analysis related to grade separation at both Mary and Sunnyvale Avenues. Public outreach meetings will occur in late 2021/early 2022. City Council will review the results at a meeting in spring 2022.	8/19/2021
5	Road Overlay, Slurry, Reconstruction & Chip Schedule	Ng	Annual	List was included in April 2021 BPAC meeting agenda packet.	5/20/2021
6	Stevens Creek Trail Extension	Obeso	TBD	Sunnyvale partnered with Mountain View in the application of the Measure B Bike/Ped Competitive Grant for capital projects for the environmental study and design of the Stevens Creek Trail extension from the Dale/Heatherstone bike-pedestrian overcrossing to West Remington Drive/Mountain View High School. The application was accepted and the grant amount would be $4.8 million. The City of Mountain View and VTA are in the process of finalizing the grant allocation timeline. Sunnyvale also submitted an application for the segment between W. Remington Dr. and W. Fremont Avenue. The application for the environmental study and design phases were accepted and the grant amount would be $3.5 million. Grant was accepted by City Council on April 20, 2021. VTA and staff will coordinate on project schedule and next steps.	5/20/2021
7	Bike to Work Day	Tsang	Annual	Silicon Valley Bicycle Coalition Bike to Wherever Day 2021 will be held on Friday May 21, 2021. Due to COVID-19, the City will not host Energizer Stations this year.	4/15/2021
8	East-West Channel Trail	Ng	TBD	This project is to provide trails along the Sunnyvale East and West Channels via installation of paving on the Santa Clara Valley Water District's maintenance road. Approximately 1.7 new miles of trails will be constructed. The West Channel trail will extend from Caribbean Drive to Mathilda Avenue, and the East Channel trail will extend from Caribbean Drive to Moffett Park Drive. Valley Water is managing the Sunnyvale East and West Channel Flood Protection Project (Project). Design is 99% complete. The Project includes paved trail improvements along both channels in north Sunnyvale. Valley Water is awaiting approval of regulatory permits before advertising the construction bid. Valley Water anticipates Project construction to begin in late 2021. The project should be complete by December 2023. Part of this Project includes partnering with Google to enhance 1,100-feet of the West Channel. This is part of Google's proposed site development at Caribbean Drive. Currently, Valley Water is working with Google on an agreement. The agreement will outline short-term and long-term responsibilities related to the West Channel. This enhancement of the West Channel will provide mitigation opportunities for Valley Water.	2/18/2021

City of Sunnyvale

Agenda Item

21-0465 **Agenda Date:** 9/16/2021

REPORT TO BICYCLE AND PEDESTRIAN ADVISORY COMMISSION

SUBJECT

2021 Deferred Study Issues

2021 Deferred Study Issues

Number	Name	2021 Ranking Results
DPW 21-01	Bike Lanes on Hollenbeck Avenue between El Camino Real and Homestead Road	Deferred by BPAC
DPW 21-02	Community Driven Active Transportation Plan Amendment Process	Deferred by BPAC
DPW 21-05	Pedestrian Improvements on Marion Way between Norman Drive and Oriole Avenue	Ranked by City Council Below the line

Notes:
These study issues will be brought back to BPAC in 2022 for ranking.
The Study Issue Papers can be found on the City website at www.sunnyvale.ca.gov by searching "Proposed Study Issues".