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**1412, 1438, 1500 AND 1514 CAPITOLA ROAD
MIXED-USE DEVELOPMENT
TRAFFIC IMPACT ANALYSIS**

DRAFT REPORT

SANTA CRUZ COUNTY, CALIFORNIA

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June 11, 2019



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1 INTRODUCTION

This report summarizes the potential traffic circulation impacts associated with the proposed mixed-use project at 1412, 1438, 1500 and 1514 Capitola Road in the Live Oak neighborhood of Santa Cruz County, California. The study project is composed of MidPen Housing's 56 affordable rental housing units (plus 1 manager's unit), clinics and office space for the Santa Cruz Community Health Centers and Dientes Community Dental, and a small amount of commercial retail space.

Vehicular, pedestrian, bicycle and transit circulation issues were evaluated at the project site and the immediately surrounding street network. The project site is located on Capitola Road, between 15th and 16th Avenues in unincorporated Santa Cruz County. The locations of the project site and study area are indicated on **Exhibit 1**. The site plan is shown on **Exhibit 2**.

1.1 Scope of Work

This report addresses the following topics:

- Existing vehicular, pedestrian and bicycle circulation at the project access and the surrounding street network.
- Assessment of potential impacts to vehicular, pedestrian, bicycle and transit circulation due to the project, and recommendations to minimize or alleviate those impacts.
- Assessment of potential cumulative traffic impacts.
- Site access and on-site circulation assessment.
- Parking demand and supply evaluation.

1.2 Study Network

The AM and PM peak periods were analyzed at the following 13 intersections:

1. 15th Avenue / Capitola Road;
2. 16th Avenue / Capitola Road;
3. 17th Avenue / Capitola Road;
4. Chanticleer Avenue / Capitola Road;
5. 17th Avenue / Soquel Avenue;
6. 17th Avenue / Market Driveway;
7. 17th Avenue / Brommer Street;
8. East Cliff Drive - 17th Avenue / East Cliff Drive - Portola Drive;
9. 7th Avenue / Capitola Road;
10. 7th Avenue / Brommer Street;
11. Capitola Road / Soquel Avenue;

12. 7th Avenue / Soquel Avenue; and
13. Soquel Avenue / Soquel Avenue - Soquel Drive.

In addition, the project driveways on Capitola Road are also analyzed.

The study intersections of this analysis were determined in consultation with Santa Cruz County staff.

Exhibit 3 shows the existing traffic control and lane configurations at the study intersections.

Traffic operations for the following analysis scenarios were analyzed, as required by Santa Cruz County:

- Existing Conditions
- Existing Plus Project Conditions
- Background Without Project Conditions
- Background Plus Project Conditions
- Cumulative Without Project Conditions
- Cumulative Plus Project Conditions

Improvements recommended to offset impacts created by the proposed project is recommended where warranted.

1.3 Traffic Operation Evaluation Methodologies

Intersection traffic operations were evaluated based upon the level of service (LOS) concept. LOS is a qualitative description of an intersection's operations, ranging from LOS A to LOS F. Level of Service "A" represents free flow uncongested traffic conditions. Level of Service "F" represents highly congested traffic conditions with unacceptable delay to vehicles at intersections. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes. The analysis was performed using the *Highway Capacity Manual 6th Edition* (HCM 6th Edition) methodologies. LOS descriptions for each type of existing traffic control at the study intersections (i.e., signal and one-way stop) are included as **Appendix A**.

Intersection traffic operations were evaluated using the Synchro© traffic analysis software (Version 10) which is based on HCM 6th Edition methodologies. The average delay is correlated to a level of service. For two-way stop-controlled intersections, only the vehicle delay for side street traffic is analyzed. LOS for each side street movement is based on the distribution of gaps in the major street traffic stream and driver judgment in selecting gaps. For signalized intersections, the overall intersection delay is used to determine LOS.

The critical volume-to-capacity (v/c) ratios were quantified to determine project impacts at signalized and all-way stop controlled study intersections under the jurisdiction of Santa Cruz County, using data from the Synchro© 10 software and the HCM 6th Edition methodologies. The critical v/c calculations can be found in **Appendix L**. More information regarding the use of critical v/c in determining impacts can be found in Section 1.7.

1.4 Level of Service Standards

The study area covers the jurisdictions of multiple public agencies, including Santa Cruz County and the City of Santa Cruz.

The Santa Cruz County overall and side-street level of service objective is LOS C, but LOS D is acceptable where costs, right-of-way requirements, or environmental impacts of maintaining LOS under this policy are excessive or capacity enhancement may be considered infeasible. The Santa Cruz County level of service standard applies to Intersections #1-10 and 12-13.

The City of Santa Cruz overall level of service standard is LOS D. This level of service only applies to Intersection #11 – Capitola Road / Soquel Avenue.

1.5 Modeling of Right Turn on Red (RTOR)

All the signalized study intersections allow right turns on red (RTOR), which generally reduce the overall intersection delay, thus improving the overall intersection level of service. They therefore affect the intersection LOS calculations. There are several options to model right turns on red with different traffic analysis software packages, but the only method prescribed by the HCM for modeling RTOR is to reduce the input volumes to account for vehicles turning right on red. Where an exclusive right turn lane movement runs concurrent with a protected left turn phase from the cross street, the HCM allows for the right turn volume to be reduced by the number of simultaneous left turners. However, the length of the right turn lane affects the number of vehicles that can turn right on red. This is because a short right turn lane can result in right turning vehicles being trapped in the queue with vehicles in the through lane. For the purposes of this analysis, it is assumed that no vehicles would be able to turn right on red at any of the study intersections.

1.6 Modeling of U-Turn Movements

Some of the study intersections allow U-turn movements. The HCM 6th Edition cannot model U-turn movements. Hence, this analysis models U-turn movements as additional left turn volumes.

1.7 Significance Criteria

According to the California Environmental Quality Act (CEQA) guidelines, a project may have a significant effect on the environment if it would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. The study intersections are under the jurisdiction of Santa Cruz County and the City of Santa Cruz. The following significance criteria have been used within this study, based upon the jurisdiction of each study intersection:

1.7.1 Santa Cruz County

For the purposes of this analysis, a significant impact would occur if any of the following conditions are met at a Santa Cruz County intersection:

Signalized and All-Way Stop-Controlled Intersections:

- A significant impact would occur if a signalized or all-way stop-controlled intersection operating at LOS A, B, C or D degrades to LOS E or F with the addition of project traffic; or
- For signalized and all-way stop intersections already operating at LOS E or F, a significant impact would occur if the addition of project trips causes the volume / capacity ratio of the sum of all critical movements to increase by at least 1%, as compared to conditions without the project.

One-Way and Two-Way Stop-Controlled Intersections:

- A significant impact would occur if the side-street operations of a one-way or two-way stop-controlled intersection already operating at LOS A, B, C, D or E degrades to LOS F with the addition of project traffic; or
- For unsignalized one-way and two-way stop-controlled intersections with side-street operations already operating at LOS F, a significant impact would occur if a signal warrant is also met at the intersection.

1.7.2 City of Santa Cruz

For the purposes of this analysis, a significant impact would occur in either of the following two conditions at City of Santa Cruz intersections:

Signalized and All-Way Stop-Controlled Intersections:

- A significant impact would occur if a signalized or all-way stop-controlled intersection operating at LOS A, B, C or D degrades to LOS E or F; or
- For signalized or all-way stop-controlled intersections with side-street operations already operating at LOS E or F, a significant impact would occur if the addition of project trips causes the intersection volumes to increase by more than 3.0 percent (3.0%), as compared to conditions without the project.

One-Way and Two-Way Stop-Controlled Intersections:

- A significant impact would occur if the side-street operations of a one-way or two-way stop-controlled intersection operating at LOS A, B, C or D degrades to LOS E or F; or
- For the side-street operations of a one-way or two-way stop-controlled intersection intersections already operating at LOS E or F, a significant impact would occur if the addition of project trips causes the intersection volumes to increase by more than 3.0 percent (3.0%), as compared to conditions without the project.

1.8 Roadside and Transportation Fees

Santa Cruz County assesses both a Roadside Improvement Fee (RIF) and a Transportation Improvement Fee (TIF) for all development projects in Aptos, Live Oak, Pajaro Valley and Soquel. These fees provide funding for transportation related infrastructure improvements in the Santa Cruz County Capital Improvement Program. The actual fee varies by area and is updated yearly.

The RIF and TIF are assessed based on the number of residential units and the trip generation of non-residential uses. The actual amount owed by the project towards the RIF and TIF will be determined by Santa Cruz County, based upon the project definition.

2 EXISTING TRAFFIC CONDITIONS

This chapter evaluates Existing traffic conditions and includes a description of the project setting.

2.1 Existing Traffic Network

The project site is located on Capitola Road between 15th and 16th Avenues in the Live Oak neighborhood of Santa Cruz County. The site is bordered by residential and commercial properties.

The site would be accessed via Capitola Road. Regional access to the project site is provided by Capitola Road and 17th Avenue. Other roadways serving the study area include 7th Avenue, 15th Avenue, 16th Avenue, Brommer Street, Chanticleer Avenue, East Cliff Drive, Portola Drive, Soquel Avenue and Soquel Drive. A brief description of each roadway can be found below.

Capitola Road is an east-west arterial street through Live Oak, connecting Santa Cruz with Capitola. Capitola Road is a major commute corridor between the two cities, as well as providing local circulatory functions in Live Oak itself. The roadway varies in width from a two-to four-lane roadway. Near the project site, it is a two-lane roadway with a center two-way left turn lane west of 17th Avenue and a four-lane roadway with left-turn lanes at major streets between 17th and Chanticleer Avenues. The posted speed limit on Capitola Road is 35 miles per hour (mph) between Soquel Avenue and 7th Avenue, and 30 mph east of 7th Avenue.

7th Avenue is a two-lane, north-south arterial street in Live Oak, extending between the Santa Cruz Yacht Harbor to the south and Soquel Avenue to the north. The speed limit on 7th Avenue is 25 mph.

15th Avenue is a two-lane, north-south local street in Live Oak, providing access to residential neighborhoods north of Capitola Road and west of 17th Avenue. The presumed speed limit on 15th Avenue is 25 mph.

16th Avenue is a two-lane, north-south local street in Live Oak, providing access to residential neighborhoods north of Capitola Road and west of 17th Avenue. The presumed speed limit on 15th Avenue is 25 mph.

17th Avenue is a two-lane, north-south arterial street in Live Oak. It connects the coastal neighborhoods near Monterey Bay to Soquel Avenue and the State Route 1 / Soquel Drive interchange. The posted speed limit on 17th Avenue is 30 mph.

Brommer Street is a two-lane, east-west arterial street in Live Oak. To the west, it provides access to the northern end of the Santa Cruz Yacht Harbor. To the east, it provides access to southern Capitola. The posted speed limit on Brommer Street is 25 mph.

Chanticleer Avenue is a two-lane, north-south collector street in Live Oak. It provides regional access in Live Oak east of 17th Avenue, as well as to Live Oak Elementary School. The posted speed limit on Chanticleer Avenue is 25 mph.

East Cliff Drive is a two-lane, east-west arterial street, connecting the Santa Cruz Yacht Harbor with the unincorporated Pleasure Point neighborhood south of Capitola. East Cliff Drive provides both regional and neighborhood access to the residential neighborhoods along Monterey Bay. The posted speed limit on East Cliff Drive is 25 mph.

Portola Drive is an east-west arterial street through Live Oak and Pleasure Point. It provides a more direct route through the Pleasure Point neighborhood than East Cliff Drive, which it parallels east of 17th Avenue. It also provides access to Capitola Village, the commercial and residential center of Capitola. The posted speed limit on Portola Drive is 30 mph.

Soquel Avenue is an east-west arterial street, connecting Santa Cruz with Capitola. Soquel Avenue is composed of multiple distinct sections. It extends eastward from downtown Santa Cruz as a four-lane arterial street, including past Capitola Road. It continues as a four-lane arterial street into unincorporated Santa Cruz until reaching Soquel Drive. East of Soquel Drive, Soquel Avenue is a two- to four-lane arterial street, fronting State Route 1 to nearly 41st Avenue in Capitola. The speed limit on Soquel Drive is 25 mph in Santa Cruz, 35 mph between the Santa Cruz city limit and Soquel Drive, and 35 mph east of Soquel Drive.

Soquel Drive is an east-west arterial street in Santa Cruz County, serving as the backbone of the roadway network of the county between Santa Cruz and Aptos. It provides access to major uses such as Dominical Hospital and Cabrillo College, as well as the residential neighborhoods and commercial districts in Soquel and Aptos north of State Route 1. In the vicinity of the project study area, it is a four-lane arterial street. The posted speed limit on Soquel Drive in the study area is 35 miles per hour east of Soquel Avenue.

2.2 Existing Pedestrian Network

Sidewalks are present on all sides of all streets in the vicinity of the project site. These sidewalks are continuous onto adjacent streets and into adjacent neighborhoods with no discontinuities. Marked crosswalks are located at all signalized intersections near the project site, as well as across 15th and 16th Avenues at their intersections with Capitola Road. There is also a marked crosswalk with advance warning signs across Capitola Road at 15th Avenue, near the western side of the project site.

2.3 Existing Bicycle Network

There are four types of bicycle facilities defined by Caltrans. Each type is described below:

1. Bike path (Class I) – A completely separate right-of-way designed for the exclusive use of bicycle and pedestrian traffic with cross-flow minimized.
2. Bike lane (Class II) – A striped lane for one-way bike travel on a street or highway, typically including signs placed along the street segment.
3. Bike route (Class III) – Provides a shared use with pedestrian or motor vehicle traffic. Typically, these facilities are city streets with signage designating the segment for Bike Route without additional striping or facilities.
4. Separated Bikeways (Class IV) – A bikeway for the exclusive use of bicycles and includes a separation between the bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

Near the project site, Class II bike lanes are present on all of Capitola Road and 17th Avenue. These connect to Class II bike lanes on other streets in the study area, including 7th Avenue, Brommer Street, Chanticleer Avenue, East Cliff Drive, Portola Drive, Soquel Avenue and Soquel Drive. It is therefore possible to travel continuously in Class II bike lanes from Santa Cruz or Capitola to the project site.

2.4 Existing Transit Service

Santa Cruz Metropolitan Transit District (SCMTD) provides fixed-route bus service in Santa Cruz County. SCMTD provides three lines in Santa Cruz County, plus intra-county service to San Jose and Paratransit services. Route 69A/W is the only bus route servicing the project site. Route 69A/W connects downtown Santa Cruz with downtown Watsonville via Capitola (69A/W) and Soquel (69W only), providing service roughly every half-hour on weekdays and weekends. The nearest bus stops to the project site are located on Capitola Road at 15th Street (eastbound) and 16th Street (westbound). Both of these stops are located adjacent to the project site.

2.5 Existing Conditions Traffic Circulation

2.5.1 Vehicle Circulation

Traffic volumes at the study intersections were collected during the AM (7:00 – 9:00 AM) and PM (4:00 – 6:00) peak hours on Thursday, November 8, 2018. Traffic data was collected for cars, trucks, buses, bicyclists, and pedestrians. From these counts, the AM and PM peak hour volumes were determined. **Appendix B** contains the traffic count data collected at these study intersections.

Exhibit 4 depicts the peak turning movement volumes for the study intersections under Existing Conditions.

Existing intersection levels of service are summarized on **Exhibit 5A**. Recommended intersection improvements are summarized on **Exhibit 5B**. The LOS calculation sheets for Existing conditions can be found in **Appendix C**.

All of the 13 study intersections currently operate at or better than their respective level of service standards.

2.5.2 Pedestrian Circulation

There is a moderate amount of pedestrian traffic at the study intersections, averaging about 10-15 pedestrians per hour crossing each approach at the signalized and all-way stop controlled intersections. The pedestrian activity spikes to upwards of 40 pedestrians per hour near schools (AM) and near major shopping areas (PM). Pedestrian activity is lower crossing uncontrolled approaches such as Capitola Road, with a peak activity of 10 pedestrians per hour crossing in the marked crosswalk at 15th Avenue.

2.5.3 Bicycle Circulation

There is also a moderate amount of bicycle traffic at the study intersections, averaging 7-10 bicycles per hour in each direction on the most used corridors, including 17th Avenue, Brommer Street, Capitola Road, East Cliff Drive, Soquel Avenue and Soquel Drive. Peak activity of over 10 bicycles per hour per directions occurs on Brommer Street, Capitola Road, Portola Drive, Soquel Avenue, and Soquel Drive. Bicyclists appear to be traveling both to and from school and to and from work.

3 EXISTING PLUS PROJECT CONDITIONS

3.1 Project Description

3.1.1 Project Definition

The proposed project is composed of the following elements:

1. MidPen Housing Development:
 - a. 56 affordable rental apartments, plus 1 manager's unit
 - b. Community building and open green space including BBQs, seating, and children's playscapes
2. Dientes Community Dental ("Dientes")
 - a. Clinic: 5,552 square feet
 - b. Office (Administrative): 5,486 square feet
3. Santa Cruz Community Health Centers ("SCCHC"):
 - a. Clinic: 11,386 square feet
 - b. Office (Administrative): 6,603 square feet
4. Pharmacy: 1,308 square feet

The apartments and pharmacy would be new to the area. The Dientes clinic would also be new, augmenting the services of the existing Dientes clinics in Santa Cruz County, including the nearby clinic on Commercial Way near the intersection of Thurber Lane and Soquel Drive (see **Exhibit 1**). However, the Dientes office space would be relocated from its existing location on Soquel Avenue east of Chanticleer Avenue in Live Oak (see **Exhibit 1**). The SCCHC clinic and offices would also relocate from their existing location in the Twin Lakes neighborhood at the East Cliff Village Shopping Center between 17th and 14th Avenues (see **Exhibit 1**). The total relocated clinic and office space on the project site will be larger than at either of the current sites.

Note: The above project definition is as of May 7, 2019. Subsequent minor modifications to the project site plan have slightly modified the building sizes. However, these changes would not significantly affect the results of the analysis summarized in this report.

The project site is largely vacant, but does include two residences, one of which is currently uninhabited. To be conservative, no credit has been taken for these current site uses.

3.1.2 Project Access

As shown on the site plan in **Exhibit 2**, the project will have two driveways on Capitola Road, one directly opposite the 15th Avenue / Capitola Road intersection (West driveway) and one slightly offset from the 16th Avenue / Capitola Road intersection (East driveway). Due to their proximity to the intersections, both driveways are analyzed as fourth approaches to the two intersections.

The east driveway will be restricted to right turns in and right turns out only (“RIRO”). This is due to the 40-foot offset from 16th Avenue, which would require left turns into and out of the driveway to cross over the existing eastbound Capitola Road left turn lane. If allowed, the lefts into and out of the driveway would conflict with traffic in the eastbound Capitola Road left turn lane, creating a potential safety hazard.

The west driveway will largely be a full-access driveway, except that left turns of the driveway will be prohibited during the weekday evening peak period (i.e., 4:00 – 6:00 PM).

Appropriate signs and pavement striping will be added to both driveways and the 15th Avenue and 16th Avenue intersections with Capitola Road to alert drivers to these restrictions, in consultation with Santa Cruz County Public Works staff.

3.1.3 Project Roadway and Pedestrian Infrastructure Improvements

This project also proposes to add various roadway and pedestrian infrastructure improvements along the project frontage, specifically the following:

1. Relocation of the curb line and existing sidewalk along the project frontage to accommodate the future widening of Capitola Road to four lanes along the project frontage, as proposed by Santa Cruz County. (See Section 6.1 for more information about the Capitola Road widening project.) This includes the restriping of eastbound Capitola Road to two through lanes between Leila Court and 16th Avenue.
2. Addition of Rectangular Rapid Flashing Beacons (RRFDs) at the existing crosswalk across Capitola Road at 15th Avenue.

3.2 Project Trip Generation

The trip generation for the project was previously estimated by Jeff Waller Consulting in the letter *1412, 1438, 1500 and 1514 Capitola Road Mixed-Use Development, Santa Cruz County, CA*, dated September 4, 2018. However, since that time, the project definition has been slightly modified to the version described in this report. Hence, the trip generation estimate described in this report supersedes the estimate in the September 2018 letter. For reference, the September 2018 letter is included in **Appendix D**.

The trip generation estimate uses the same assumptions as described in the September 2018 letter and the project definition described earlier in Section 3.1. These assumptions are summarized below:

1. All vehicle trips are estimated using trip generation rates from *Trip Generation Manual*, 10th Edition, published by the Institute of Traffic Engineers in September 2017.
2. As the clinic buildings will include separate administrative office space, the trip generation for this office space was estimated separately from the clinic space.

In addition, an internal reduction of 10% has been applied to the project trip generation. This is for a number of reasons:

1. Some patients will likely schedule same-day appointments for themselves and/or their families at the two clinics. According to representatives for Dientes and SCCHC, they share over 3,000 different clients. With both clinics having an office immediately next to each other, patients will now be able to visit both clinics in the same trip, rather than driving separately to and from each clinic. This may be more common for patients that do not live in the greater Live Oak area.
2. There will also be onsite trips between other site uses, such as between the apartment units and the clinics and the clinics and the pharmacy. None of these trips would travel offsite, thus reducing the project's off-site trip activity.

Adjustments were also made to the ITE mode split (i.e., percentage of trips made by various travel modes, such as driving, walking, biking, and transit). According to *Trip Generation Handbook*, 3rd Edition, also published by the Institute of Transportation Engineers in September 2017, the trip generation rates in *Trip General Manual* assume that at least 95% of the estimated total person trips to and from a site are made by vehicle (i.e., personal passenger vehicle plus trucks), as opposed to other travel methods. This means that using the *Trip Generation Manual* rates essentially assumes that 95% of the clinic, office, residential and commercial trips would be made by vehicle, as opposed to walking, bicycling or transit. However, Jeff Waller Consulting performed a survey of over 300 patients at the Dientes and SCCHC clinics in Live Oak and Twin Lakes in July 2018. This survey, whose results are contained and summarized in both the September 2018 letter and in **Appendix E** of this report, found that approximately 14% of patients traveled via modes other than driving, much higher than the ITE percentage of less than 5%. This level of alternate modes of travel to and from the project site is anticipated to continue with the relocation of the clinics and offices to the project site – not to mention the proposed residential and commercial uses – due to the extensive and continuous sidewalk and bicycle network in the study area, as well as the frequency of transit service to the nearby bus stops. Note also that this transit frequency is similar to, if not exceeding, the frequency of bus stops near the current clinic locations. The routes servicing those bus stops also travel to and from similar areas as the route servicing the bus stops near the project site.

As the clinic uses would generate the majority (but not all) of the traffic from the project, only 11% of project traffic is assumed to use travel modes other than driving.

Exhibit 6A summarizes the project trip activity. The project is estimated to generate 995 daily trips, with 85 trips (57 in, 28 out) during the AM peak hour and 88 trips (32 in, 56 out) during the PM peak hour.

Also noted on **Exhibit 6A** is the trip generation for a slightly older project definition. This older trip generation would generate an estimated 1,437 daily trips, with 93 trips (62 in, 31 out) during the AM peak hour and 107 trips (43 in, 64 out) during the PM peak hour. The older trip generation, which was used for the analysis in this report, was based on a prior project definition and is slightly higher than the trip generation based on the current definition. Therefore, the results of this analysis are conservatively high.

3.3 Project Trip Distribution and Assignment

Exhibit 6B depicts the trip distribution for the project. This distribution was derived based on adjacent land uses, population centers and the proportion of patient travel locations identified through the aforementioned July 2018 patient surveys. The trip distribution was combined with the trip generation to derive the project trip assignment depicted on **Exhibit 7**.

The trip assignment accounts for the turn restrictions at the project driveways. This includes additional U-turn movements that would result from these restrictions. U-turns are only assigned to locations on Capitola Road where U-turns are currently allowed, specifically the eastbound Capitola left turn lane at Chanticleer Avenue.

3.4 Existing Plus Project Condition Traffic Circulation

3.4.1 Vehicle Circulation

The trip assignment (**Exhibit 7**) was added to the existing traffic volumes (**Exhibit 4**) to create the Existing Plus Project volumes depicted on **Exhibit 8**.

Existing Plus Project condition intersection levels of service are summarized on **Exhibit 5A**. Recommended intersection improvements are summarized on **Exhibit 5B**. The LOS calculation sheets for Existing Plus Project conditions can be found in **Appendix F**.

All of the study intersections under Existing Plus Project conditions continue to operate at or better than their respective level of service standards. No improvements are required.

As noted in Section 3.3, the left turn prohibitions at the driveways will require considerable rerouting by exiting project traffic attempting to travel westbound on Capitola Road. Eastbound U-turns on Capitola Road are prohibited at both 16th and 17th Avenues, requiring project traffic to continue east to Chanticleer Avenue before U-turns are allowed – a diversion of nearly a quarter mile east of the project site. It is therefore suggested that Santa Cruz County Public Works staff consider reviewing the restriction of eastbound Capitola Road U-turns at 17th Avenue to determine if this prohibition can be removed. This would minimize the traffic diversions for project traffic due to the driveway turn restrictions by allowing project traffic to make eastbound U-turns at 17th Avenue instead of Chanticleer Avenue.

3.4.2 Pedestrian Circulation

The project would increase pedestrian traffic in the study area, primarily on Capitola Road near the project site. However, the existing sidewalks and pedestrian crossings in the study area, as further enhanced by the planned project pedestrian improvements, will more than accommodate the increase in pedestrian traffic created by the project. Therefore, the project would not represent a significant impact to pedestrian circulation.

3.4.3 Bicycle Circulation

The project would increase bicycle traffic in the study area, primarily on Capitola Road near the project site. However, the existing bicycle infrastructure in the study area will more than accommodate the increase in bicycle traffic attributable to the project. Therefore, the project would not represent a significant impact to bicycle circulation.

3.4.4 Transit Circulation

The project will increase transit demand at the two bus stops on Capitola Road closest to the project site. However, both bus stops are within a three-minute walk from the project site, and the closest stop to the project site has a covered bus shelter. The planned pedestrian improvements will also better facilitate the necessary crossings of Capitola Road between the project site and the existing bus stops. Therefore, the project would not represent a significant impact to transit service demand.

3.5 Roadside and Transportation Fees

The project would be responsible for payment of Santa Cruz County' Live Oak Roadside Improvement Fee (RIF) and Transportation Improvement Fee (TIF). Payment of this fee would represent the project's contribution towards countywide roadway improvements funded by the fee program. Santa Cruz County will determine the exact fee amount attributable to this project. Preliminarily, Santa Cruz County has determined that the project would be responsible for a RIF of \$324,600 and a TIF of \$324,600.

4 BACKGROUND CONDITIONS

This chapter describes Background Conditions, which represents traffic conditions with the additional traffic from land development that is either approved but not yet built or proposed but not yet approved. Thus, Background Without Project volumes are approximately 5 years beyond Existing conditions. This scenario does not include trips from the study project.

4.1 Background Traffic Volumes

A list of development projects in unincorporated Santa Cruz County and the eastern portion of the City of Santa Cruz was assembled. This includes both approved but not yet constructed projects (“approved”) and proposed but not yet approved projects (“pending”) that would add traffic to the study network. These projects were identified through a review of lists of approved and pending projects from Santa Cruz County and City of Santa Cruz and additional discussions with Santa Cruz County Planning Department staff. **Exhibit 9** depicts these projects and their respective trip generation.

The background traffic growth derived from **Exhibit 9** was distributed through the study intersections and added to the Existing traffic volumes to create the Background Without Project conditions traffic volumes depicted in **Exhibit 10**.

4.2 Background Condition Traffic Circulation

4.2.1 Vehicle Circulation

Background Without Project condition intersection levels of service are summarized on **Exhibit 5A**. The LOS calculation sheets for Background Without Project conditions can be found in **Appendix G**.

All of the 13 study intersections currently operate at or better than their respective level of service standards.

4.2.2 Pedestrian Circulation

Pedestrian activity would not be significantly different from Existing conditions.

4.2.3 Bicycle Circulation

Bicycle activity would not be significantly different from Existing Conditions.

4.2.4 Transit Circulation

Transit usage would not be significantly different from Existing conditions.

5 BACKGROUND PLUS PROJECT CONDITIONS

This chapter describes Background Conditions plus traffic from the proposed project.

5.1 *Background Plus Project Traffic Volumes*

The project trip assignment (**Exhibit 7**) described in Chapter 3 – Existing Plus Project Conditions – was added to the Background Condition volumes (**Exhibit 10**) to estimate Background Plus Project Condition volumes shown in **Exhibit 11**.

5.2 *Background Plus Project Conditions Traffic Circulation*

5.2.1 *Vehicle Circulation*

Background Plus Project intersection levels of service are summarized on **Exhibit 5A**. Recommended intersection improvements are summarized on **Exhibit 5B**. The LOS calculation sheets for Background Plus Project traffic conditions can be found in **Appendix H**.

All of the study intersections under Background Plus Project conditions would operate at or better than their respective level of service standards. No improvements are required.

5.2.2 *Pedestrian Circulation*

Pedestrian traffic under Background Plus Project conditions is not anticipated to significantly increase over Existing Plus Project conditions. Therefore, the project would not represent a significant impact to pedestrian circulation under Background Plus Project conditions.

5.2.3 *Bicycle Circulation*

Bicycle traffic under Background Plus Project conditions is not anticipated to significantly increase over Existing Plus Project conditions. Therefore, the project would not represent a significant impact to bicycle circulation under Background Plus Project conditions.

5.2.4 *Transit Circulation*

Transit demand under Background Plus Project conditions is not anticipated to significantly increase over Existing Plus Project conditions. Therefore, the project would not represent a significant impact to transit circulation under Background Plus Project conditions.

6 CUMULATIVE WITHOUT PROJECT CONDITIONS

This section describes the analysis results under Cumulative Without Project conditions. The Cumulative Without Project traffic condition is defined as traffic conditions roughly seventeen years beyond existing conditions (i.e., the Year 2040).

6.1 Transportation Network Improvements under Cumulative Conditions

The Santa Cruz County Public Works Department proposes to widen Capitola Road to four lanes plus a center two-way left turn lane across the project frontage. The roadway widening in the eastbound direction was previously incorporated into the analysis of the 15th Avenue / Capitola Road and 16th Avenue / Capitola Road intersections under Existing Plus Project and Background Plus Project conditions. The entire improvement – with widening in both directions of Capitola Road – is incorporated at those same intersections for Cumulative Without Project and Cumulative Plus Project conditions.

Projects included in Santa Cruz County's Capital Improvement Program (CIP) are also incorporated into the analysis under Cumulative Without Project and Cumulative Plus Project conditions. Santa Cruz County will be updating its project list for the CIP in 2019. Adoption of a revised CIP by the county Board of Supervisors is currently anticipated in June 2019.

6.2 Derivation of Cumulative Without Project Condition Traffic Volumes

The traffic volume growth under the Cumulative Without Project conditions were derived using growth rates from historical average daily traffic volumes on various roadways in the study network, as summarized in **Appendix I**. These traffic volumes were obtained from the Santa Cruz County Regional Transportation Commission and used to quantify traffic growth rates per year for specific roadways. In addition, traffic growth rates for the Portola Drive corridor were cited from *Development at Portola Drive / 38th Avenue Traffic Impact Study*, Kimley-Horn, January 14, 2015. All of the quantified traffic volume growth rates were then applied to the existing volumes for that particular segment over a 17-year period to obtain the total volume growth on these roadways through the Year 2040. The volume growth on these roadway segments was then distributed to all of the study intersections throughout the study street network, based primarily on the portion of existing traffic on each intersection movement. The resulting cumulative traffic growth was added to the Background volumes to create the Cumulative Without Project traffic volumes depicted on **Exhibit 12**.

Note: The greater Live Oak region is nearly built out – there are relatively few vacant parcels in the study area, and those that are vacant are mostly small in size. As a result, other than redevelopment that increases development density, future traffic growth from project development is anticipated to be relatively modest, compared to historical traffic growth. For this reason, traffic growth rates on any one roadway were capped at 1.5% per year, or 25.5% total growth over 17 years.

6.3 Cumulative Without Traffic Conditions

6.3.1 Vehicle Circulation

Cumulative Without Project conditions AM and PM intersection levels of service are summarized on **Exhibit 5A**. The LOS calculation sheets for Cumulative Without Project traffic conditions can be found in **Appendix J**.

Many of the study intersections under Cumulative Without Project conditions continue to operate at or better than their respective level of service standards.

However, three intersections would operate below their respective level of service standards under Cumulative Without Project conditions:

3. 17th Avenue / Capitola Road – Overall LOS E (PM)
4. Chanticleer Avenue / Capitola Road – Overall LOS F (PM)
13. Soquel Avenue – Commercial Driveway / Soquel Avenue – Soquel Drive – Overall LOS E (AM)

6.3.2 Pedestrian Circulation

The widening of Capitola Road to four lanes will require a realigned sidewalk along the project frontage. The realignment is due to a large tree along the frontage of Capitola Road between 15th and 16th Avenues. The presence of this tree will require relocating the sidewalk to behind the tree. The project would construct this improvement as part of the project construction.

6.3.3 Bicycle Circulation

There are no planned bicycle facility improvements planned in the study area.

7 CUMULATIVE PLUS PROJECT CONDITIONS

This section describes the analysis results under Cumulative Plus Project traffic conditions, which combines both Cumulative Without Project conditions with traffic from the study project.

7.1 Derivation of Cumulative Plus Project Condition Traffic Volumes

The project trip assignment was combined with the Cumulative Without Project condition volumes to create the Cumulative Plus Project volumes depicted on **Exhibit 13**.

7.2 Cumulative Plus Project Traffic Conditions

7.2.1 Vehicle Circulation

Cumulative Plus Project AM and PM intersection levels of service are summarized on **Exhibit 5A**. Recommended intersection improvements are summarized on **Exhibit 5B**. The LOS calculation sheets for Cumulative Plus Project traffic conditions can be found in **Appendix K**.

Many of the study intersections under Cumulative Plus Project conditions would operate at or better than their respective level of service standards. No improvements are required at these intersections.

However, three intersections would operate below their respective level of service standards:

3. 17th Avenue / Capitola Road – Overall LOS E (PM)
4. Chanticleer Avenue / Capitola Road – Overall LOS F (PM)
13. Soquel Avenue – Commercial Driveway / Soquel Avenue – Soquel Drive – Overall LOS E (AM)

Below is a discussion of the significance evaluation and recommended improvement at the study intersections expected to operate below their respective level of service standards under Cumulative Plus Project conditions.

- Intersection #3: 17th Avenue / Capitola Road:

Overall operations at this intersection under Cumulative Plus Project conditions would operate at a deficient LOS E during the PM peak hour, unchanged from LOS E operations under Cumulative Without Project conditions. As shown in **Appendix L**, the volume-to-capacity ratio increases by 0.02 under Cumulative Plus Project conditions, compared to Cumulative Without Project conditions, which is more than 0.01, or 1%. Per the significance criteria presented in Section 1.7 of this document, the project would represent a significant impact at this intersection.

It is recommended that the signal timing at this intersection be optimized to better balance the lengths of the green times for all of the signal phases, including potential lengthening of the overall cycle length. This recommendation would improve operations to LOS D during the PM peak hour. Santa Cruz County would be responsible for implementation of this improvement, as part of its typical maintenance schedule for signal operations. Note that this improvement would not affect the area Vehicle Miles Traveled (VMT), as signal timing improvements do not typically increase VMT¹.

- Intersection #4: Chanticleer Avenue / Capitola Road:

Overall operations at this intersection under Cumulative Plus Project conditions would operate at a deficient LOS F during the PM peak hour, unchanged from LOS F operations under Cumulative Without Project conditions. As shown in **Appendix L**, the volume-to-capacity ratio would increase by less than 0.01, or 1%, under Cumulative Plus Project conditions, compared to Cumulative Without Project conditions. Per the significance criteria presented in Section 1.7 of this document, the project would not represent a significant impact at this intersection. No improvements are required.

- Intersection #13: Soquel Avenue – Commercial Driveway / Soquel Avenue – Soquel Drive:

Overall operations at this intersection under Cumulative Plus Project conditions would operate at a deficient LOS E during the AM peak hour, unchanged from LOS E operations under Cumulative Without Project conditions. As shown in **Appendix L**, the volume-to-capacity ratio would increase by less than 0.01, or 1%, under Cumulative Plus Project conditions, compared to Cumulative Without Project conditions. Per the significance criteria presented in Section 1.7 of this document, the project would not represent a significant impact at this intersection. No improvements are required.

¹ Per the publication *Technical Advisory on Evaluating Transportation Impacts in CEQA*, State of California Governor's Office of Planning and Research, December 2018, projects that include either "Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes" and "Timing of traffic signals to optimize vehicle, bicycle or pedestrian flow" would not likely lead to either a substantial or measurable increase in vehicle travel.

7.2.2 Pedestrian Circulation

Pedestrian activity is not anticipated to increase significantly under Cumulative Plus Project conditions. Therefore, the project would not represent a significant cumulative impact to pedestrian circulation.

The project will be responsible for implementation of the sidewalk relocation behind a large tree, as part of the planned Capitola Road widening to four lanes.

7.2.3 Bicycle Circulation

Bicycle activity is not anticipated to increase significantly under Cumulative Plus Project conditions. Thus, the project would not represent a significant cumulative impact to bicycle circulation.

7.2.4 Transit Circulation

Transit demand near the study project is not anticipated to increase significantly under Cumulative Plus Project conditions. As such, the project would not represent a significant cumulative impact to transit circulation.

8 SITE ACCESS AND INTERNAL CIRCULATION

This section summarizes the site access and internal circulation analysis, including operations of the project driveway operations.

8.1 Site Access

8.1.1 Driveway Operations

As discussed previously and shown on **Exhibit 5A**, operations of the two project driveways will be within acceptable levels of service under Existing Plus Project, Background Plus Project and Cumulative Plus Project conditions.

As part of the Capitola Road widening project, Santa Cruz County Public Works staff should consider reviewing the restriction of eastbound Capitola Road U-turns at both 16th Avenue and 17th Avenue to determine if these prohibitions can be removed. This would minimize the traffic diversions due to the driveway turn restrictions.

8.1.2 Driveway Sight Distance

Observations at the project site in November 2018 found good sight distance between the driveways and passing vehicles on Capitola Road. The locations of the two project driveways are well situated between the existing street trees and utility poles along Capitola Road to minimize obstructions. Due to the bus stop located immediately to its west, the western project driveway (opposite 15th Avenue) will have reduced sight distance when buses are stopped at this bus stop. However, this is only a temporary restriction on available sight distance. The bus shelter itself at the bus stop does not restrict sight distance at this driveway.

Sight distance at the project driveways with the future Capitola Road widening is anticipated to be as good, if not better, than current conditions, due to the removal of on-street parking and raised islands near the roadway edges that would occur with the widening.

8.1.3 Driveway Vehicle Queuing

Vehicle queues at the project driveways with the recommended improvements would be approximately one vehicle during the AM and PM peak hours at either driveway. As the throats of the driveways (i.e., distance between the sidewalk at the parking area) are only 10-20 feet long, the vehicle queues may temporarily block the nearest parking spaces to the street. However, these delays would be relatively brief and would not substantially affect operations in the parking area.

8.2 Internal Circulation

As shown on the project site plan in **Exhibit 2**, both of the project driveways connect to a shared parking area with 190 spaces. The parking area wraps around all of the on-site buildings. The overall layout of the parking area allows good access to all of the parking spaces and each project driveway. The parking area also connects both driveways to each other, allowing traffic to freely travel to any portion of the project site from either driveway, thus minimizing any effects

from the planned driveway turn restrictions on access to any one area of the project site.

Sidewalks around each building provide access to each buildings' access points, the central courtyard adjacent to the apartments, and the commercial plaza between the clinic/office buildings. Pedestrian walkways are provided from Capitola Road into the commercial plaza, alongside each clinic/office building, and the western side of the west project driveway. Marked crossings of the parking area connect these sidewalks and walkways. Other crossings are provided to the central garbage area for the apartments. All of these facilities provide good pedestrian circulation into and around the project site.

A total of 99 bicycle parking spaces are proposed on the project site, which exceeds the minimum county requirement for this project of 98 spaces. These bicycle parking spaces are split between the commercial area (30 spaces) and residential area (69 spaces) of the project site. The commercial bicycle parking will be located outside of the commercial and clinic buildings. The residential bicycle parking will be housed in a secure bicycle storage room inside of the community building adjacent to the apartment buildings. The bicycle parking will provide ample storage to serve the on-site bicycle parking demands from clinic patients and on-site residents.

8.3 Future Third Driveway

A future third access to the project site may be possible through the adjacent Live Oak Market property east of 16th Avenue, if that property were to redevelop. This could potentially include use of Intersection #6 in this analysis – 17th Avenue / Market Driveway – by project traffic. One benefit of this access would be that it could be used by vehicles exiting the project that are bound for westbound Capitola Road (or other parallel routes), rather than making U-turns on Capitola Road. However, such a vehicular access to the adjacent property will require removal of some onsite parking spaces on both the project site and the adjacent property. It will also require an access agreement with the adjacent property owner to allow project traffic to travel freely on said adjacent property. It is not known at this time when or if the adjacent property would redevelop.

9 PROJECT PARKING DEMAND AND SUPPLY

An evaluation of onsite vehicle parking demand and supply was previously analyzed in a separate document, *1412, 1438, 1500 and 1514 Capitola Road Mixed-Use Development, Santa Cruz County, CA – Parking Demand Estimates*, Jeff Waller Consulting, May 8, 2019. This document can be found in **Appendix M**. Please see this document for details regarding the derivation of the project parking demand, which included surveys at existing MidPen housing developments and Dientes and SCCHC clinics in Santa Cruz County.

Overall, it is concluded that the maximum project parking demand will be 180 spaces (weekdays) and 119 spaces (Saturdays), including the 57 spaces that will be reserved for exclusive use by residents of the apartments and the on-site property manager. The project site plan in **Exhibit 2** provides 190 spaces. Therefore, the project supply will be adequate for the anticipated parking demand.

10 PROJECT VEHICLE MILES TRAVELED

10.1 Introduction

Pursuant to SB 743, CEQA amendments became effective on January 1, 2019. A new section 15064.3(a) provides that vehicle miles traveled (VMT) is the “most appropriate measure of transportation impacts.” It further provides that a “project’s effects on automobile delay shall not constitute a significant environmental impact.” It also provides that a lead agency has discretion to choose the most appropriate methodology to evaluate a project’s VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. Accordingly, the following discussion explains the methodology used in this VMT analysis.

10.2 VMT Calculation

Exhibit 14 summarizes the calculation of the residential Vehicle Miles Traveled (VMT) per capita for the study project.

The project’s residential VMT was quantified separately from the commercial components, rather than for the project as a whole, per state guidelines. As stated in the publication *Technical Advisory on Evaluating Transportation Impacts in CEQA*, State of California Governor’s Office of Planning and Research, December 2018:

Lead agencies can evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential and retail). Alternatively, a lead agency may consider only the project’s dominant use. In the analysis of each use, a project should take credit for internal capture. Combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.

The residential component of the project site is effectively the dominant use of the project site, as it comprises more than two-thirds (66.7%) of the proposed total building square footage. In addition, commercial projects under 50,000 square feet, like the commercial component of the project, are traditionally excluded from VMT calculations. Hence, a commercial VMT is not calculated for the project.

The residential VMT is quantified using the following steps:

1. Quantify the total estimated distance traveled by all vehicles to and from the residential component of the project site over an average day. These locations were derived from the project trip distribution on **Exhibit 6B**. These distances were multiplied by the net trip generation of the residential component from **Exhibit 6A** and the distances between the locations and the project site. These distances were measured using Google® Maps.

For example, 109 vehicle trips (42%) from the residential component are anticipated to travel to and from Santa Cruz. These trips would thus be traveling an estimated 327 miles per day. This process is repeated for the remaining project trips and then summed to create the total distance traveled per day for the residential component. As shown on **Exhibit 14**, traffic to and from the residential component of the project would travel 1,437 miles per day.

2. Estimate the number of future residents in the residential component of the project. The project proposes 57 units, including the manager's unit. The proposed unit breakdown by number of bedrooms is as follows:
 - One Bedroom Apartments – 26 units
 - Two Bedroom Apartments – 15 units
 - Three Bedroom Apartments – 16 units

The State of California Tax Credit Allocation Committee (CTCAC) has established that the number of occupants per low-income apartment unit type in California is 1.5 residents per bedroom – 1.5 residents per one-bedroom unit, 3.0 residents per two-bedroom unit, and 4.5 residents per three-bedroom unit. When averaged with the amounts of each proposed unit type on the project site, the average apartment occupancy for all units on the project site is estimated at 2.74 persons per unit. For 57 units, a total of 156 residents would reside on the project site. This data is also shown on **Exhibit 14**.

3. Quantify the residential VMT per capita by dividing the vehicle miles traveled per day by the number of onsite residents. The VMT per capita for the residential component of the project is 1,437 miles per day divided by 156 residents, or 9.2 miles per capita. This result is shown on **Exhibit 14**.

The residential VMT of 9.2 miles per capita is less than the estimated 18.3 miles per capita for Santa Cruz County as whole². Therefore, the project would not represent a significant impact per its VMT.

² Countywide VMT quantified using data from *California Public Road Data 2017*, California Department of Transportation, Released November 2018, and *Population Estimates for Cities, Counties and the State – January 1, 2017 and 2018*, California Department of Finance, Released May 1, 2018.

In addition, it is noted that the Office of Planning and Research's *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) provides that:

Adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT. (Karner and Benner (2016) *The convergence of social equity and environmental sustainability: Jobs-housing fit and commute distance* (“[P]olicies that advance a more equitable distribution of jobs and housing by linking the affordability of locally available housing with local wage levels are likely to be associated with reduced commuting distances”); Karner and Benner (2015) *Low-wage jobs-housing fit: identifying locations of affordable housing shortages*.) Further, “... low-wage workers in particular would be more likely to choose a residential location close to their workplace, if one is available.” In areas where existing jobs-housing match is closer to optimal, low income housing nevertheless generates less VMT than market-rate housing. (Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement*, available at <https://www.arb.ca.gov/research/apr/past/13-310.pdf>; CAPCOA (2010) *Quantifying Greenhouse Gas Mitigation Measures*, pp. 176-178, available at <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>)

Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations.

Given that the residential portion of the project is 100% affordable and that it is located in an infill location supports the less than significant VMT conclusion.

11 SUMMARY OF RECOMMENDATIONS

Below is a summary of the recommended improvements in this traffic impact analysis report. For reference, **Exhibit 15** depicts the locations of these improvements.

11.1 *Project Responsibilities*

None Required.

11.2 *Others to Implement*

1. Santa Cruz County should consider reviewing the eastbound Capitola Road U-turn restrictions at 16th Avenue and 17th Avenue, including as part of the Capitola Road widening project, to determine if these prohibitions can be removed. Santa Cruz County would be responsible for implementation of this improvement.
2. Optimize the signal timing at the 17th Avenue / Capitola Road intersection to better balance the lengths of the green times for all of the signal phases, including potentially lengthening of the overall cycle length. Santa Cruz County would be responsible for implementation of this improvement, as part of its typical maintenance schedule for signal operations.

12 REFERENCES

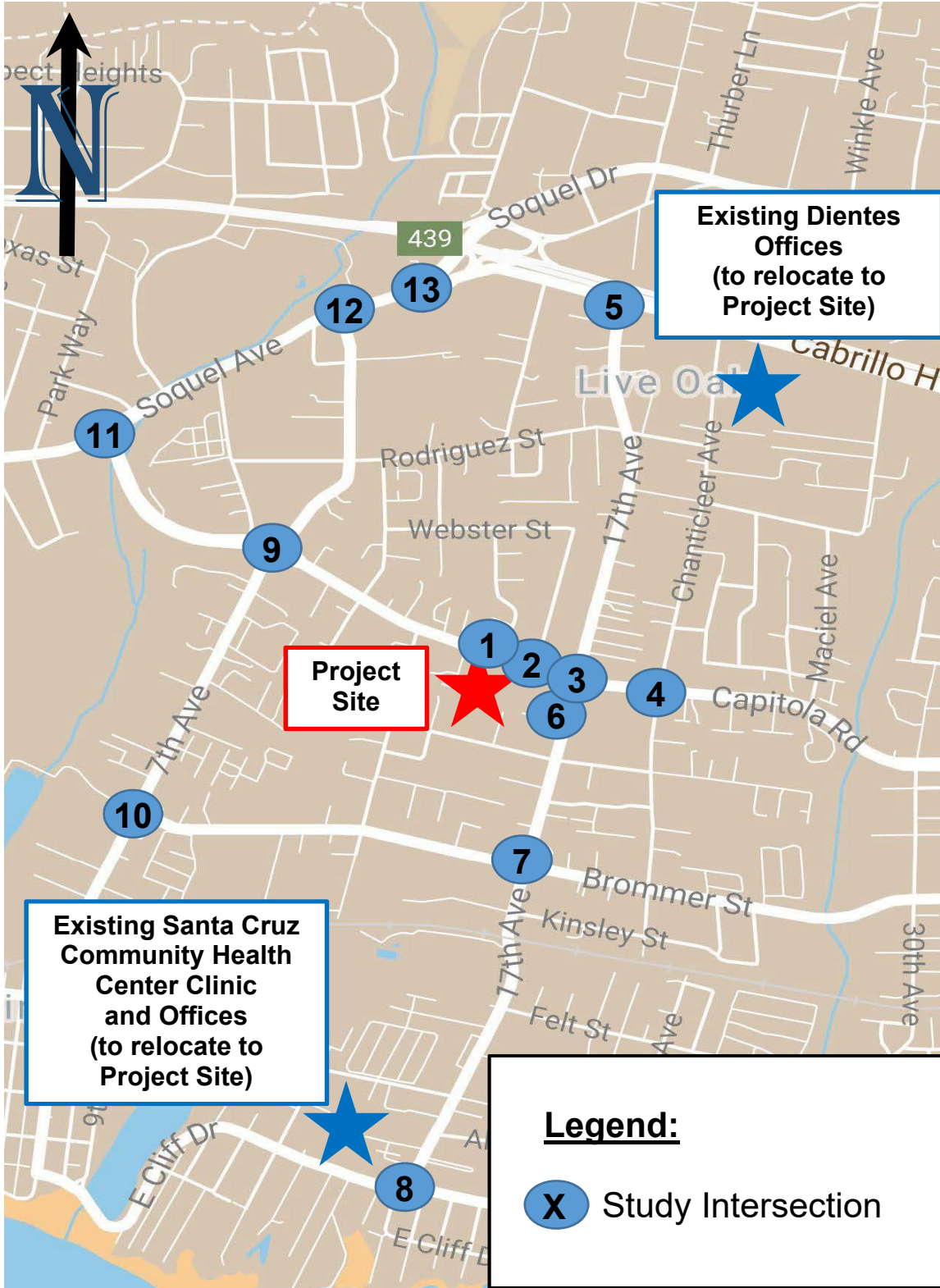
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4. *Santa Cruz County Department of Public Works Service and Capital Improvement Fees for Fiscal Year 2017/18*, Santa Cruz County Public Works Department, December 12, 2017.
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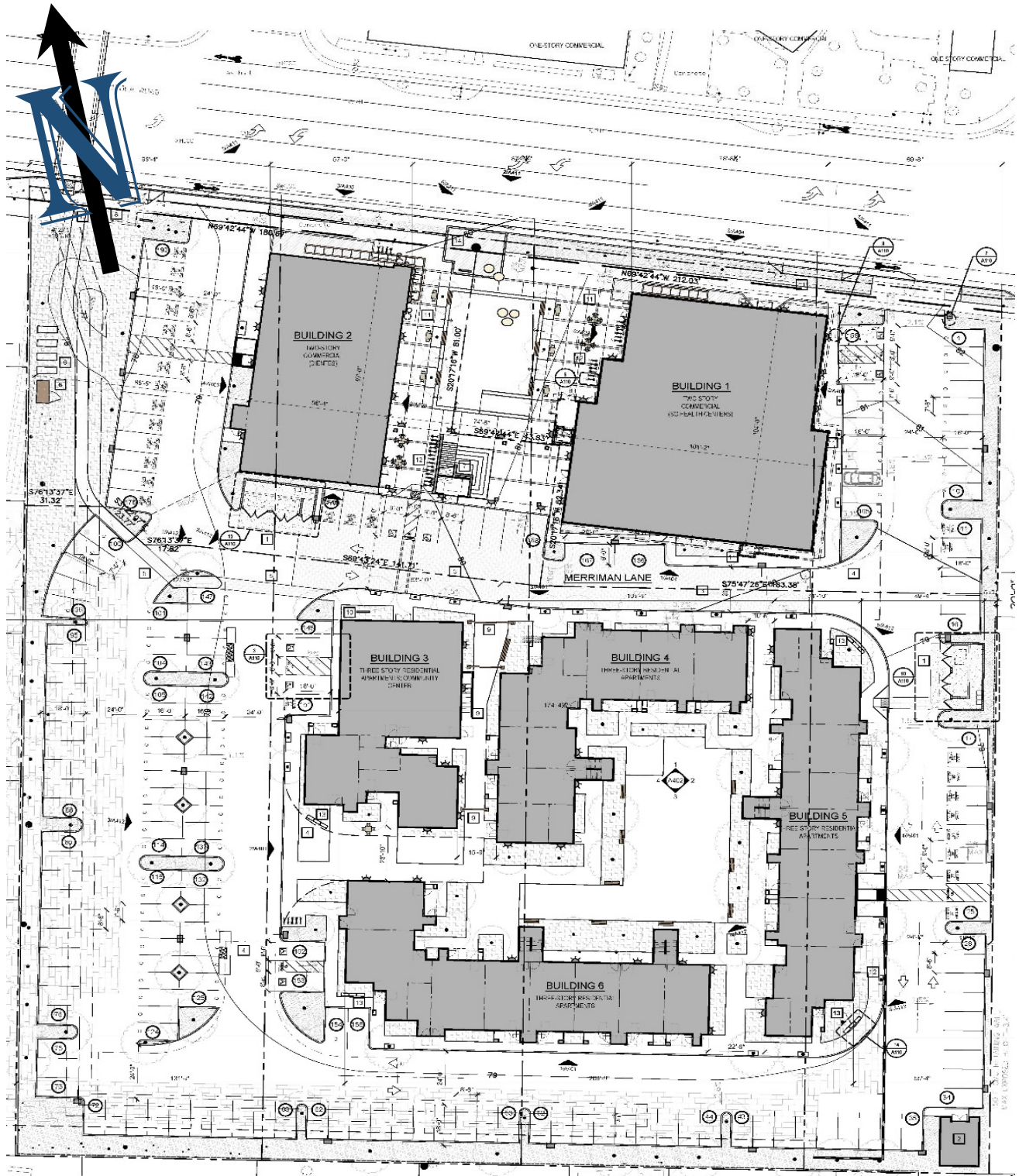
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19. *Population Estimates for Cities, Counties and the State – January 1, 2017 and 2018*, California Department of Finance, Released May 1, 2018.

12.2 List of Contacts

1. Ashley Schweickart, MidPen Housing, Watsonville, California.
2. Carlos Jurado, MidPen Housing, Watsonville, California.
3. Chelsea Maclean, Holland & Knight LLP, San Francisco, California.
4. Rodolfo Rivas, Santa Cruz County Public Works Department, Santa Cruz, California.
5. Lezanne Jeffs, Santa Cruz County Planning Department, Santa Cruz, California.

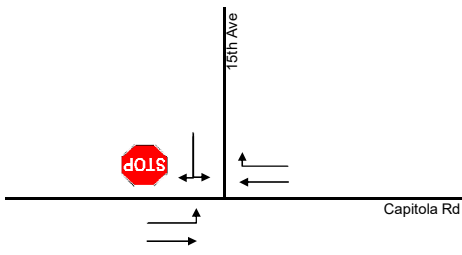


Basemap Source: Google Maps, 2018.

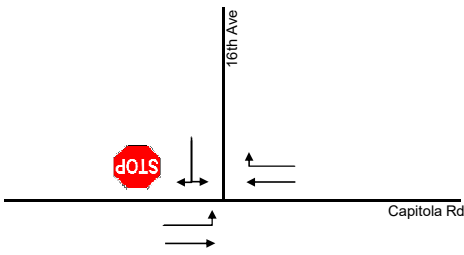


Source: Wald Ruhnke & Dost Architects, April 24, 2019.

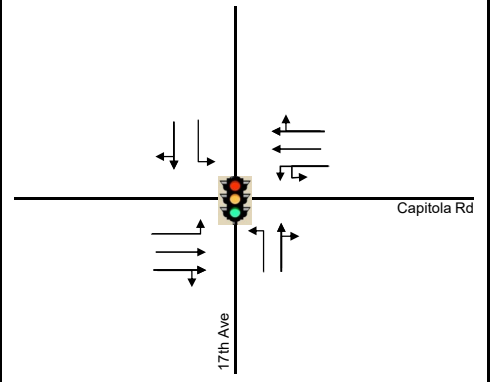
1. 15th Avenue / Capitola Road



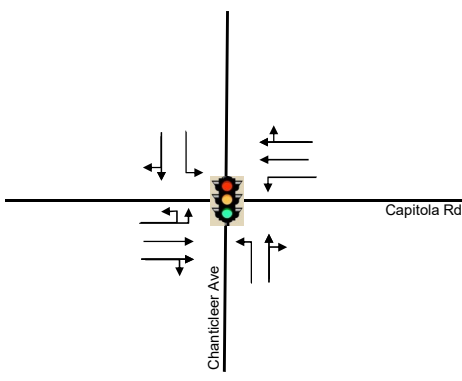
2. 16th Avenue / Capitola Road



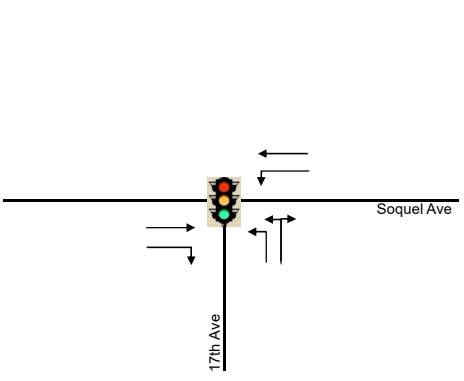
3. 17th Avenue / Capitola Road



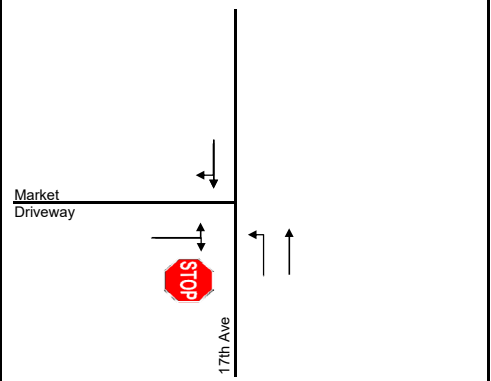
4. Chanticleer Avenue / Capitola Road



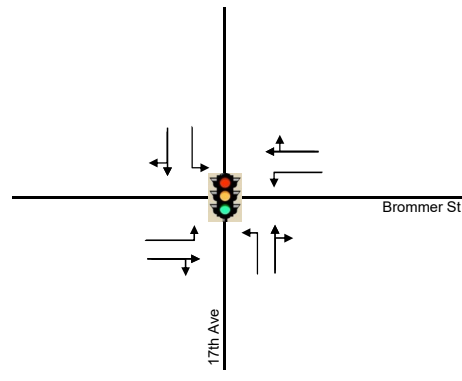
5. 17th Avenue / Soquel Avenue



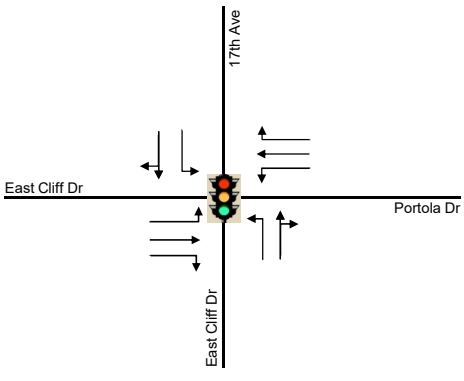
6. 17th Avenue / Market Driveway



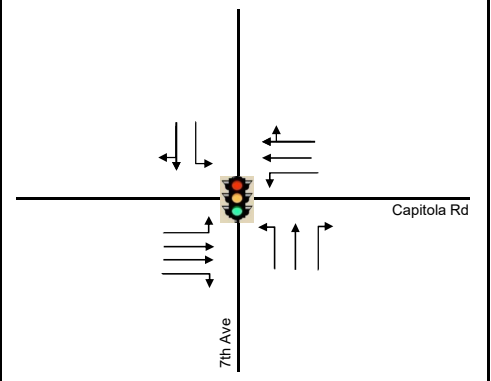
7. 17th Avenue / Brommer Street



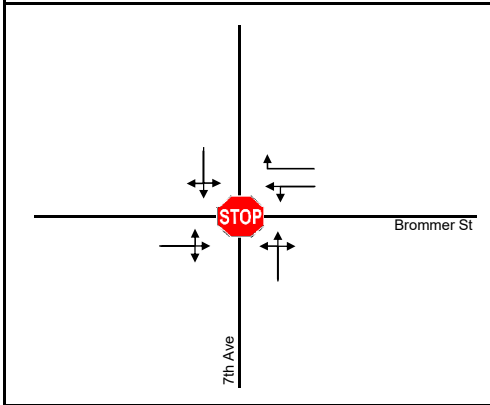
8. East Cliff Drive - 17th Avenue / East Cliff Drive - Portola Drive



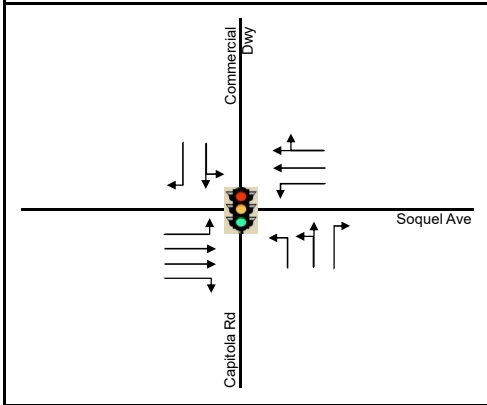
9. 7th Avenue / Capitola Road



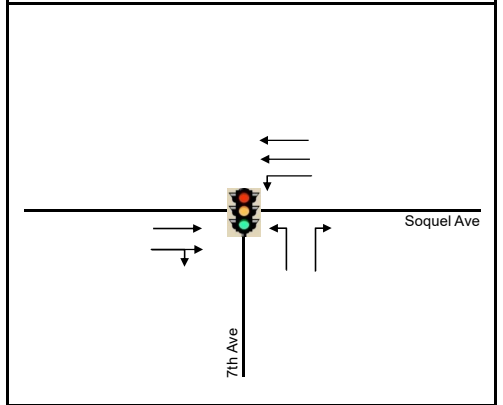
10. 7th Avenue / Brommer Street



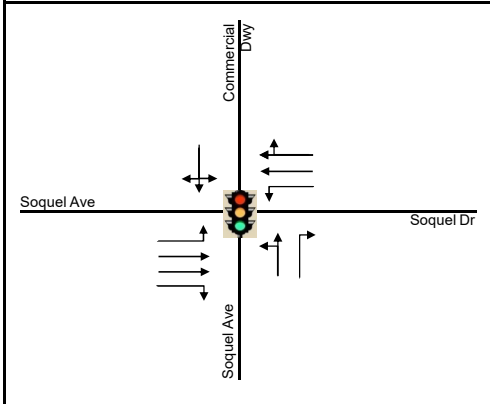
11. Capitola Road - Commercial Driveway / Soquel Avenue



12. 7th Avenue / Soquel Avenue



13. Soquel Avenue - Commercial Driveway /
Soquel Avenue - Soquel Drive




LEGEND

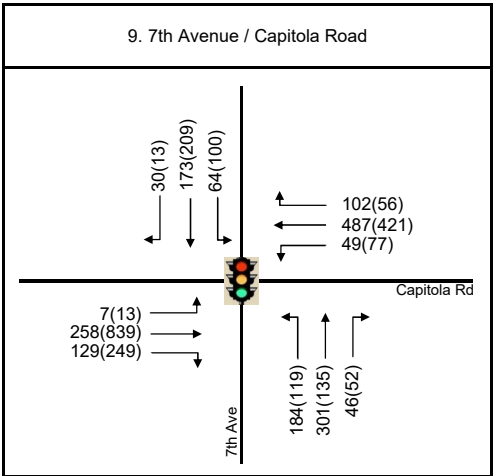
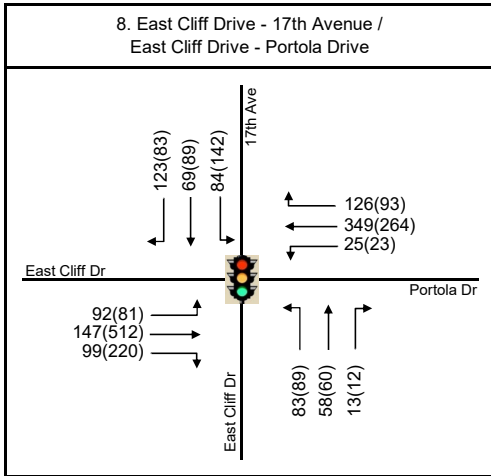
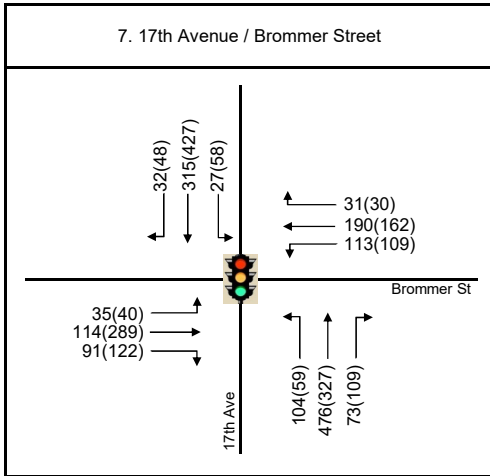
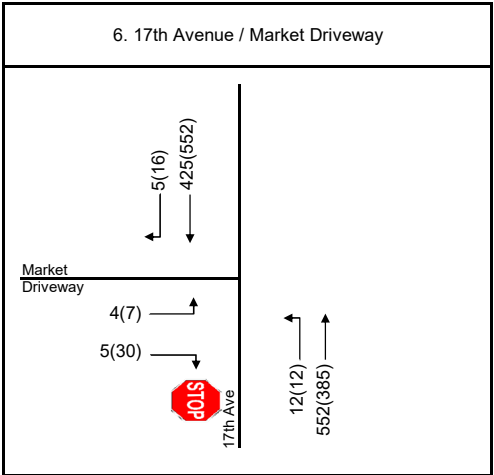
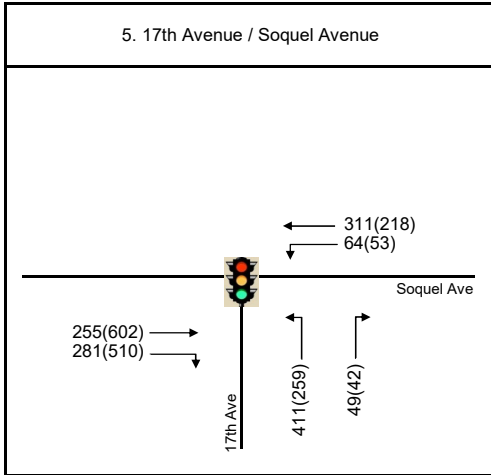
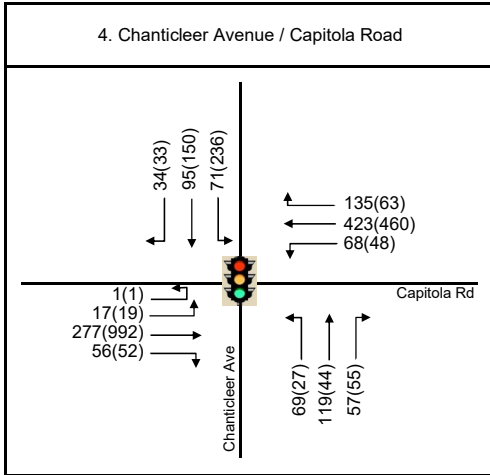
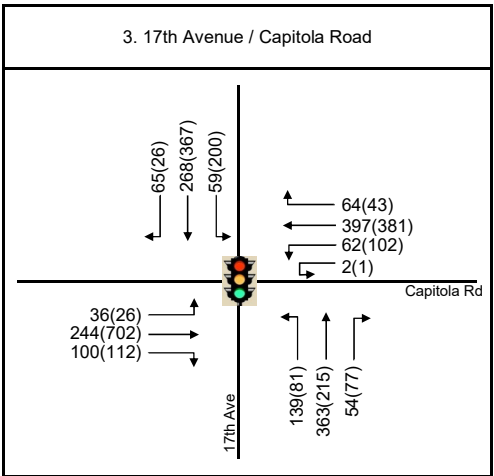
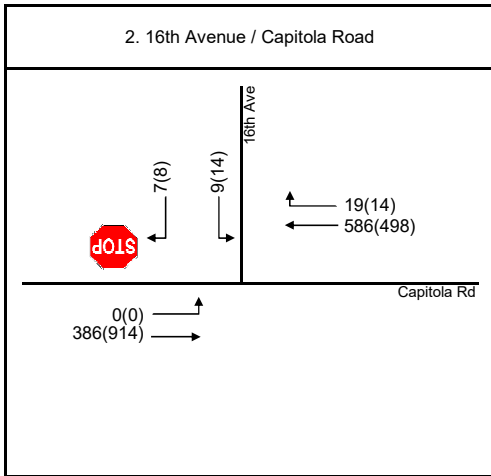
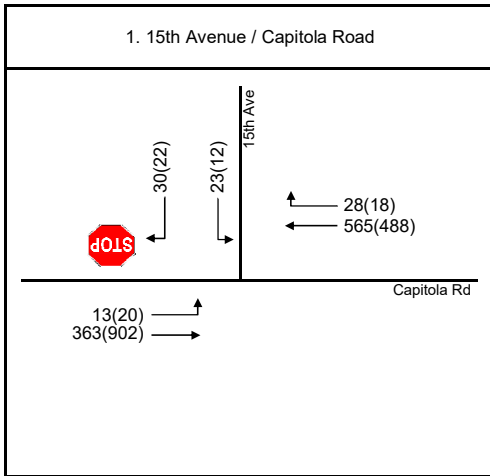
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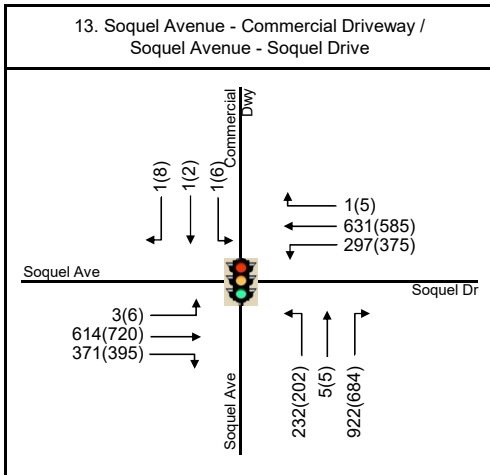
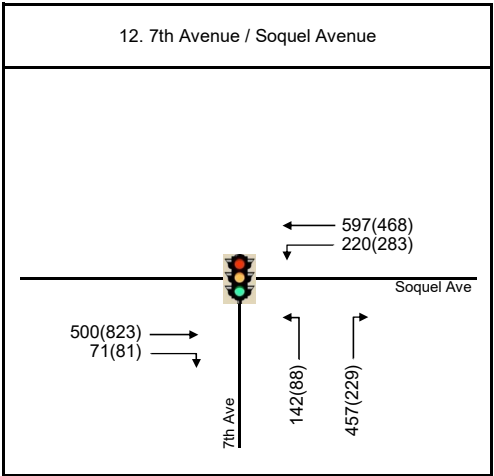
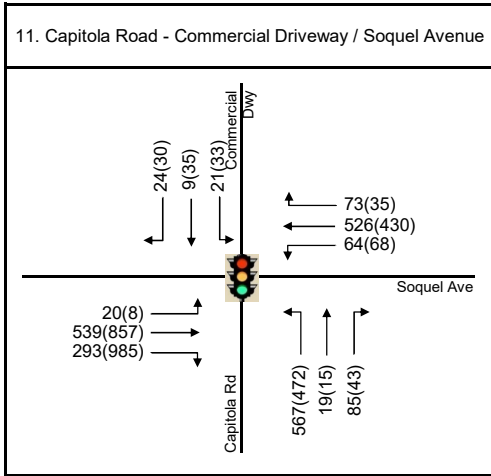
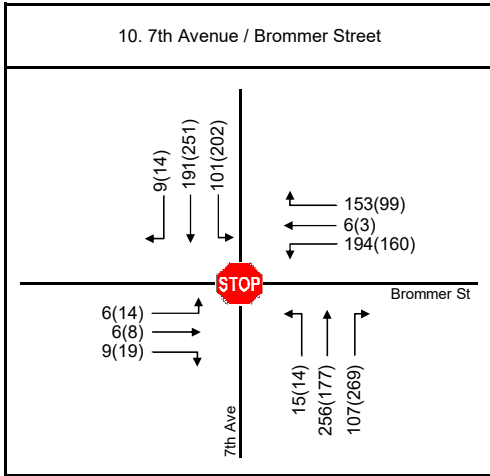
 Traffic Movement

 Stop Sign

 Traffic Signal

 Roundabout





LEGEND

XX (YY) = AM (PM)

Traffic Movement

Stop Sign

Traffic Signal

Roundabout

N-S Street	E-W Street	Existing Intersection Control	Jurisdiction	LOS Standard	Peak Hour	Existing Conditions		Existing Plus Project Conditions		Background Conditions		Background Plus Project Conditions		Cumulative Without Project Conditions		Cumulative Plus Project Conditions			
						Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS		
1	15th Avenue	One-Way Stop	Santa Cruz County	D	AM	14.7	B	20.7/18.7	C/C	14.7	B	20.9/18.8	C/C	14.2	B	17.1/21.3	C/C		
					PM	15.8	C	12.6/20.5	B/C	15.9	C	12.6/21.7	B/C	14.0	B	14.0/26.5	B/D		
2	16th Avenue	One-Way Stop	Santa Cruz County	D	AM	17.3	C	9.7/14.8	A/B	17.4	C	9.8/14.9	A/B	14.0	B	10.0/15.6	B/C		
					PM	29.9	D	13.7/16.7	B/C	30.4	D	13.1/16.8	B/C	15.9	C	14.7/18.9	B/C		
3	17th Avenue	Signal	Santa Cruz County	D	AM	23.1	C	24.2	C	23.1	C	24.3	C	27.5	C	29.5	C		
					PM	34.8	C	37.0	D	35.1	D	37.3	D	58.3	E	63.7	E		
					AM														
					PM														
4	Chanticleer Avenue	Signal	Santa Cruz County	D	AM	21.1	C	21.2	C	21.2	C	21.3	C	23.9	C	24.2	C		
					PM	38.4	D	39.1	D	39.0	D	39.7	D	80.3	F	81.4	F		
5	17th Avenue	Signal	Santa Cruz County	D	AM	10.8	B	10.8	B	10.8	B	10.8	B	10.7	B	10.8	B		
					PM	14.5	B	14.5	B	14.4	B	14.5	B	14.3	B	14.4	B		
6	17th Avenue	One-Way Stop	Santa Cruz County	D	AM	13.2	B	13.3	B	13.2	B	13.3	B	14.7	B	14.8	B		
					PM	13.5	B	13.6	B	13.6	B	13.6	B	15.4	C	15.5	C		
7	17th Avenue	Signal	Santa Cruz County	D	AM	29.5	C	29.7	C	29.7	C	29.9	C	39.8	D	40.4	D		
					PM	34.1	C	34.3	C	34.4	C	34.6	C	46.8	D	47.4	D		
8	East Cliff Drive - 17th Avenue	Signal	Santa Cruz County	D	AM	27.0	C	27.2	C	27.3	C	27.4	C	41.2	D	41.6	D		
					PM	32.1	C	32.3	C	32.7	C	32.9	C	38.4	D	38.6	D		
9	7th Avenue	Signal	Santa Cruz County	D	AM	30.6	C	30.6	C	30.7	C	30.7	C	43.2	D	43.1	D		
					PM	25.9	C	26.6	C	26.0	C	26.7	C	38.5	D	40.5	D		

N-S Street	E-W Street	Existing Intersection Control	Jurisdiction	LOS Standard	Peak Hour	Existing Conditions		Existing Plus Project Conditions		Background Conditions		Background Plus Project Conditions		Cumulative Without Project Conditions		Cumulative Plus Project Conditions	
						Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
10 7th Avenue	Brommer Street	All-Way Stop	Santa Cruz County	D	AM	14.7	B	15.1	C	14.8	B	15.2	C	17.1	C	17.6	C
					PM	22.5	C	23.8	C	22.8	C	24.3	C	30.9	D	33.3	D
11 Capitola Road - Commercial Driveway	Soquel Avenue	Signal	City of Santa Cruz	D	AM	35.0	D	35.1	D	35.2	D	35.3	D	52.3	D	52.9	D
					PM	30.0	C	30.2	C	30.2	C	30.3	C	36.1	D	36.7	D
12 7th Avenue	Soquel Avenue	Signal	Santa Cruz County	D	AM	26.3	C	26.3	C	26.6	C	26.7	C	33.8	C	33.8	D
					PM	28.6	C	28.6	C	28.9	C	28.9	C	51.2	D	51.3	D
13 Soquel Avenue - Commercial Driveway	Soquel Avenue - Soquel Drive	Signal	Santa Cruz County	D	AM	46.7	D	46.6	D	48.0	D	47.9	D	67.9	E	68.2	E
					PM	25.7	C	26.3	C	25.8	C	26.4	C	43.3	D	44.4	D

Notes:

- L, T, R = Left, Through, Right
- NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound
- Overall and side-street Santa Cruz County level of service objective is LOS C. However, LOS D is the minimum acceptable level of service if costs, right-of-way requirements, or environmental impacts of maintaining LOS under this policy are excessive. Overall City of Santa Cruz level of service standard is LOS D.
- For signalized and all-way stop intersection analysis, delay is average overall delay in seconds per vehicle (sec/veh).
- For one- and two-way stop controlled intersection analysis, delay is stop-controlled approach delay(s) in seconds per vehicle (sec/veh).
- Analysis performed using Highway Capacity Manual 6th Edition methodologies.
- * = Delay exceeds ability of methodology to quantify. This signifies LOS F conditions.
- LOS highlighted in red indicates intersection operating below level of service standard.
- LOS bounded by thick borders indicate significant impacts that require improvements. Resulting levels of service with recommended improvements noted under "With Improvements". A list of applied improvements can be found on **Exhibit 5B**.
- N/A = Not Applicable. No improvement is recommended for that time period for this scenario.
- Level of service calculations can be found in **Appendices C, F through H, and J and K**.

N-S Street	E-W Street	Existing Intersection Control	Existing Plus Project Conditions	Background Plus Project Conditions	Cumulative Plus Project Conditions
1 15th Avenue	Capitola Road	One-Way Stop	None Required	None Required	None Required
2 16th Avenue	Capitola Road	One-Way Stop	None Required	None Required	Consider Reviewing EB U-Turn Prohibition
3 17th Avenue	Capitola Road	Signal	Consider Reviewing EB U-Turn Prohibition	Consider Reviewing EB U-Turn Prohibition	a. Optimize Signal Timing b. Consider Reviewing EB U-Turn Prohibition
4 Chanticleer Avenue	Capitola Road	Signal	None Required	None Required	None Required
5 17th Avenue	Soquel Avenue	Signal	None Required	None Required	None Required
6 17th Avenue	Market Driveway	One-Way Stop	None Required	None Required	None Required
7 17th Avenue	Brommer Street	Signal	None Required	None Required	None Required
8 East Cliff Drive - 17th Avenue	East Cliff Drive - Portola Drive	Signal	None Required	None Required	None Required
9 7th Avenue	Capitola Road	Signal	None Required	None Required	None Required

	N-S Street	E-W Street	Existing Intersection Control	Existing Plus Project Conditions	Background Plus Project Conditions	Cumulative Plus Project Conditions
10	7th Avenue	Brommer Street	All-Way Stop	None Required	None Required	None Required
11	Capitola Road - Commercial Driveway	Soquel Avenue	Signal	None Required	None Required	None Required
12	7th Avenue	Soquel Avenue	Signal	None Required	None Required	None Required
13	Soquel Avenue - Commercial Driveway	Soquel Avenue - Soquel Drive	Signal	None Required	None Required	None Required

Notes:

1. L, T, R = Left, Through, Right
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound
3. Dwy = Driveway
4. RIRO = Right-In, Right-Out, i.e., left turns into and out of this approach are prohibited

TRIP GENERATION RATES	ITE LAND USE CODE	DAILY TRIP RATE	AM PEAK HOUR			PM PEAK HOUR				
			PEAK HOUR RATE	% OF ADT	% IN	% OUT	PEAK HOUR RATE	% OF ADT	% IN	% OUT
Multifamily Housing (Mid-Rise) (per unit)	221	5.44	0.36	7%	26%	74%	0.44	8%	0.61	0.39
Clinic (per 1,000 sq. ft.)	630	38.16	3.69	10%	78%	22%	3.28	9%	29%	71%
General Office Building (per 1,000 sq. ft.)	710	9.74	1.16	12%	86%	14%	1.15	12%	16%	84%
Pharmacy/Drugstore without Drive-Through Window (per 1,000 sq. ft.)	880	90.08	2.94	3%	65%	35%	8.51	9%	49%	51%

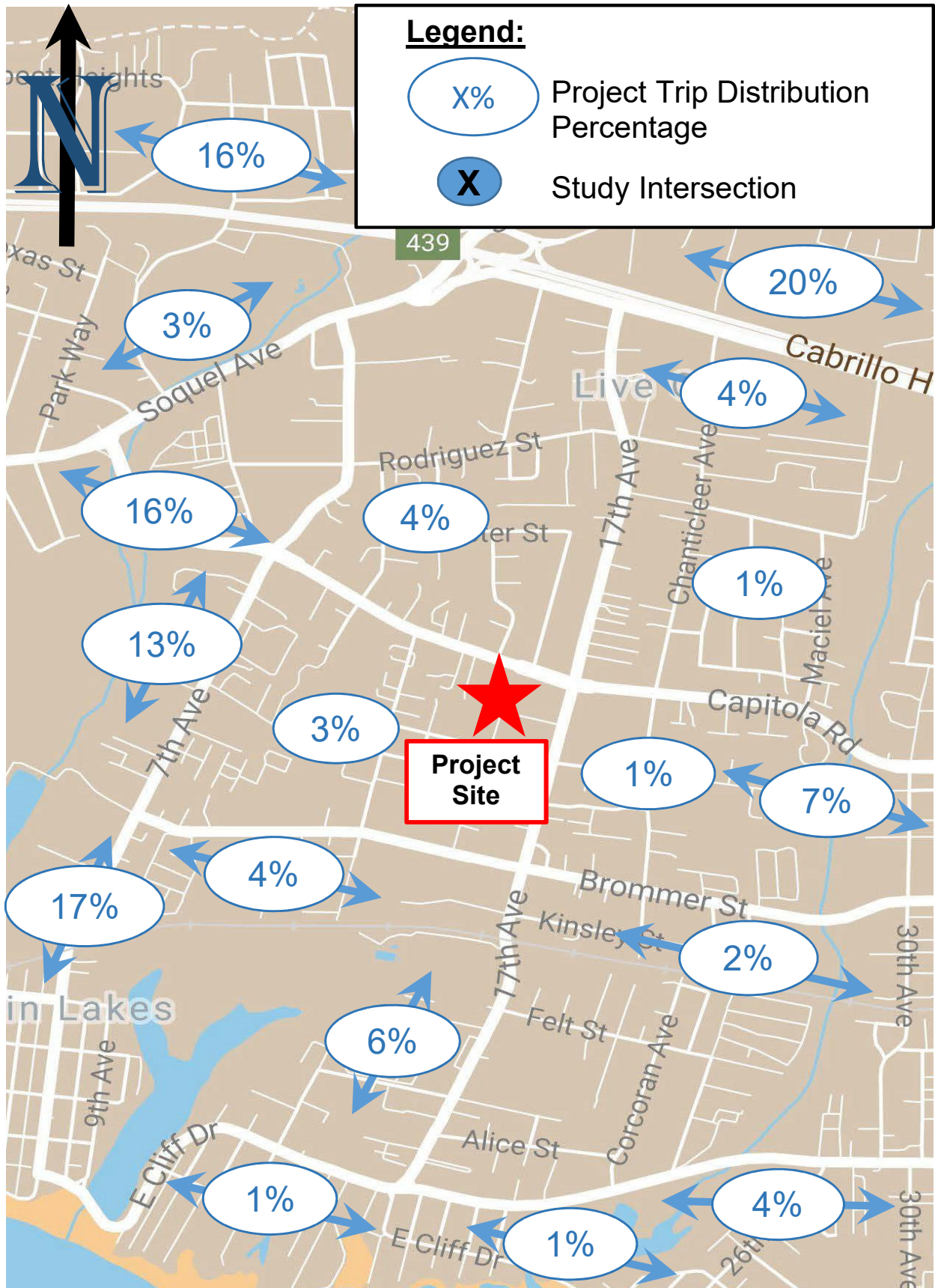
PROPOSED USE ²	PROJECT SIZE	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR				
			PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT	PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT
Apartments	57 units	310	21	7%	5	16	25	8%	15	10
Clinics	16,938 sq. ft.	646	63	10%	49	14	56	9%	16	40
Office	12,089 sq. ft.	118	14	12%	12	2	14	12%	2	12
Pharmacy	1,308 sq. ft.	118	4	3%	3	1	11	9%	5	6
Subtotal:		1,192	102		69	33	106		38	68
Internal Reduction (10%):		-119	-10		-7	-3	-11		-4	-7
Net Subtotal:		1,073	92		62	30	95		34	61

MODE SPLIT ADJUSTMENTS		
	Base ³	Anticipated ⁴
Vehicle Trip Percentage:	96%	89%
Pedestrian Trip Percentage:	2%	4%
Bicycle Trip Percentage:	1%	1%
Transit Trip Percentage:	1%	6%
	100%	100%

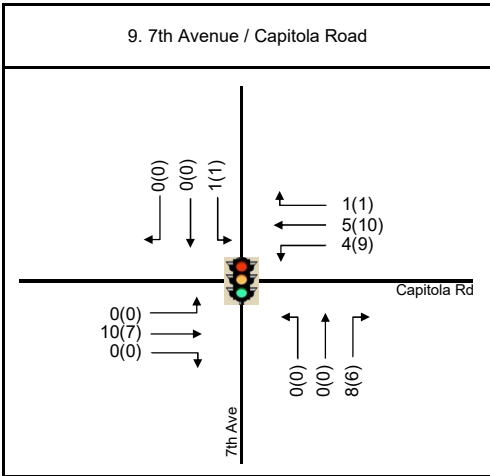
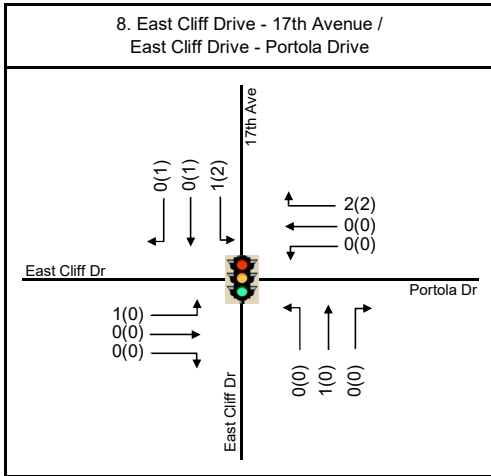
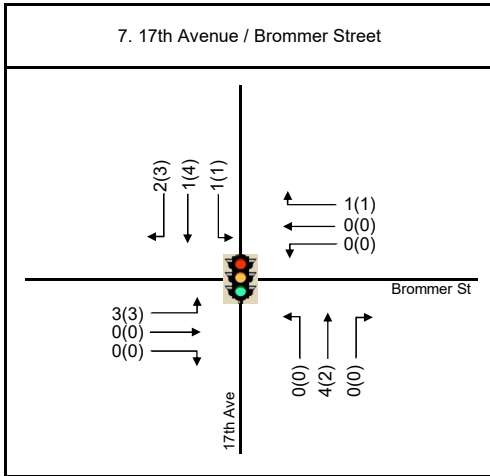
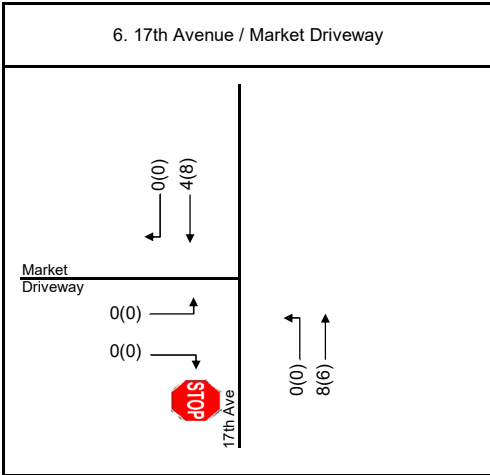
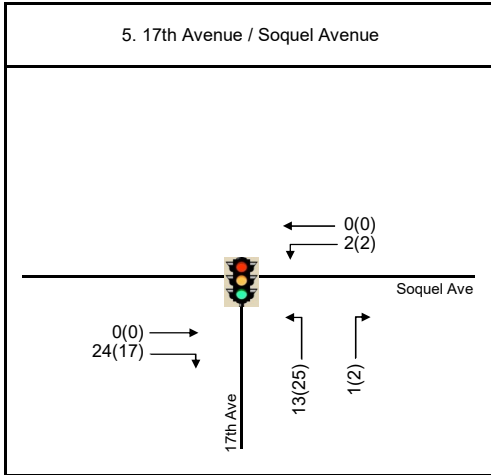
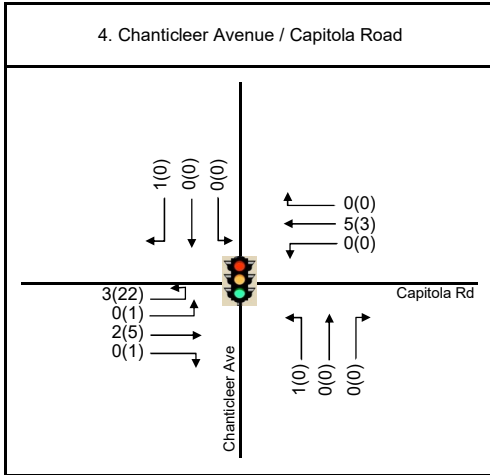
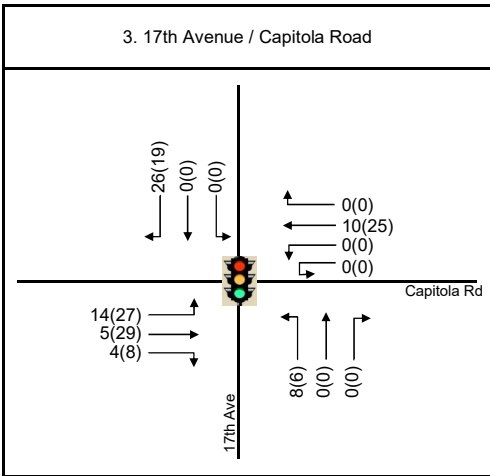
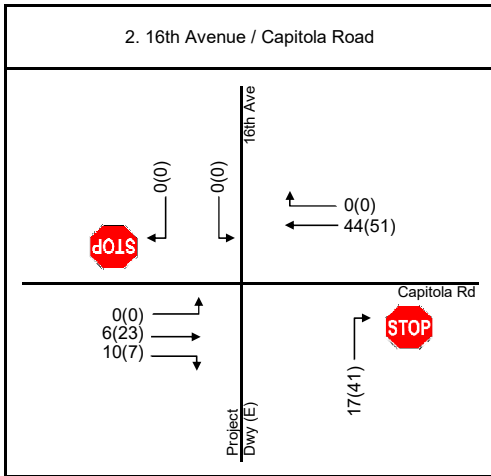
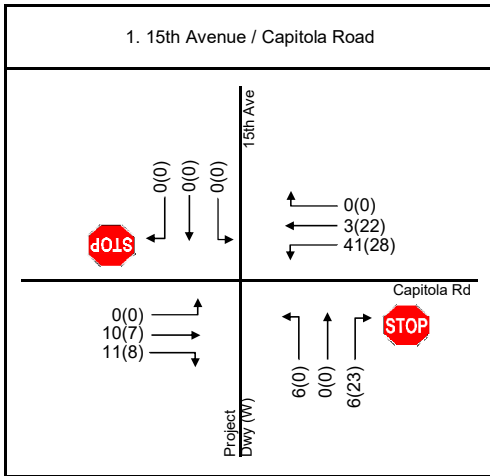
PROPOSED USE	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR				
		PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT	PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT
Adjusted Vehicle Trips:	995	85		57	28	88		32	56
Older Trip Generation (used in analysis): ⁵	1,437	93		62	31	107		43	64

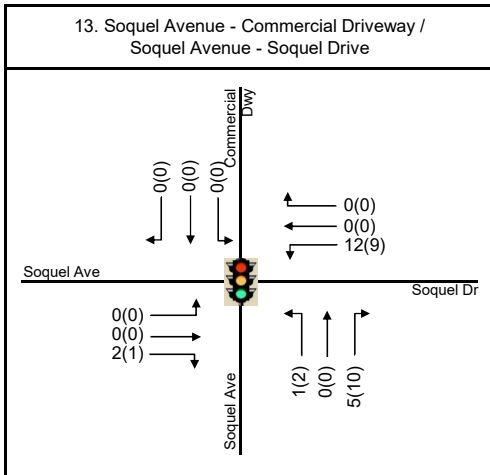
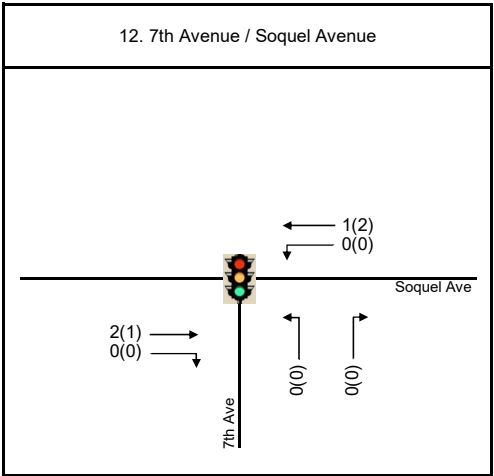
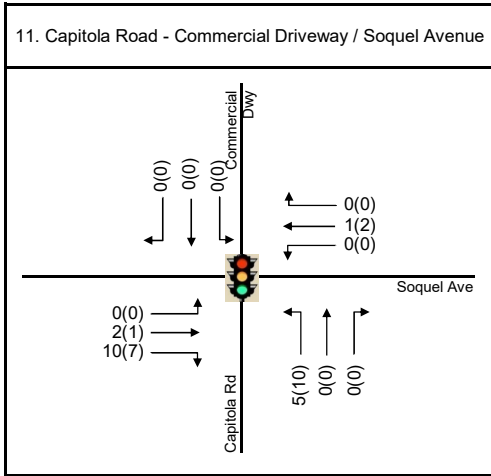
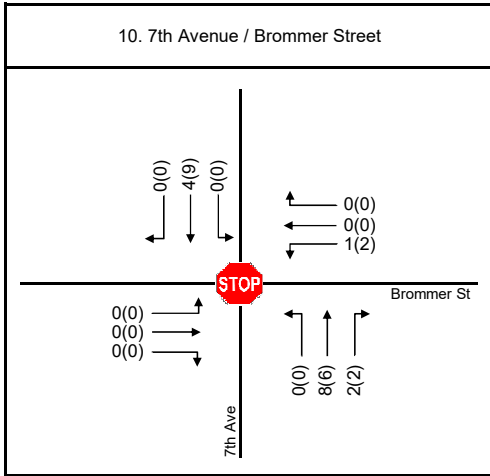
Notes:

1. Trip generation rates published by Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017.
2. Project definition includes following components:
 - a. Apartments: 56 Apartments plus 1 manager's unit.
 - b. Clinics: Two medical office/clinics, 5,552 and 11,386 square feet each.
 - c. Office: Office space associated with each clinic, 5,486 and 6,603 square feet each.
 - d. Pharmacy: 1,308 square feet.
3. Base mode splits based upon data in source cited in Note 1.
4. Anticipated mode splits are based upon anticipated pedestrian, bicycle and transit trips for project. This was partially based on results of a clinic patient survey found in **Appendix E**.
5. Trip generation used for operational analysis in this report based on older project definition.



Basemap Source: Google Maps, 2018.





LEGEND

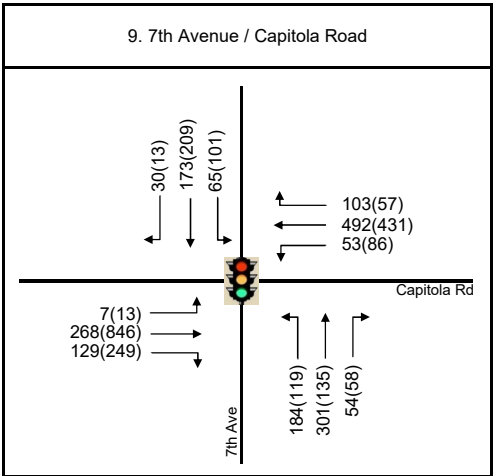
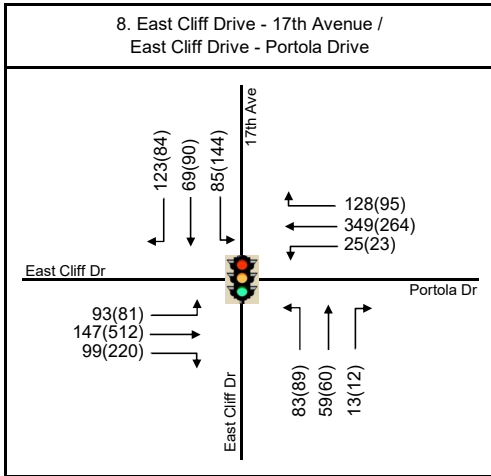
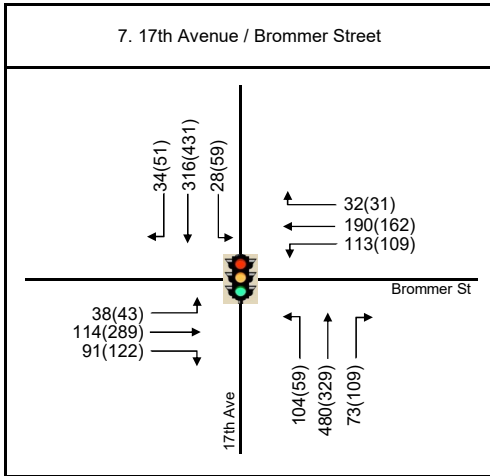
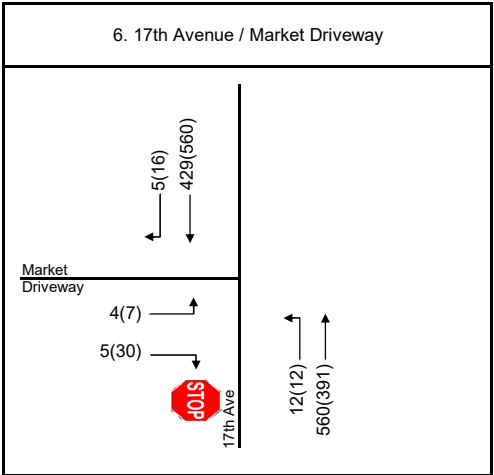
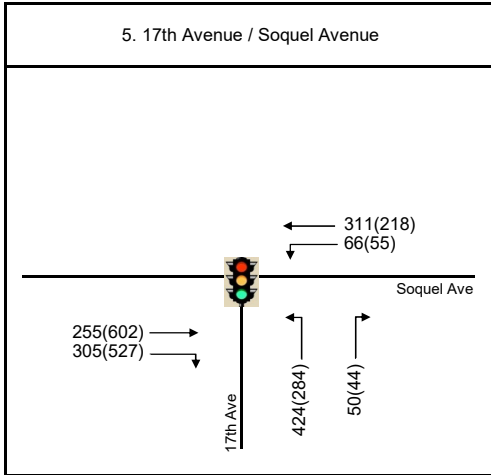
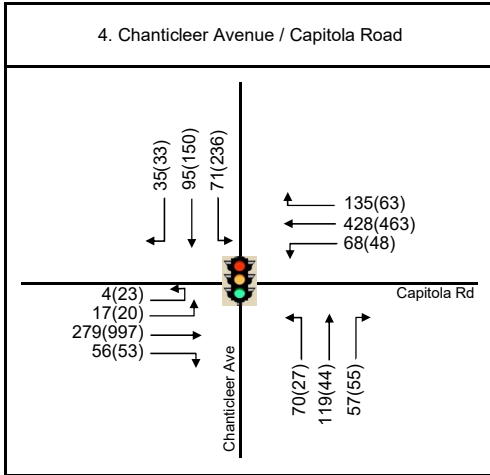
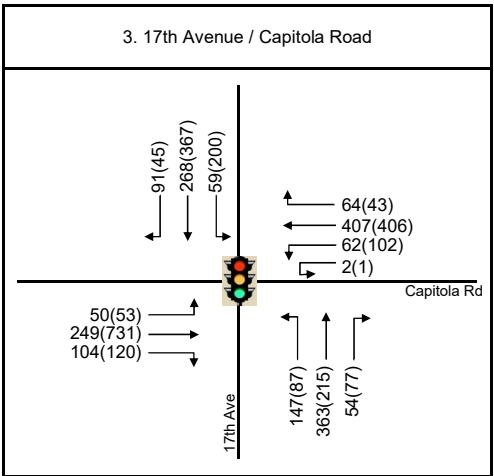
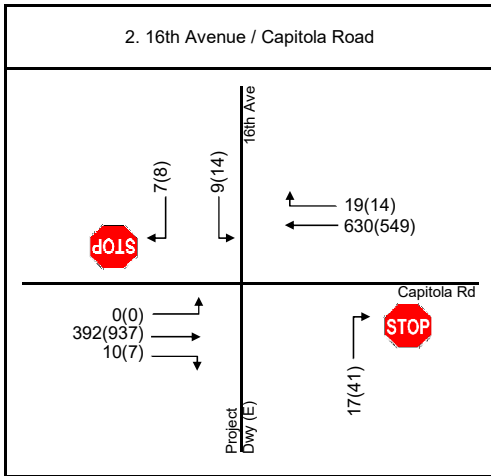
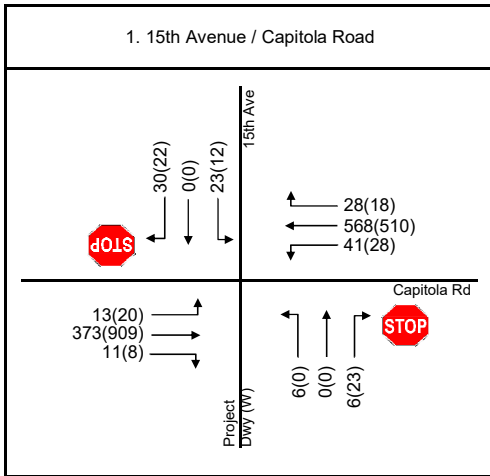
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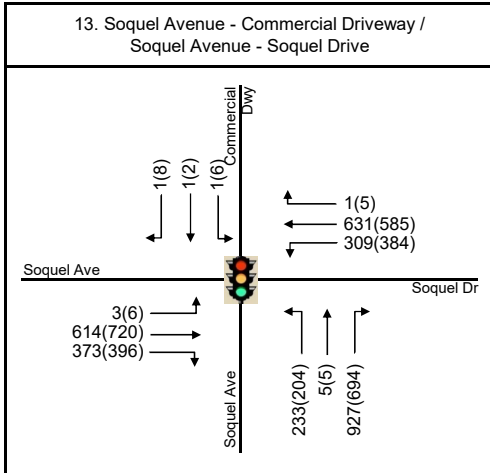
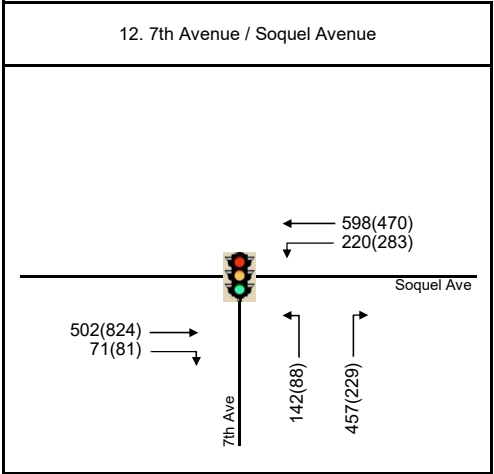
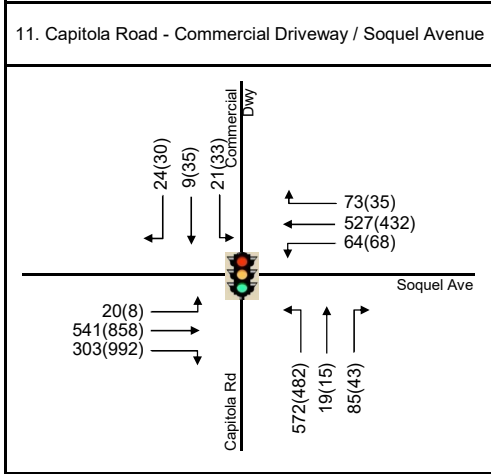
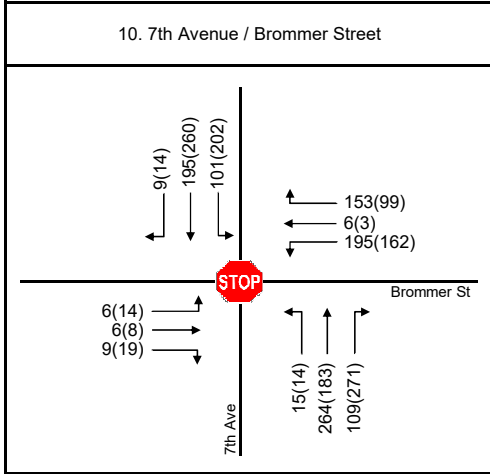
Traffic Movement

Stop Sign

Traffic Signal

Roundabout





LEGEND

XX (YY) = AM (PM)

Traffic Movement

Stop Sign

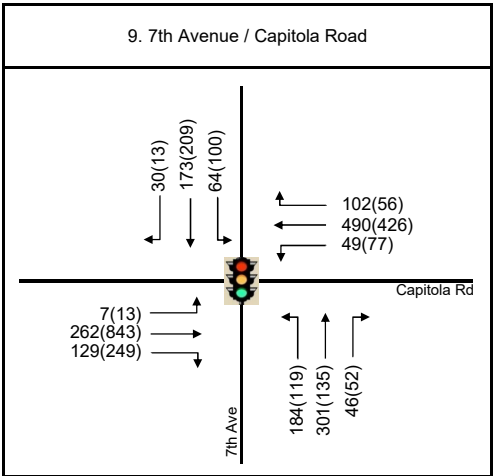
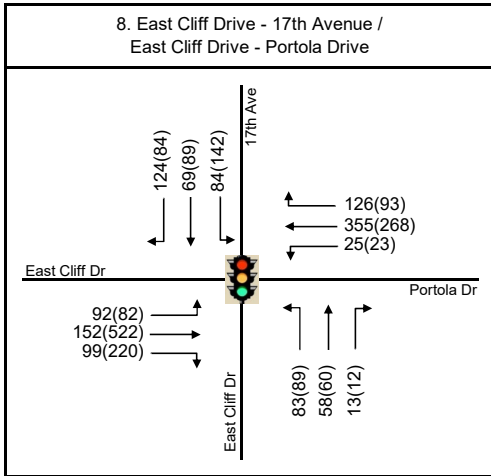
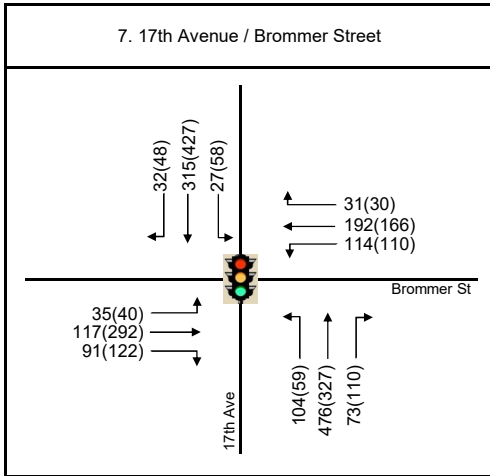
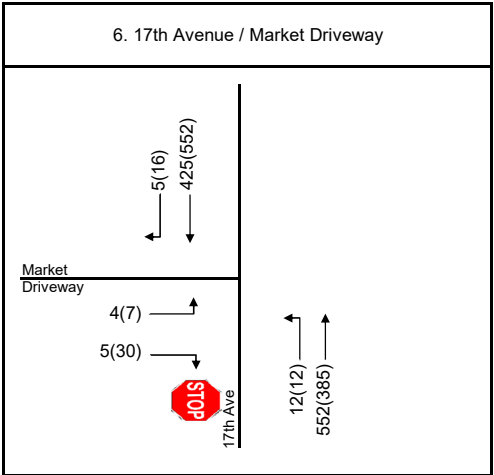
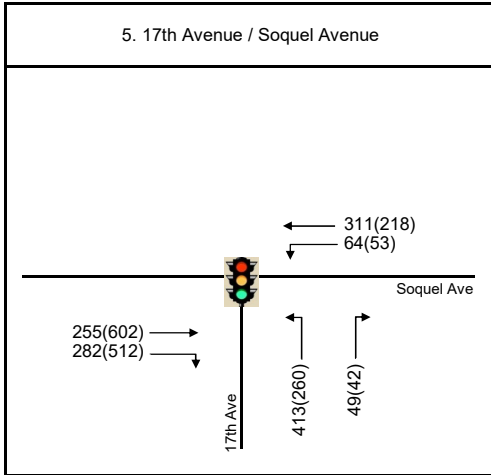
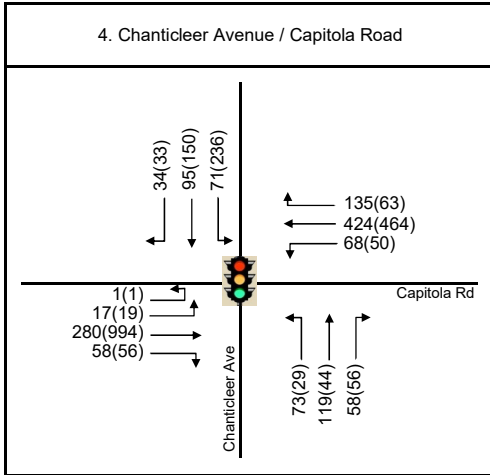
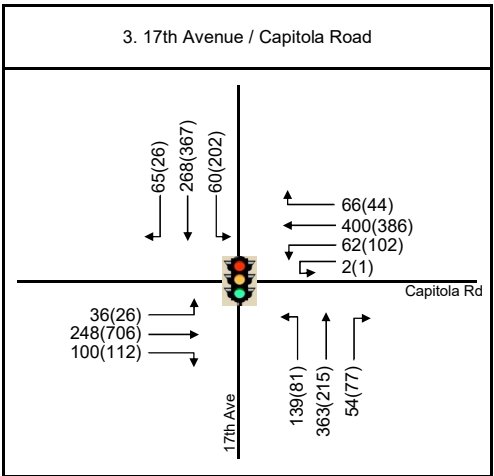
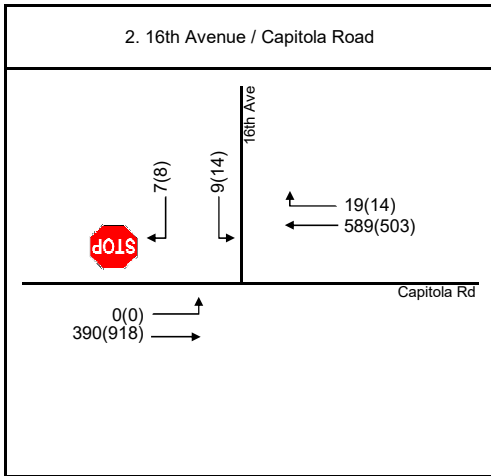
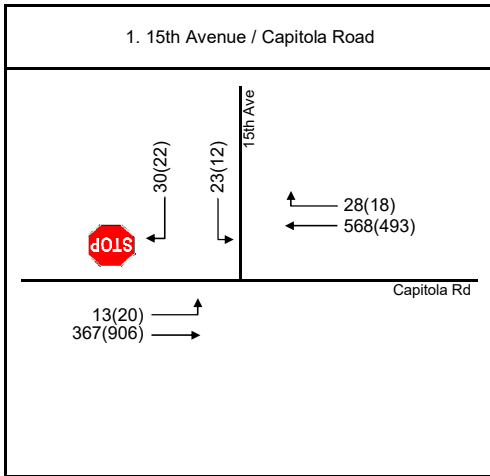
Traffic Signal

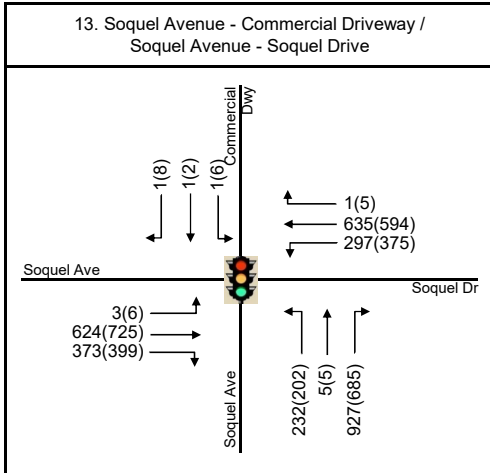
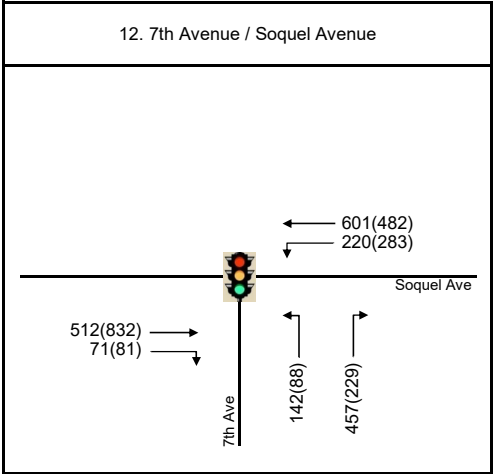
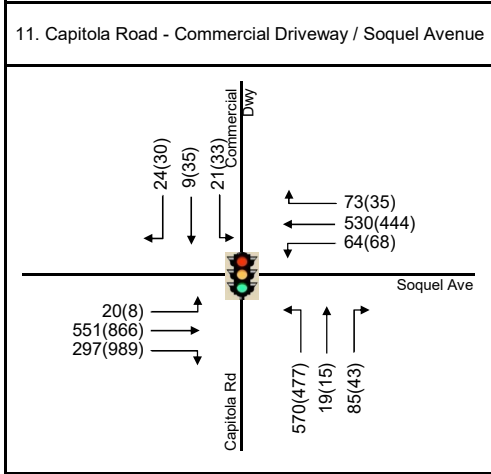
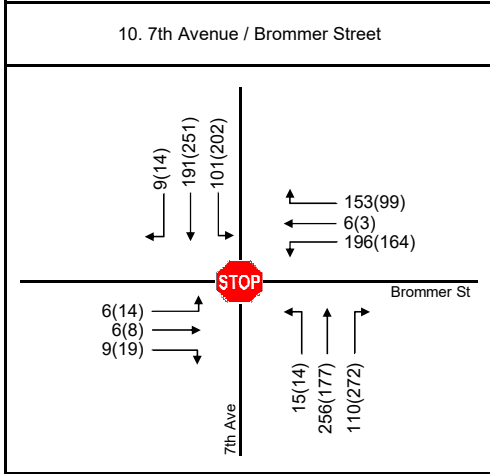
Roundabout

Project	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
<i>Santa Cruz County</i>								
1. Nissan of Santa Cruz ³	-	168	-5	11	-16	26	5	21
2. Discretion Brewing	17,050 sq. ft.	85	12	11	1	11	1	10
3. East Cliff Rowhouses (townhomes)	8 units	76	6	2	4	8	5	3
4. 1240 Chanticleer (home)	1 unit	9	1	0	1	1	1	0
5. The Lumberyard ⁴	-	412	24	8	16	22	20	2
6. 2340 Harper (homes)	11 units	104	8	2	6	11	7	4
7. Paul Minnie Mixed-Use Apartments	15 units	110	7	2	5	8	5	3
Office	3,600 sq. ft.	58	7	6	1	9	3	6
8. 3715 Moana (homes)	2 units	19	1	0	1	2	1	1
9. 3911 Portola ⁵	-	94	16	7	9	29	14	15
<i>City of Santa Cruz</i>								
10. 708 Water (apartments)	41 units	300	19	4	15	23	14	9
11. 1024 Soquel Apartments	12 units	88	6	1	5	7	4	3
Commercial	1,600 sq. ft.	60	2	1	1	6	3	3
12. 514 Frederick (townhomes)	4 units	38	3	1	2	4	3	1
13. 738 Pacheco (homes)	3 units	28	2	1	1	3	2	1
14. 1800 Soquel Condominiums	32 units	234	15	3	12	18	11	7
Commercial	4,000 sq. ft.	151	4	2	2	15	7	8
15. 800 Soquel Apartments	2 units	15	1	0	1	1	1	0
Commercial	2,600 sq. ft.	98	2	1	1	10	5	5
16. 769 N. Branciforte (townhomes)	3 units	28	2	1	1	3	2	1
17. 724 Darwin (duplexes)	4 units	38	3	1	2	4	3	1
18. 1129 Soquel Apartments	2 units	15	1	0	1	1	1	0
Commercial ⁶	2,700 units	102	3	2	1	10	5	5
19. 415 Windsor (townhomes)	3 units	28	2	1	1	3	2	1
20. 916 Seabright (townhomes) ⁷	9 units	85	7	2	5	9	6	3
21. 1412 Seabright Apartments	5 units	37	2	0	2	3	2	1
Office	940 sq. ft.	35	2	2	0	2	1	1
22. 719 Darwin (townhomes)	3 units	28	2	1	1	3	2	1
Total Approved and Pending Projects:		2,543	155	73	82	252	136	116

Notes:


- Traffic volumes are based on trip generation rates cited from *Trip Generation Manual*, 10th Edition, Institute of Transportation Engineers (ITE), 2017, unless otherwise noted.
- sq. ft. = square feet.
- Trip generation for Nissan of Santa Cruz cited from *Santa Cruz Nissan Transportation Impact Analysis*, Kimley-Horn, October 2017.
- Trip generation for The Lumberyard cited from *Development at Portola Drive / 38th Avenue Traffic Impact Study*, Kimley-Horn, January 14, 2015.
- Trip generation for 3911 Portola cited from *3911 Portola Drive Mixed-Use Project Traffic Study, Santa Cruz County, California*, Keith Higgins Traffic Engineer, August 2018.
- Commercial square footage estimated as roughly half of total building square footage.
- Trip generation for 916 Seabright cited from *Seabright Townhomes, Santa Cruz, CA*, Jeff Waller Consulting, September 12, 2018.








LEGEND

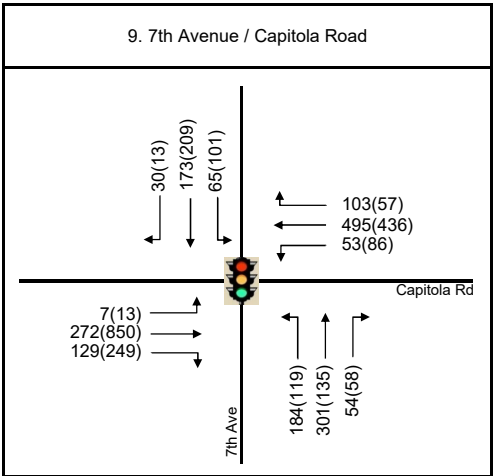
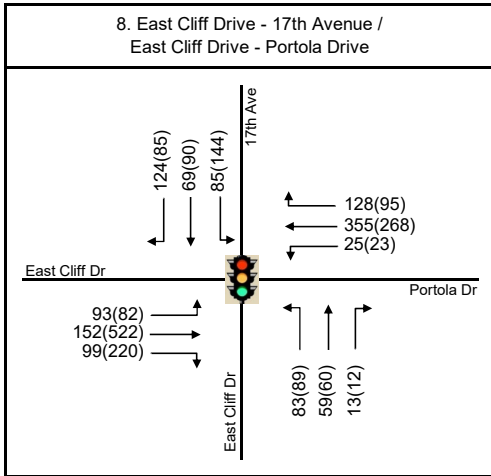
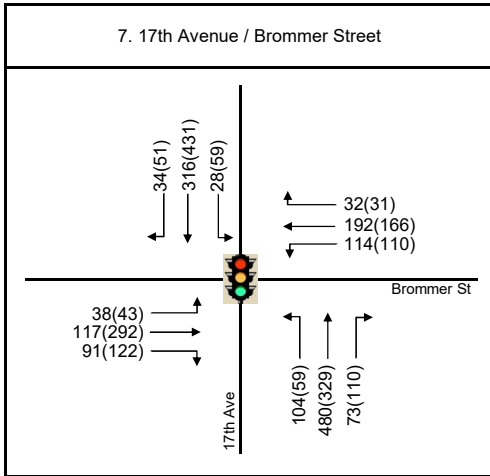
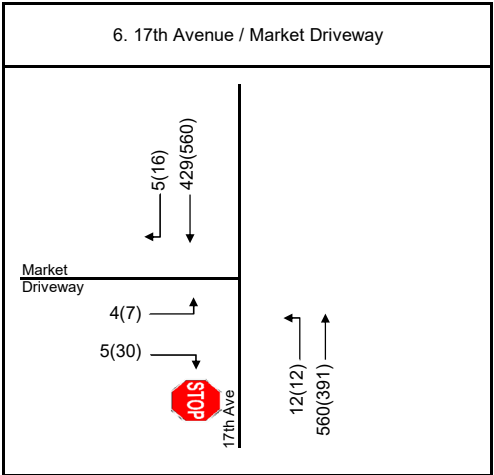
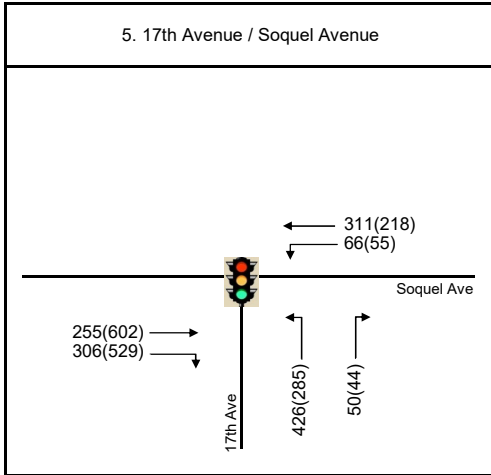
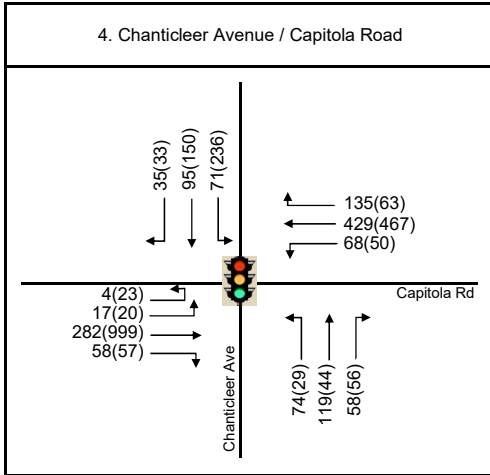
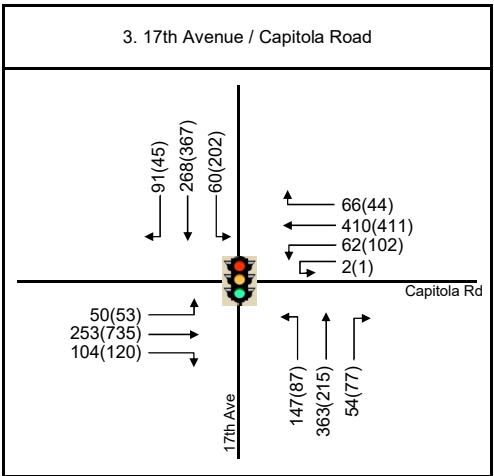
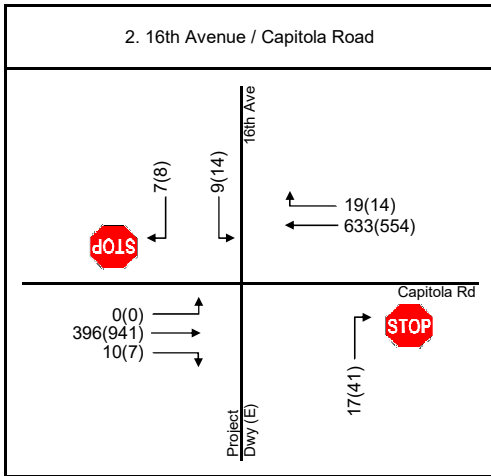
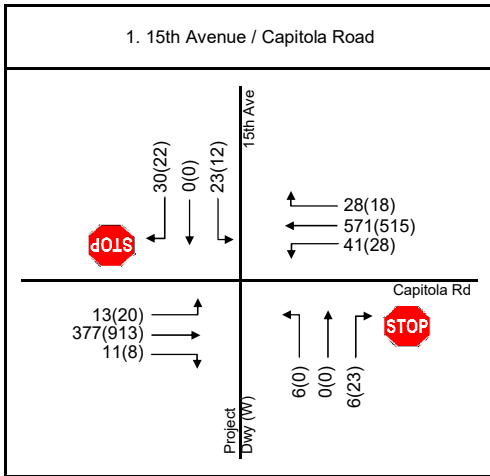
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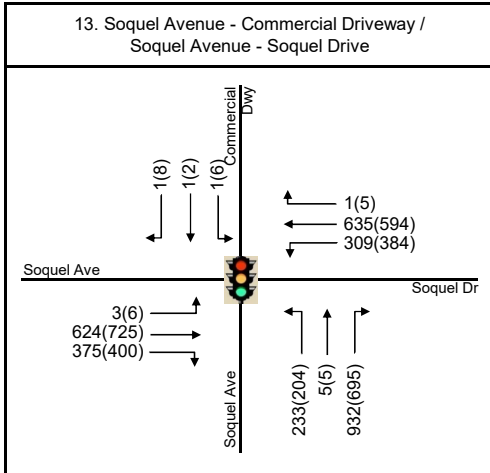
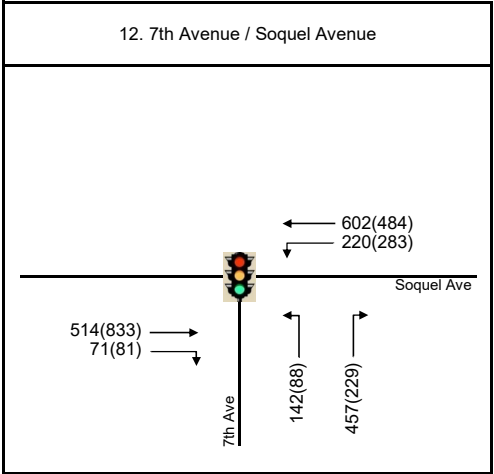
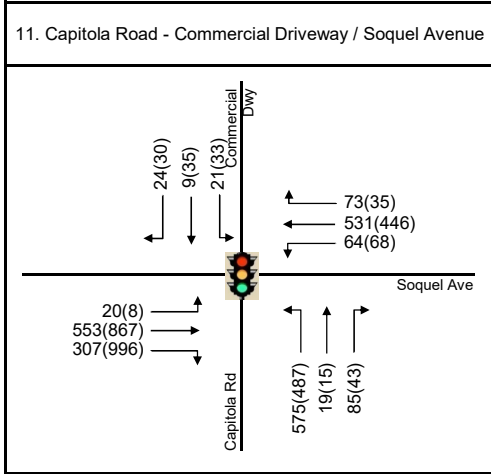
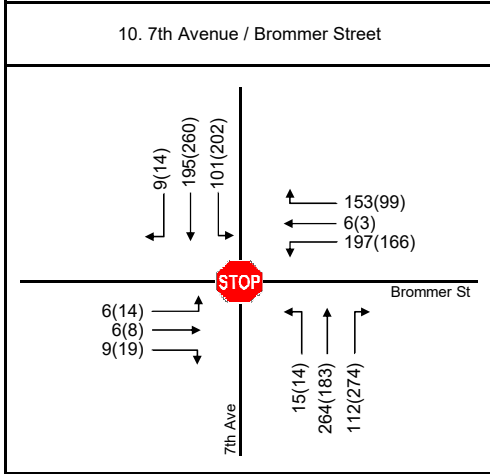
 Traffic Movement

 Stop Sign

 Traffic Signal

 Roundabout





LEGEND

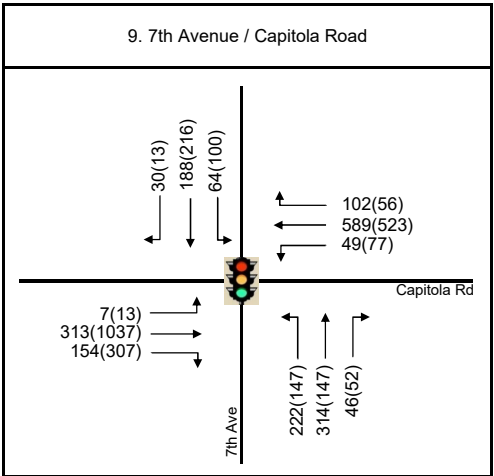
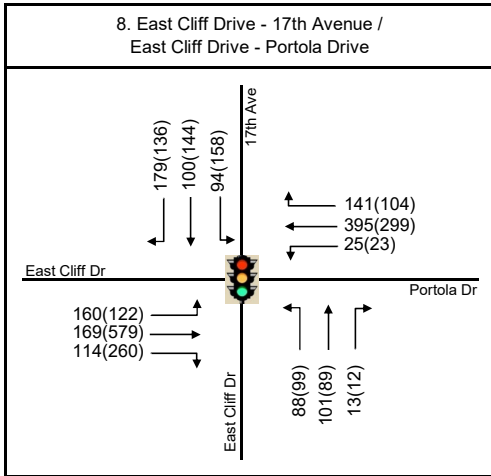
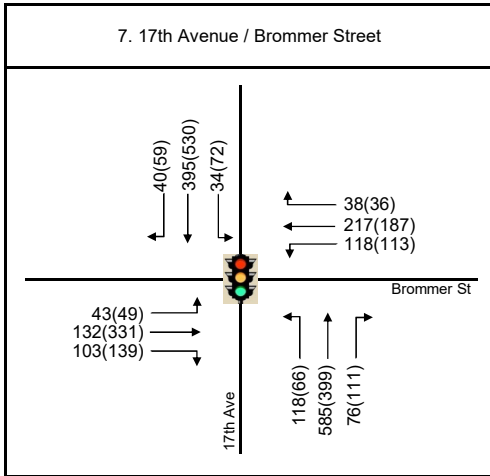
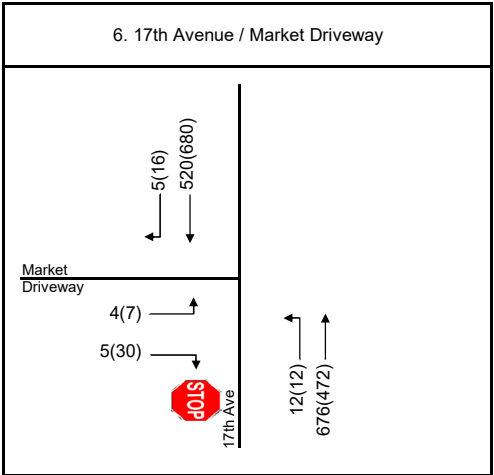
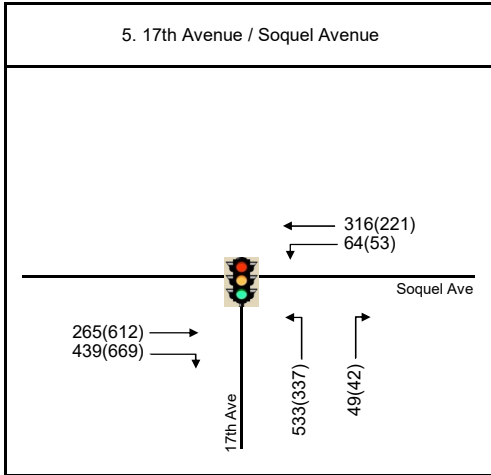
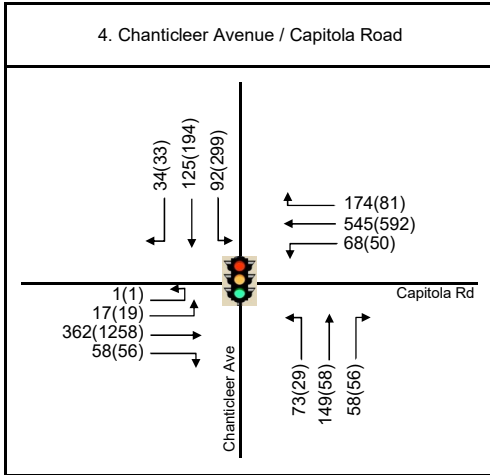
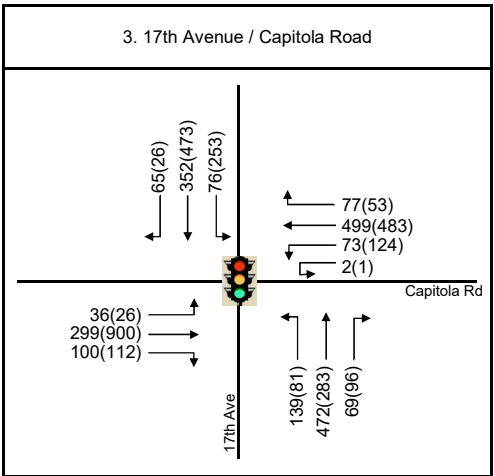
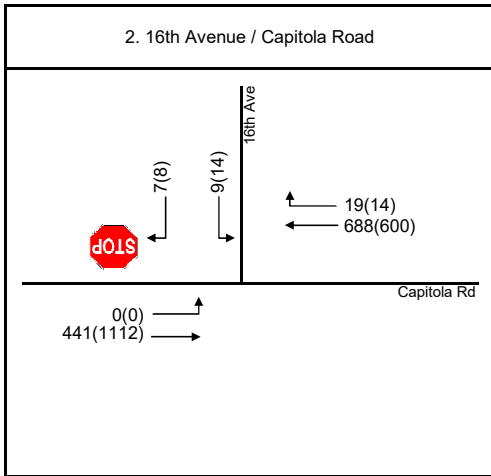
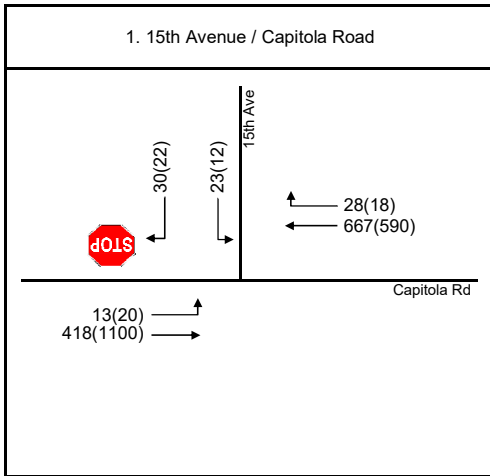
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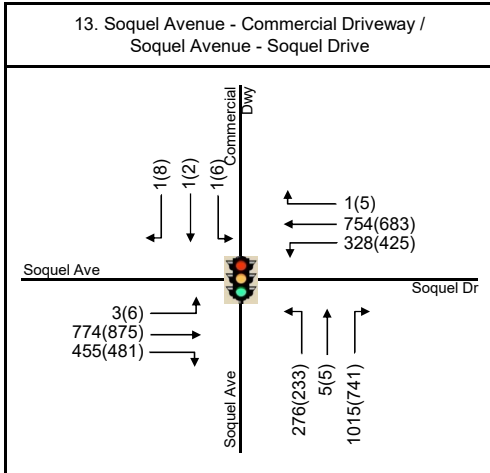
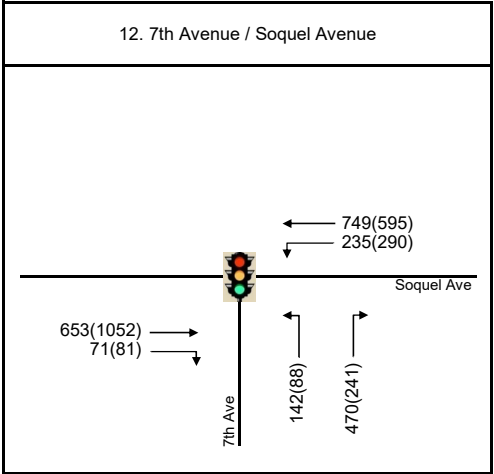
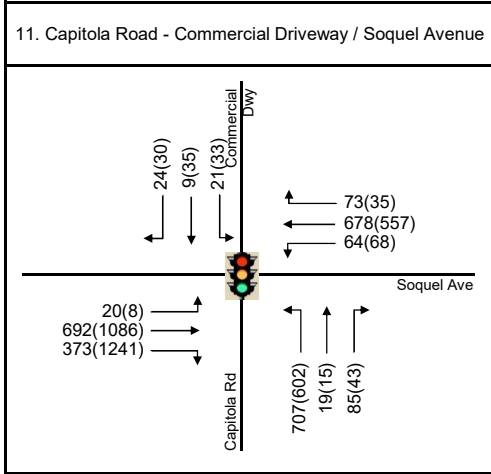
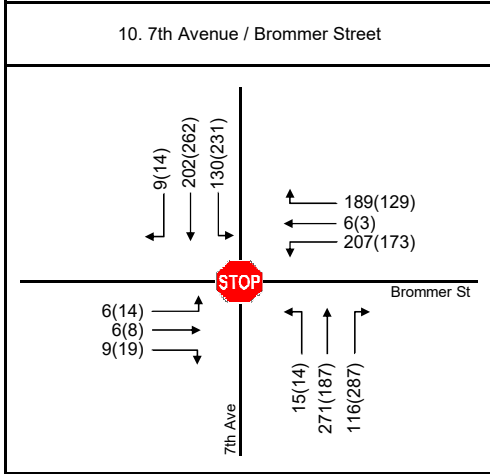
Traffic Movement

Stop Sign

Traffic Signal

Roundabout





LEGEND

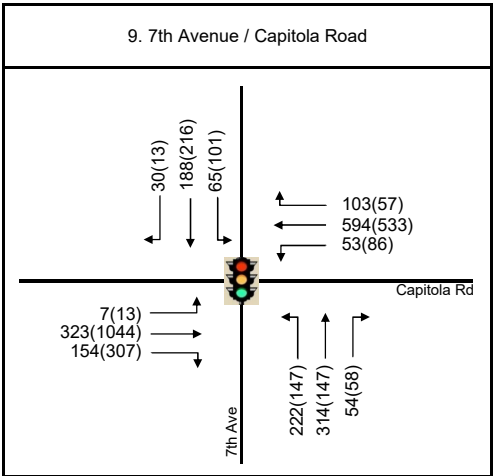
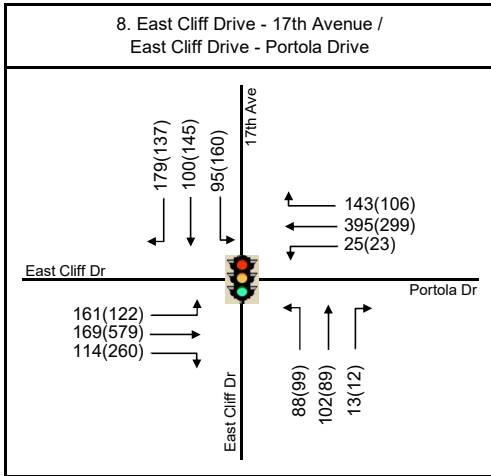
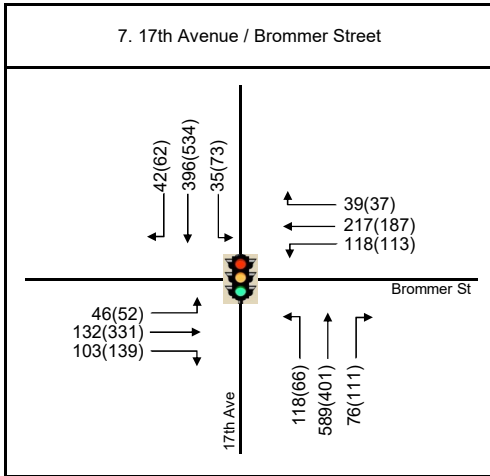
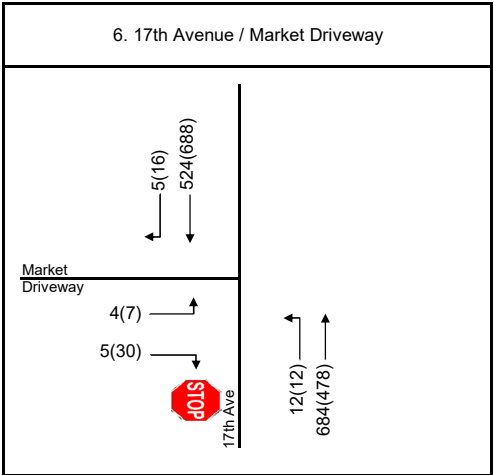
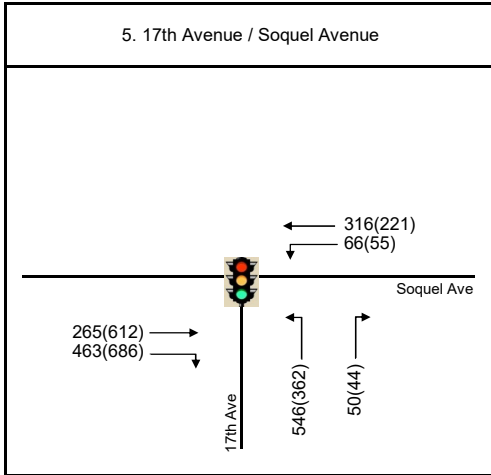
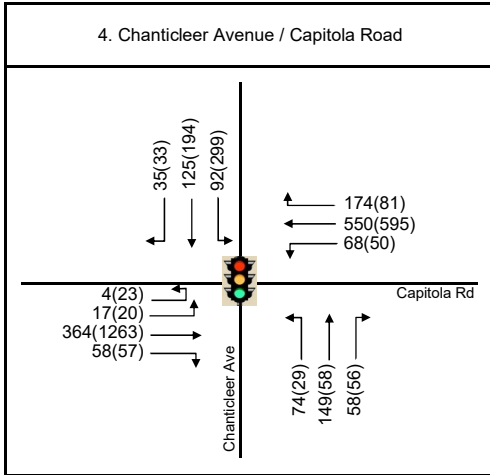
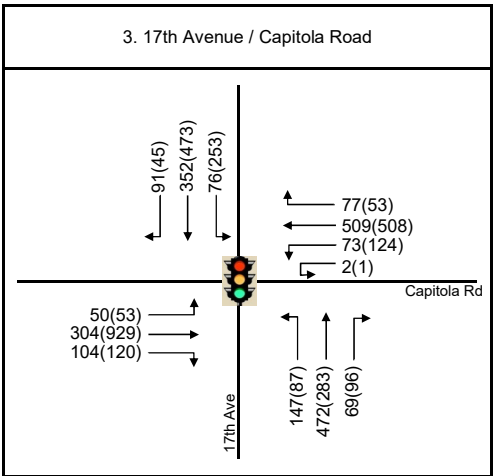
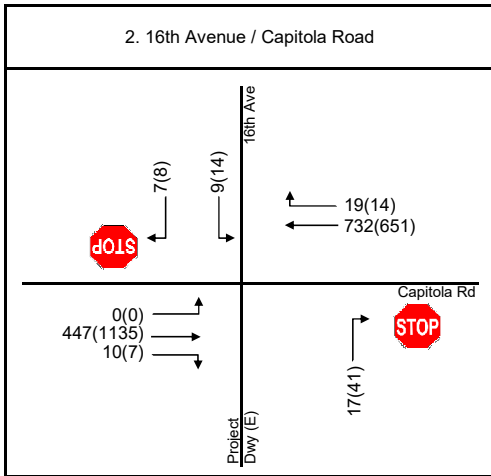
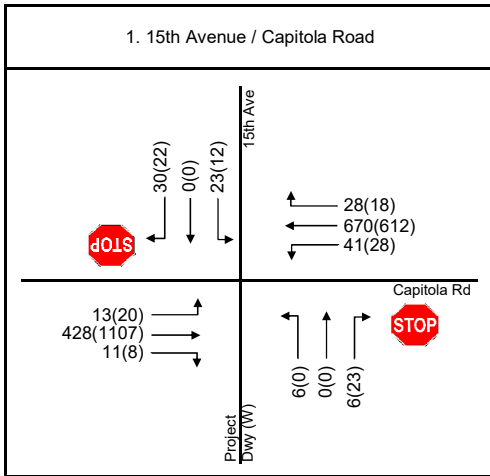
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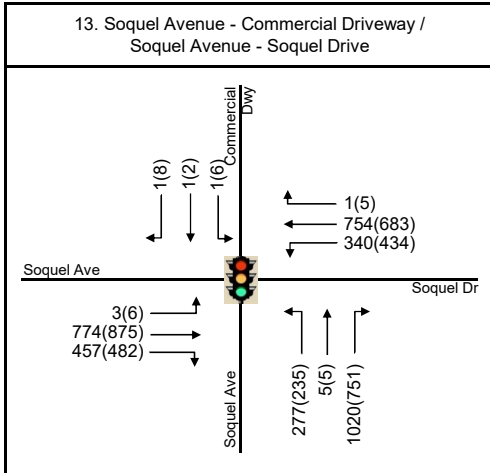
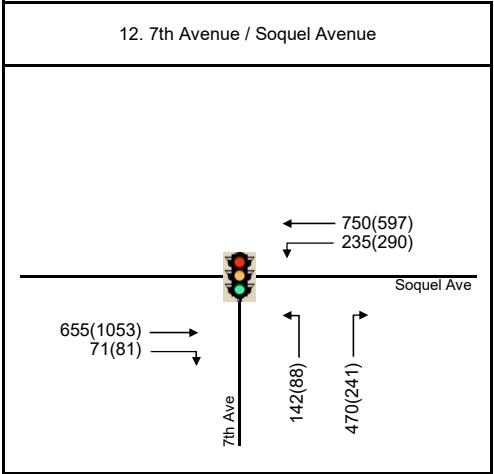
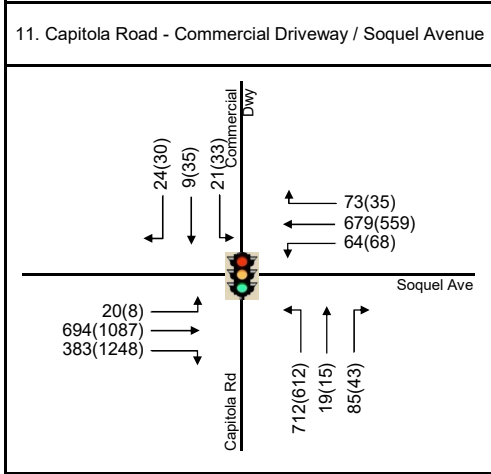
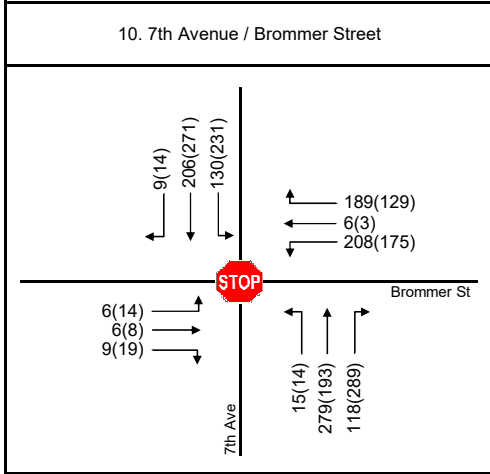
Traffic Movement

Stop Sign

Traffic Signal

Roundabout





LEGEND

XX (YY) = AM (PM)

Traffic Movement

Stop Sign

Traffic Signal

Roundabout

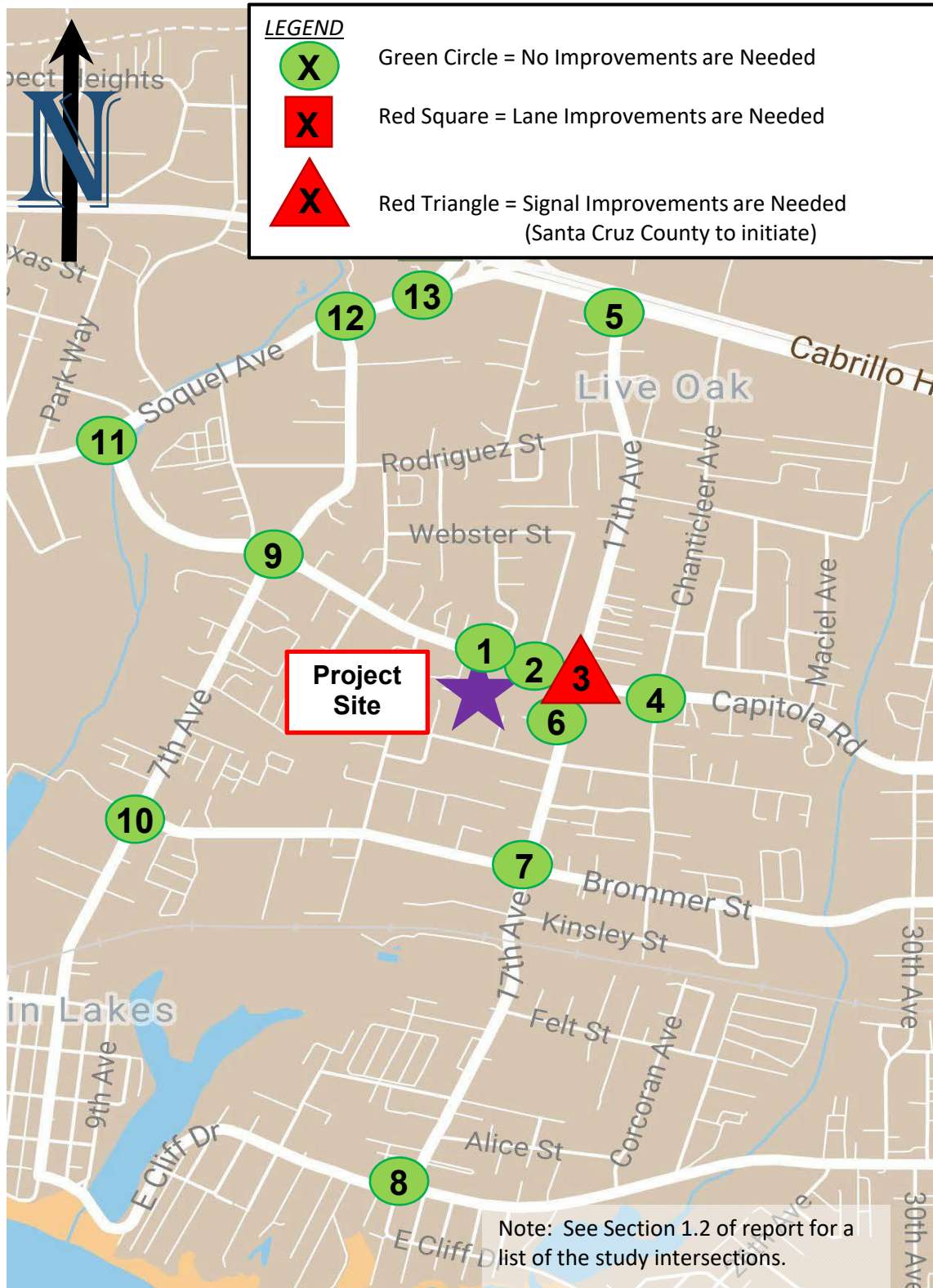
Location	Percent of Net Project Traffic	Daily Project Traffic	Distance from Project (miles)	Vehicle-Miles Traveled
Aptos/Rio Del Mar/La Selva Beach	9%	23	7.0	161
Boulder Creek (Upper San Lorenzo Valley)	0%	0	14.0	0
Capitola	9%	24	1.5	36
Davenport/Bonny Doon	0%	0	10.0	0
Felton (Lower San Lorenzo Valley)	2%	5	10.0	50
Live Oak	10%	26	1.0	26
Pleasure Point	3%	8	1.5	12
Santa Cruz	42%	109	3.0	327
Scotts Valley	4%	10	7.5	75
Soquel	6%	16	3.0	48
Watsonville	10%	26	14.0	364
San Jose	5%	13	26.0	338
Total:	100%	260		1,437

Apartment Occupants per Unit (estimated): ⁴	2.74
Number of Apartments (including Manager's Unit):	57
Number of People Living in Apartments:	156

Average Residential Vehicle-Miles Traveled (miles/resident):	9.2
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Notes:

1. Percent of Net Project Traffic derived from trip distribution on **Exhibit 6B**.
2. Total net daily residential project trips cited from trip generation on **Exhibit 6A**.
3. Traveled distances are measured using Google© Maps.
4. Apartment Occupants per Unit estimated as 1.5 persons per unit per bedroom, based on data from the Californit Tax Credit Allocation Committee and the relative amount of 1-, 2- and 3- bedroom units proposed by the project applicant.



Basemap Source: Google Maps, 2018.

Appendix A

Level of Service

Descriptions

APPENDIX A1

LEVEL OF SERVICE (LOS) DESCRIPTION SIGNALIZED INTERSECTIONS

The capacity of an urban street is related primarily to the signal timing and the geometric characteristics of the facility as well as to the composition of traffic on the facility. Geometrics are a fixed characteristic of a facility. Thus, while traffic composition may vary somewhat over time, the capacity of a facility is generally a stable value that can be significantly improved only by initiating geometric improvements. A traffic signal essentially allocates time among conflicting traffic movements that seek to use the same space. The way in which time is allocated significantly affects the operation and the capacity of the intersection and its approaches.

The methodology for signalized intersection is designed to consider individual intersection approaches and individual lane groups within approaches. A lane group consists of one or more lanes on an intersection approach. The outputs from application of the method described in the HCM 2010 are reported on the basis of each lane. For a given lane group at a signalized intersection, three indications are displayed: green, yellow and red. The red indication may include a short period during which all indications are red, referred to as an all-red interval and the yellow indication forms the change and clearance interval between two green phases.

The methodology for analyzing the capacity and level of service must consider a wide variety of prevailing conditions, including the amount and distribution of traffic movements, traffic composition, geometric characteristics, and details of intersection signalization. The methodology addresses the capacity, LOS, and other performance measures for lane groups and the intersection approaches and the LOS for the intersection as a whole.

Capacity is evaluated in terms of the ratio of demand flow rate to capacity (v/c ratio), whereas LOS is evaluated on the basis of control delay per vehicle (in seconds per vehicle). The methodology does not take into account the potential impact of downstream congestion on intersection operation, nor does the methodology detect and adjust for the impacts of turn-pocket overflows on through traffic and intersection operation.

LEVEL OF SERVICE (LOS) CRITERIA FOR SIGNALIZED INTERSECTIONS

(Reference 6th Edition Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	<10
B	>10 - 20
C	>20 - 35
D	>35 - 55
E	>55 - 80
F	>80

APPENDIX A2

LEVEL OF SERVICE (LOS) DESCRIPTION UNSIGNALIZED INTERSECTIONS WITH ALL-WAY STOP CONTROL (AWSC)

AWSC intersections require every vehicle to stop at the intersection before proceeding. Since each driver must stop, the judgment as to whether to proceed into the intersection is a function of traffic conditions on the other approaches. While giving priority to the driver on the right is a recognized rule in some areas, it is not a good descriptor of actual intersection operations. What happens is the development of a consensus of right-of-way that alternates between the drivers on the intersection approaches, a consensus that depends primarily on the intersection geometry and the arrival patterns at the stop line.

If no traffic is present on the other approaches, a driver can proceed immediately after the stop is made. If there is traffic on one or more of the other approaches, a driver proceeds only after determining that there are no vehicles currently in the intersection and that it is the driver's turn to proceed. Since no traffic signal controls the stream movement or allocates the right-of-way to each conflicting stream, the rate of departure is controlled by the interaction between the traffic streams themselves.

For AWSC intersections, the average control delay (in seconds per vehicle) is used as the primary measure of performance. Control delay is the increased time of travel for a vehicle approaching and passing through an AWSC intersection, compared with a free-flow vehicle if it were not required to slow down or stop at the intersection.

The criteria for AWSC intersections have different threshold values than do those for signalized intersections, primarily because drivers expect different levels of performance from different kinds of traffic control devices (i.e., traffic signals, two way stop or all way stop, etc.). The expectation is that a signalized intersection is designed to carry higher traffic volumes than an AWSC intersection and a higher level of control delay is acceptable at a signalized intersection for the same LOS.

For AWSC analysis using the HCM 6th Edition method, the LOS shown reflects the weighted average of the delay on each of the approaches.

LEVEL OF SERVICE (LOS) CRITERIA FOR AWSC INTERSECTIONS (Reference 6th Edition Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

APPENDIX A3

LEVEL OF SERVICE (LOS) DESCRIPTION UNSIGNALIZED INTERSECTIONS WITH TWO-WAY STOP CONTROL (TWSC)

TWSC intersections are widely used and stop signs are used to control vehicle movements at such intersections. At TWSC intersections, the stop-controlled approaches are referred to as the minor street approaches; they can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are referred to as the major street approaches. A three-leg intersection is considered to be a standard type of TWSC intersection if the single minor street approach (i.e. the stem of the T configuration) is controlled by a stop sign. Three-leg intersections where two of the three approaches are controlled by stop signs are a special form of unsignalized intersection control.

At TWSC intersections, drivers on the controlled approaches are required to select gaps in the major street flow through which to execute crossing or turning maneuvers on the basis of judgment. In the presence of a queue, each driver on the controlled approach must use some time to move into the front-of-queue position and prepare to evaluate gaps in the major street flow. Capacity analysis at TWSC intersections depends on a clear description and understanding of the interaction of drivers on the minor or stop-controlled approach with drivers on the major street. Both gap acceptance and empirical models have been developed to describe this interaction.

Thus, the capacity of the controlled legs is based on three factors:

- the distribution of gaps in the major street traffic stream;
- driver judgment in selecting gaps through which to execute the desired maneuvers; and
- the follow-up time required by each driver in a queue.

The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incident, control, traffic or geometric delay. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation and referred to as level of service.

LEVEL OF SERVICE (LOS) CRITERIA FOR TWSC INTERSECTIONS

(Reference 6th Edition Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

Appendix B

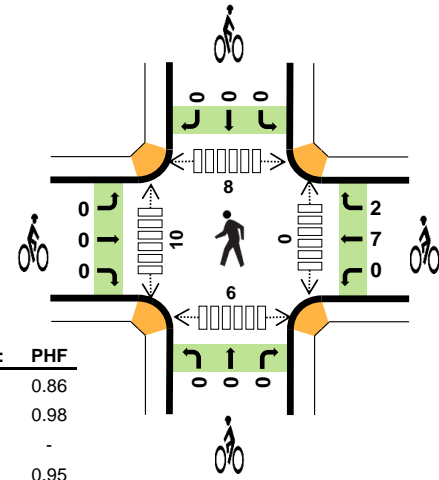
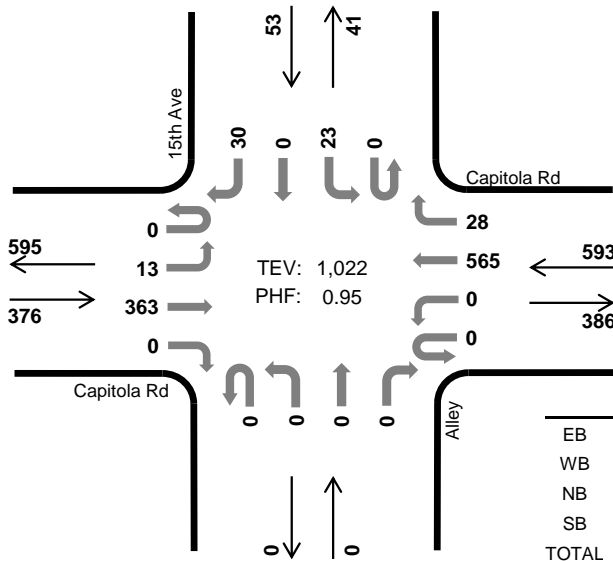
Intersection
Traffic Volume
Counts

15th Ave Capitola Rd



Peak Hour

Date: 11-08-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	2.1%	0.86
WB	1.7%	0.98
NB	-	-
SB	0.0%	0.95
TOTAL	1.8%	0.95

Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				Alley Northbound				15th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	5	25	0	0	0	57	7	0	0	0	0	0	5	0	1	100	0	
7:15 AM	0	4	51	0	0	0	95	6	0	0	0	0	0	5	0	7	168	0	
7:30 AM	0	5	55	0	0	0	124	7	0	0	0	0	0	2	0	7	200	0	
7:45 AM	0	8	77	0	0	0	126	9	0	0	0	0	0	9	0	7	236	704	
8:00 AM	0	1	72	0	0	0	141	10	0	0	0	0	0	4	0	9	237	841	
8:15 AM	0	6	91	0	0	0	141	7	0	0	0	0	0	8	0	5	258	931	
8:30 AM	0	4	105	0	0	0	140	6	0	0	0	0	0	5	0	9	269	1,000	
8:45 AM	0	2	95	0	0	0	143	5	0	0	0	0	0	6	0	7	258	1,022	
Count Total	0	35	571	0	0	0	967	57	0	0	0	0	0	44	0	52	1,726	0	
Peak Hour	All	0	13	363	0	0	0	565	28	0	0	0	0	0	23	0	30	1,022	0
	HV	0	0	8	0	0	0	10	0	0	0	0	0	0	0	0	0	18	0
	HV%	-	0%	2%	-	-	-	2%	0%	-	-	-	-	-	0%	-	0%	2%	0

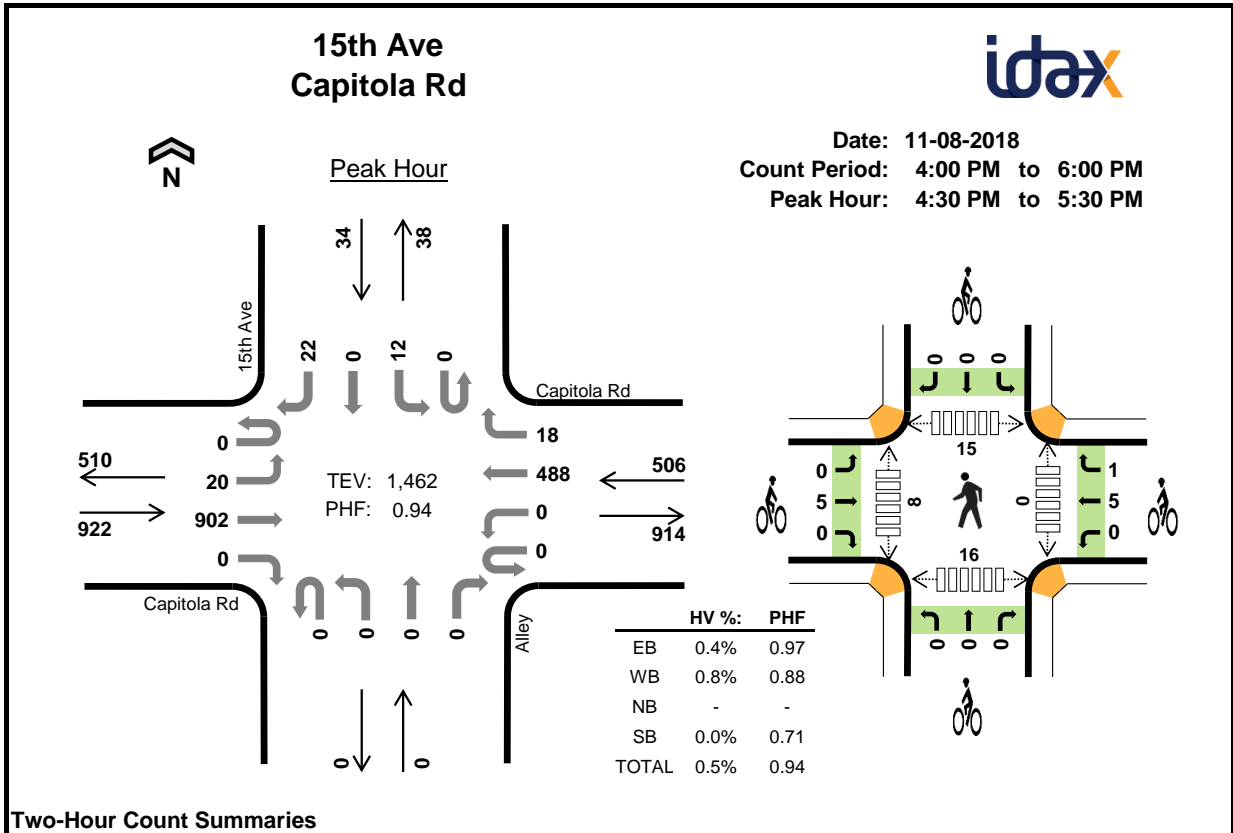
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	2	0	0	3	2	0	0	0	2	0	2	4	2	8
7:15 AM	1	4	0	0	5	0	2	0	0	2	0	0	1	1	2
7:30 AM	0	2	0	0	2	0	4	0	0	4	0	0	4	0	4
7:45 AM	2	1	0	0	3	1	2	0	0	3	0	2	4	6	12
8:00 AM	1	0	0	0	1	0	2	0	0	2	0	3	3	3	9
8:15 AM	4	2	0	0	6	0	2	0	0	2	0	2	1	0	3
8:30 AM	1	3	0	0	4	0	4	0	0	4	0	4	3	2	9
8:45 AM	2	5	0	0	7	0	1	0	0	1	0	1	1	1	3
Count Total	12	19	0	0	31	3	17	0	0	20	0	14	21	15	50
Peak Hour	8	10	0	0	18	0	9	0	0	9	0	10	8	6	24

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Capitola Rd				Capitola Rd				Alley				15th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0
7:15 AM	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	5	0
7:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0
7:45 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	13
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11
8:15 AM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	6	12
8:30 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	14
8:45 AM	0	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	7	18
Count Total	0	0	12	0	0	0	19	0	0	0	0	0	0	0	0	0	31	0
Peak Hour	0	0	8	0	0	0	10	0	0	0	0	0	0	0	0	0	18	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Capitola Rd			Capitola Rd			Alley			15th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0		
7:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0		
7:30 AM	0	0	0	0	3	1	0	0	0	0	0	0	0	4	0		
7:45 AM	0	1	0	0	2	0	0	0	0	0	0	0	0	3	11		
8:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	11		
8:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	11		
8:30 AM	0	0	0	0	4	0	0	0	0	0	0	0	0	4	11		
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	9		
Count Total	0	3	0	0	14	3	0	0	0	0	0	0	0	20	0		
Peak Hour	0	0	0	0	7	2	0	0	0	0	0	0	0	9	0		

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				Alley Northbound				15th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	2	234	0	0	0	104	4	0	0	0	0	0	3	0	3	350	0	
4:15 PM	0	1	221	0	0	0	125	3	0	0	0	0	0	2	0	2	354	0	
4:30 PM	0	3	232	0	0	0	108	6	0	0	0	0	0	3	0	3	355	0	
4:45 PM	0	8	222	0	0	0	135	2	0	0	0	0	0	2	0	10	379	1,438	
5:00 PM	0	4	216	0	0	0	111	1	0	0	0	0	0	3	0	4	339	1,427	
5:15 PM	0	5	232	0	0	0	134	9	0	0	0	0	0	4	0	5	389	1,462	
5:30 PM	1	0	228	0	0	0	94	2	0	0	0	0	0	1	0	2	328	1,435	
5:45 PM	0	1	198	0	0	0	107	3	0	0	0	0	0	1	0	3	313	1,369	
Count Total	1	24	1,783	0	0	0	918	30	0	0	0	0	0	19	0	32	2,807	0	
Peak Hour	All	0	20	902	0	0	0	488	18	0	0	0	0	0	12	0	22	1,462	0
	HV	0	0	4	0	0	0	3	1	0	0	0	0	0	0	0	0	8	0
	HV%	-	0%	0%	-	-	-	1%	6%	-	-	-	-	-	0%	-	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

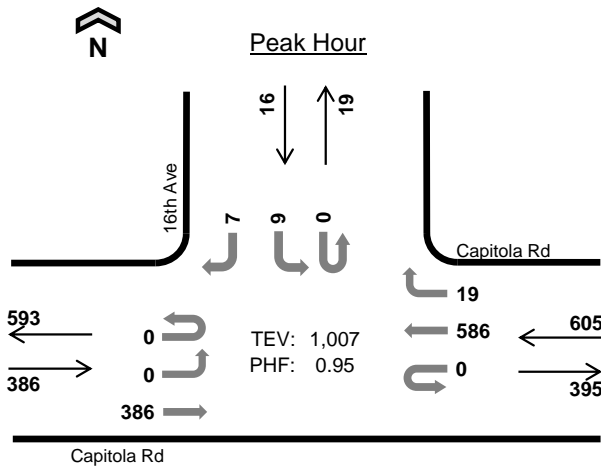
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0
4:15 PM	2	2	0	0	4	2	2	0	0	4	0	1	4	4	9
4:30 PM	0	3	0	0	3	0	2	0	0	2	0	0	2	3	5
4:45 PM	3	0	0	0	3	1	2	0	0	3	0	2	3	4	9
5:00 PM	0	0	0	0	0	2	1	0	0	3	0	4	7	6	17
5:15 PM	1	1	0	0	2	2	1	0	0	3	0	2	3	3	8
5:30 PM	0	1	0	0	1	0	1	0	2	3	0	1	1	7	9
5:45 PM	1	0	0	0	1	0	1	0	0	1	0	0	2	0	2
Count Total	8	7	0	0	15	7	11	0	2	20	0	10	22	27	59
Peak Hour	4	4	0	0	8	5	6	0	0	11	0	8	15	16	39

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Capitola Rd				Capitola Rd				Alley				15th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
4:30 PM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3	0
4:45 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	11
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	8
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	6
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
Count Total	0	0	8	0	0	0	6	1	0	0	0	0	0	0	0	0	15	0
Peak Hour	0	0	4	0	0	0	3	1	0	0	0	0	0	0	0	0	8	0

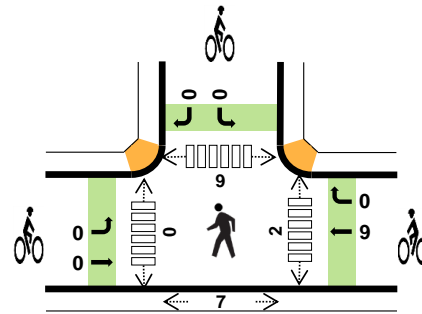
Two-Hour Count Summaries - Bikes																	
Interval Start	Capitola Rd			Capitola Rd			Alley			15th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0			
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	4	0			
4:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0			
4:45 PM	0	1	0	0	1	1	0	0	0	0	0	0	3	10			
5:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	12			
5:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	11			
5:30 PM	0	0	0	0	1	0	0	0	0	2	0	0	3	12			
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	10			
Count Total	0	7	0	0	9	2	0	0	0	2	0	0	20	0			
Peak Hour	0	5	0	0	5	1	0	0	0	0	0	0	11	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

16th Ave Capitola Rd



Date: 11-08-2018
 Count Period: 7:00 AM to 9:00 AM
 Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	2.1%	0.88
WB	1.7%	1.00
NB	-	-
SB	0.0%	0.67
TOTAL	1.8%	0.95

Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				0 Northbound				16th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	1	29	0	0	0	62	2	0	0	0	0	0	0	0	2	96	0	
7:15 AM	0	0	56	0	0	0	99	0	0	0	0	0	0	6	0	2	163	0	
7:30 AM	0	0	57	0	0	0	129	2	0	0	0	0	0	1	0	2	191	0	
7:45 AM	0	0	86	0	0	0	132	6	0	0	0	0	0	4	0	3	231	681	
8:00 AM	0	0	76	0	0	0	146	3	0	0	0	0	0	1	0	5	231	816	
8:15 AM	0	0	99	0	0	0	148	4	0	0	0	0	0	3	0	0	254	907	
8:30 AM	0	0	110	0	0	0	146	6	0	0	0	0	0	3	0	0	265	981	
8:45 AM	0	0	101	0	0	0	146	6	0	0	0	0	0	2	0	2	257	1,007	
Count Total	0	1	614	0	0	0	1,008	29	0	0	0	0	0	20	0	16	1,688	0	
Peak Hour	All	0	0	386	0	0	0	586	19	0	0	0	0	0	9	0	7	1,007	0
	HV	0	0	8	0	0	0	10	0	0	0	0	0	0	0	0	0	18	0
	HV%	-	-	2%	-	-	-	2%	0%	-	-	-	-	-	0%	-	0%	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	1	0	1	3	2	0	0	0	2	0	0	4	2	6
7:15 AM	1	4	0	0	5	0	2	0	0	2	0	0	2	1	3
7:30 AM	0	2	0	0	2	0	4	0	0	4	0	0	2	2	4
7:45 AM	2	1	0	0	3	1	2	0	0	3	3	0	4	2	9
8:00 AM	1	0	0	0	1	0	2	0	0	2	1	0	3	1	5
8:15 AM	4	2	0	0	6	0	2	0	0	2	0	0	2	3	5
8:30 AM	1	3	0	0	4	0	4	0	0	4	1	0	1	2	4
8:45 AM	2	5	0	0	7	0	1	0	0	1	0	0	3	1	4
Count Total	12	18	0	1	31	3	17	0	0	20	5	0	21	14	40
Peak Hr	8	10	0	0	18	0	9	0	0	9	2	0	9	7	18

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Capitola Rd				Capitola Rd				0				16th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	3	0
7:15 AM	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	5	0
7:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0
7:45 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	13
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11
8:15 AM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	6	12
8:30 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	14
8:45 AM	0	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	7	18
Count Total	0	0	12	0	0	0	18	0	0	0	0	0	0	0	0	1	31	0
Peak Hour	0	0	8	0	0	0	10	0	0	0	0	0	0	0	0	0	18	0

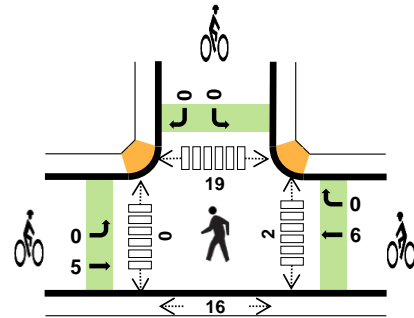
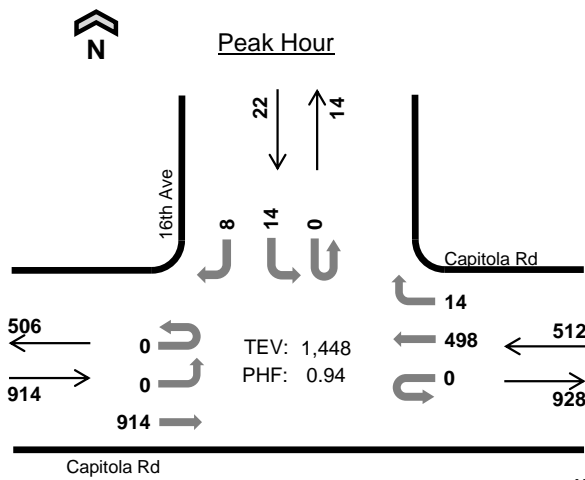
Two-Hour Count Summaries - Bikes																
Interval Start	Capitola Rd			Capitola Rd			0			16th Ave			15-min Total	Rolling One Hour		
	Eastbound			Westbound			Northbound			Southbound						
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT				
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0		
7:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	2	0		
7:30 AM	0	0	0	0	4	0	0	0	0	0	0	0	4	0		
7:45 AM	0	1	0	0	2	0	0	0	0	0	0	0	3	11		
8:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	2	11		
8:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	2	11		
8:30 AM	0	0	0	0	4	0	0	0	0	0	0	0	4	11		
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	9		
Count Total	0	3	0	0	17	0	0	0	0	0	0	0	20	0		
Peak Hour	0	0	0	0	9	0	0	0	0	0	0	0	9	0		

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

16th Ave Capitola Rd



Date: 11-08-2018
 Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:30 PM to 5:30 PM



TEV: 1,448
 PHF: 0.94

	HV %:	PHF
EB	0.4%	0.97
WB	0.8%	0.90
NB	-	-
SB	4.5%	0.69
TOTAL	0.6%	0.94

Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				16th Ave Northbound				16th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	237	0	0	0	108	3	0	0	0	0	0	2	0	0	350	0	
4:15 PM	0	2	221	0	0	0	127	4	0	0	0	0	0	1	0	1	356	0	
4:30 PM	0	0	235	0	0	0	111	4	0	0	0	0	0	2	0	3	355	0	
4:45 PM	0	0	224	0	0	0	135	3	0	0	0	0	0	4	0	2	368	1,429	
5:00 PM	0	0	219	0	0	0	110	6	0	0	0	0	0	1	0	2	338	1,417	
5:15 PM	0	0	236	0	0	0	142	1	0	0	0	0	0	7	0	1	387	1,448	
5:30 PM	0	0	229	0	0	0	96	4	0	0	0	0	0	3	0	0	332	1,425	
5:45 PM	0	0	199	0	0	0	109	2	0	0	0	0	0	2	0	1	313	1,370	
Count Total	0	2	1,800	0	0	0	938	27	0	0	0	0	0	22	0	10	2,799	0	
Peak Hour	All	0	0	914	0	0	0	498	14	0	0	0	0	0	14	0	8	1,448	0
	HV	0	0	4	0	0	0	3	1	0	0	0	0	0	0	0	1	9	0
	HV%	-	-	0%	-	-	-	1%	7%	-	-	-	-	-	0%	-	13%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	0	0	1	0	1	0	0	1	0	0	1	1	2
4:15 PM	2	2	0	0	4	2	2	0	0	4	0	0	4	3	7
4:30 PM	0	2	0	1	3	0	2	0	0	2	0	0	0	3	3
4:45 PM	3	0	0	0	3	1	2	0	0	3	0	0	4	4	8
5:00 PM	0	1	0	0	1	2	1	0	0	3	2	0	10	6	18
5:15 PM	1	1	0	0	2	2	1	0	0	3	0	0	5	3	8
5:30 PM	0	1	0	0	1	2	1	0	0	3	0	0	2	6	8
5:45 PM	1	0	0	0	1	0	1	0	0	1	0	0	3	0	3
Count Total	8	7	0	1	16	9	11	0	0	20	2	0	29	26	57
Peak Hr	4	4	0	1	9	5	6	0	0	11	2	0	19	16	37

Two-Hour Count Summaries - Heavy Vehicles														15-min Total	Rolling One Hour			
Interval Start	Capitola Rd				Capitola Rd				0				16th Ave					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
4:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	3	0
4:45 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	11
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	11
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	9
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	7
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
Count Total	0	0	8	0	0	0	6	1	0	0	0	0	0	0	0	1	16	0
Peak Hour	0	0	4	0	0	0	3	1	0	0	0	0	0	0	0	1	9	0

Two-Hour Count Summaries - Bikes														15-min Total	Rolling One Hour
Interval Start	Capitola Rd			Capitola Rd			0			16th Ave					
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	4	0	
4:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	
4:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3	10	
5:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	12	
5:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	11	
5:30 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	12	
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	10	
Count Total	0	9	0	0	11	0	0	0	0	0	0	0	20	0	
Peak Hour	0	5	0	0	6	0	0	0	0	0	0	0	11	0	

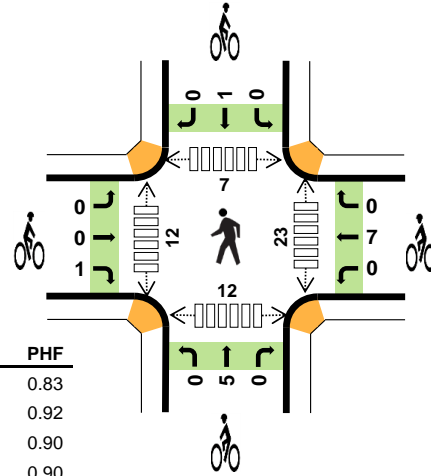
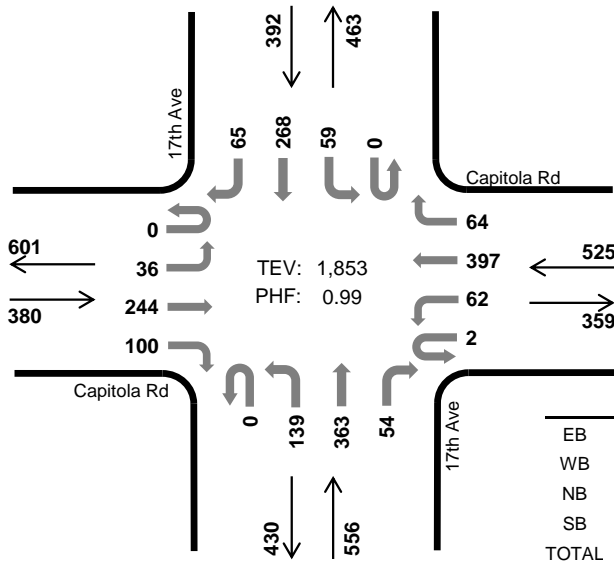
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

17th Ave Capitola Rd



Peak Hour

Date: 11-08-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	2.4%	0.83
WB	1.7%	0.92
NB	0.5%	0.90
SB	1.0%	0.90
TOTAL	1.3%	0.99

Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				17th Ave Northbound				17th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	3	27	3	0	5	45	4	0	9	79	0	0	6	29	11	221	0	
7:15 AM	0	11	33	17	0	15	62	7	0	27	84	8	0	11	49	13	337	0	
7:30 AM	0	11	41	10	0	10	96	10	0	31	94	4	0	11	50	14	382	0	
7:45 AM	0	9	54	22	0	24	83	13	0	39	103	13	0	10	73	14	457	1,397	
8:00 AM	0	10	54	18	0	16	99	22	0	37	82	17	0	18	69	22	464	1,640	
8:15 AM	0	8	59	31	2	11	100	12	0	32	96	12	0	19	62	20	464	1,767	
8:30 AM	0	9	77	29	0	11	115	17	0	31	82	12	0	12	64	9	468	1,853	
8:45 AM	0	12	68	20	0	17	94	16	0	28	79	9	0	21	53	12	429	1,825	
Count Total	0	73	413	150	2	109	694	101	0	234	699	75	0	108	449	115	3,222	0	
Peak Hour	All	0	36	244	100	2	62	397	64	0	139	363	54	0	59	268	65	1,853	0
	HV	0	3	4	2	0	1	6	2	0	0	2	1	0	2	2	0	25	0
	HV%	-	8%	2%	2%	0%	2%	2%	3%	-	0%	1%	2%	-	3%	1%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	1	0	1	3	0	1	0	1	2	2	2	0	1	5
7:15 AM	1	2	2	3	8	0	2	1	1	4	1	2	1	0	4
7:30 AM	0	1	3	3	7	0	4	0	2	6	2	2	2	3	9
7:45 AM	2	1	1	1	5	0	2	2	0	4	4	5	1	4	14
8:00 AM	2	1	2	1	6	0	2	0	1	3	3	3	4	4	14
8:15 AM	4	2	0	1	7	1	1	2	0	4	8	1	0	1	10
8:30 AM	1	5	0	1	7	0	2	1	0	3	8	3	2	3	16
8:45 AM	2	6	4	3	15	0	1	0	0	1	1	4	1	0	6
Count Total	13	19	12	14	58	1	15	6	5	27	29	22	11	16	78
Peak Hour	9	9	3	4	25	1	7	5	1	14	23	12	7	12	54

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Capitola Rd				Capitola Rd				17th Ave				17th Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	3	0	
7:15 AM	0	0	1	0	0	1	1	0	0	2	0	0	0	0	0	2	1	8	0
7:30 AM	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	2	1	7	0
7:45 AM	0	1	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	5	23
8:00 AM	0	1	0	1	0	0	1	0	0	0	2	0	0	1	0	0	6	26	
8:15 AM	0	0	3	1	0	0	1	1	0	0	0	0	0	0	1	0	7	25	
8:30 AM	0	1	0	0	0	1	3	1	0	0	0	0	0	0	1	0	7	25	
8:45 AM	0	0	1	1	0	1	4	1	0	1	3	0	0	1	2	0	15	35	
Count Total	0	3	7	3	0	3	13	3	0	4	7	1	0	3	9	2	58	0	
Peak Hour	0	3	4	2	0	1	6	2	0	0	2	1	0	2	2	0	25	0	

Two-Hour Count Summaries - Bikes																	
Interval Start	Capitola Rd			Capitola Rd			17th Ave			17th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	2	0			
7:15 AM	0	0	0	0	1	1	1	0	0	0	0	0	4	0			
7:30 AM	0	0	0	1	3	0	0	0	0	0	0	0	6	0			
7:45 AM	0	0	0	0	2	0	0	2	0	0	0	0	4	16			
8:00 AM	0	0	0	0	2	0	0	0	0	0	0	1	3	17			
8:15 AM	0	0	1	0	1	0	0	2	0	0	0	0	4	17			
8:30 AM	0	0	0	0	2	0	0	1	0	0	0	0	3	14			
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	11			
Count Total	0	0	1	1	12	2	1	5	0	1	2	2	27	0			
Peak Hour	0	0	1	0	7	0	0	5	0	0	1	0	14	0			

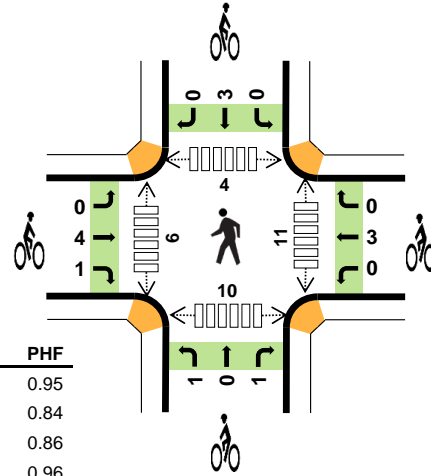
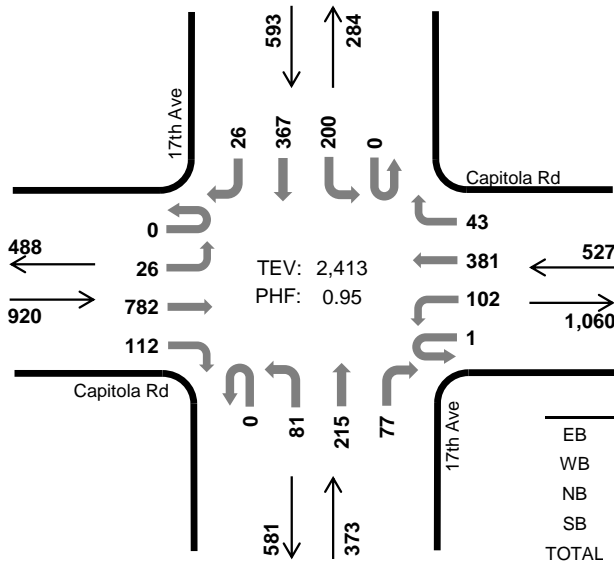
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

17th Ave Capitola Rd



Peak Hour

Date: 11-08-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	0.4%	0.95
WB	0.6%	0.84
NB	0.0%	0.86
SB	1.2%	0.96
TOTAL	0.6%	0.95

Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				17th Ave Northbound				17th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	12	193	25	1	17	94	19	0	16	53	19	0	41	79	9	578	0	
4:15 PM	0	7	177	30	1	19	87	14	0	22	45	18	0	46	98	6	570	0	
4:30 PM	0	8	201	25	0	19	87	13	0	23	39	19	0	45	81	9	569	0	
4:45 PM	0	6	204	29	1	27	117	12	0	14	43	14	0	52	86	8	613	2,330	
5:00 PM	0	8	175	26	0	19	83	8	0	25	56	17	0	56	85	5	563	2,315	
5:15 PM	0	8	211	24	0	28	100	10	0	28	59	21	0	49	89	9	636	2,381	
5:30 PM	0	4	192	33	0	28	81	13	0	14	57	25	0	43	107	4	601	2,413	
5:45 PM	0	2	173	28	0	22	73	10	0	26	43	21	0	42	79	9	528	2,328	
Count Total	0	55	1,526	220	3	179	722	99	0	168	395	154	0	374	704	59	4,658	0	
Peak Hour	All	0	26	782	112	1	102	381	43	0	81	215	77	0	200	367	26	2,413	0
	HV	0	0	2	2	0	0	3	0	0	0	0	0	0	3	4	0	14	0
	HV%	-	0%	0%	2%	0%	0%	1%	0%	-	0%	0%	0%	-	2%	1%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	1	2	1	5	0	2	0	0	2	4	1	1	1	7
4:15 PM	2	0	1	0	3	2	1	2	1	6	1	1	0	2	4
4:30 PM	0	1	0	2	3	0	0	1	1	2	1	0	2	0	3
4:45 PM	3	0	0	3	6	0	1	1	0	2	2	3	1	2	8
5:00 PM	0	1	0	2	3	1	0	1	3	5	6	1	2	4	13
5:15 PM	1	1	0	1	3	2	1	0	0	3	3	2	1	2	8
5:30 PM	0	1	0	1	2	2	1	0	0	3	0	0	0	2	2
5:45 PM	1	0	0	0	1	0	1	1	0	2	1	2	4	0	7
Count Total	8	5	3	10	26	7	7	6	5	25	18	10	11	13	52
Peak Hour	4	3	0	7	14	5	3	2	3	13	11	6	4	10	31

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Capitola Rd				Capitola Rd				17th Ave				17th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	5	0
4:15 PM	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	3	0
4:45 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	0	6	17
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	3	15
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	3	15
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	14
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9
Count Total	0	0	6	2	0	0	5	0	0	2	1	0	0	3	7	0	26	0
Peak Hour	0	0	2	2	0	0	3	0	0	0	0	0	0	3	4	0	14	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Capitola Rd			Capitola Rd			17th Ave			17th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	2	0			
4:15 PM	0	2	0	0	1	0	0	1	1	1	0	1	6	0			
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	2	0			
4:45 PM	0	0	0	0	1	0	0	0	1	0	0	0	2	12			
5:00 PM	0	1	0	0	0	0	1	0	0	0	3	0	5	15			
5:15 PM	0	1	1	0	1	0	0	0	0	0	0	0	3	12			
5:30 PM	0	2	0	0	1	0	0	0	0	0	0	0	3	13			
5:45 PM	0	0	0	0	1	0	0	0	1	0	0	0	2	13			
Count Total	0	6	1	1	6	0	2	1	3	0	5	0	25	0			
Peak Hour	0	4	1	0	3	0	1	0	1	0	3	0	13	0			

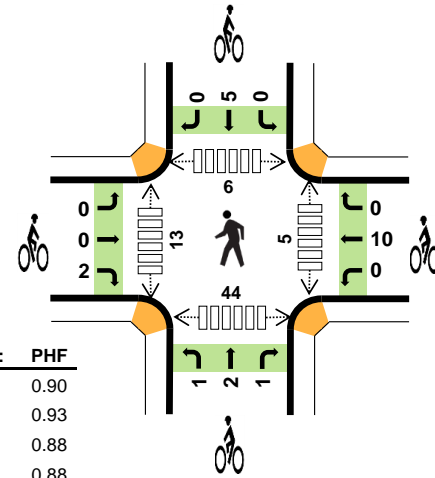
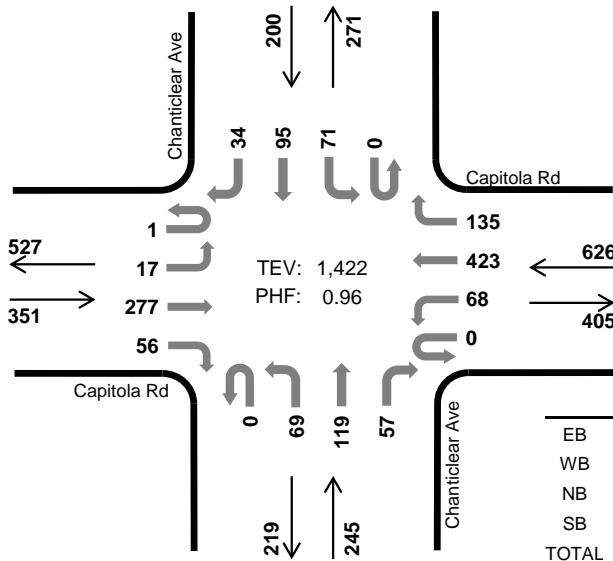
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Chanticlear Ave Capitola Rd



Peak Hour

Date: 11-08-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	1.7%	0.90
WB	1.0%	0.93
NB	0.8%	0.88
SB	1.0%	0.88
TOTAL	1.1%	0.96

Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				Chanticlear Ave Northbound				Chanticlear Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	1	24	2	0	4	51	20	0	1	15	1	0	7	11	7	144	0	
7:15 AM	0	2	49	5	0	1	74	22	0	5	22	6	0	2	10	7	205	0	
7:30 AM	0	3	38	5	0	10	102	33	0	5	34	9	0	8	13	10	270	0	
7:45 AM	0	3	68	9	0	6	105	48	0	14	36	8	0	14	22	11	344	963	
8:00 AM	0	8	63	12	0	26	100	27	0	17	25	17	0	19	29	9	352	1,171	
8:15 AM	0	5	74	19	0	24	117	27	0	17	28	13	0	18	23	6	371	1,337	
8:30 AM	1	1	72	16	0	12	101	33	0	21	30	19	0	20	21	8	355	1,422	
8:45 AM	0	0	88	8	0	8	119	26	0	7	28	13	0	16	17	10	340	1,418	
Count Total	1	23	476	76	0	91	769	236	0	87	218	86	0	104	146	68	2,381	0	
Peak Hour	All	1	17	277	56	0	68	423	135	0	69	119	57	0	71	95	34	1,422	0
	HV	0	0	6	0	0	0	5	1	0	2	0	0	0	0	1	1	16	0
	HV%	0%	0%	2%	0%	-	0%	1%	1%	-	3%	0%	0%	-	0%	1%	3%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	1	0	0	1	0	1	1	1	3	0	1	0	3	4
7:15 AM	3	1	1	1	6	0	1	0	2	3	1	0	2	0	3
7:30 AM	0	1	0	0	1	0	3	0	1	4	2	2	3	2	9
7:45 AM	1	2	0	1	4	2	3	1	2	8	0	2	0	4	6
8:00 AM	1	0	0	1	2	0	3	1	3	7	4	7	4	11	26
8:15 AM	4	2	0	0	6	0	2	0	0	2	0	3	0	20	23
8:30 AM	0	2	2	0	4	0	2	2	0	4	1	1	2	9	13
8:45 AM	1	6	1	1	9	0	1	0	1	2	0	2	0	7	9
Count Total	10	15	4	4	33	2	16	5	10	33	8	18	11	56	93
Peak Hour	6	6	2	2	16	2	10	4	5	21	5	13	6	44	68

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Capitola Rd				Capitola Rd				Chanticlear Ave				Chanticlear Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	3	0	0	0	1	0	0	1	0	0	0	0	0	0	6	0
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:45 AM	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	4	12
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13
8:15 AM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	6	13
8:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	16
8:45 AM	0	0	1	0	0	0	6	0	0	1	0	0	0	0	0	0	9	21
Count Total	0	0	10	0	0	0	14	1	0	4	0	0	0	0	0	1	33	0
Peak Hour	0	0	6	0	0	0	5	1	0	2	0	0	0	0	0	1	16	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Capitola Rd			Capitola Rd			Chanticlear Ave			Chanticlear Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	1	0	0	0	1	0	0	0	0	0	1	3	0	
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	2	0	3	0	
7:30 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	1	4	0	
7:45 AM	0	0	2	0	3	0	0	0	1	0	2	0	0	0	8	18	
8:00 AM	0	0	0	0	3	0	1	0	0	0	3	0	0	0	7	22	
8:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	21	
8:30 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	21	
8:45 AM	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	15	
Count Total	0	0	2	1	15	0	1	3	1	0	8	2	0	0	33	0	
Peak Hour	0	0	2	0	10	0	1	2	1	0	5	0	0	0	21	0	

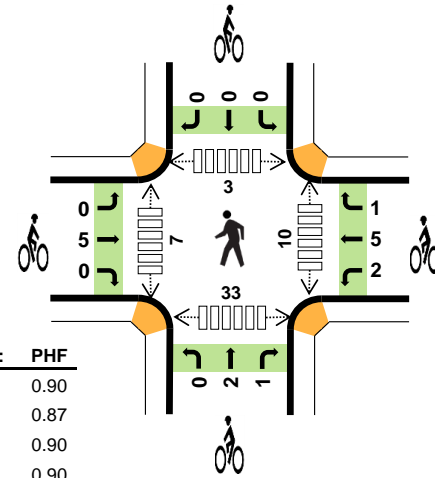
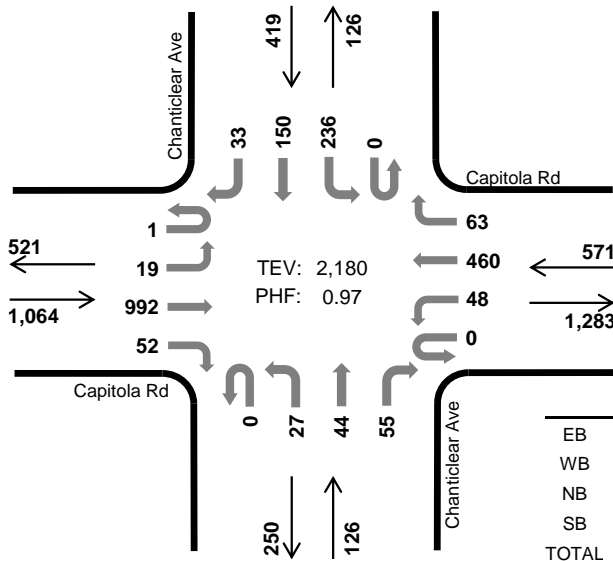
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Chanticlear Ave Capitola Rd



Peak Hour

Date: 11-08-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	0.5%	0.90
WB	0.4%	0.87
NB	0.0%	0.90
SB	0.0%	0.90
TOTAL	0.3%	0.97

Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				Chanticlear Ave Northbound				Chanticlear Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	4	255	11	0	6	111	18	0	4	12	6	0	59	23	5	514	0	
4:15 PM	0	4	230	6	0	9	105	21	0	4	9	10	0	63	32	8	501	0	
4:30 PM	0	8	259	10	0	18	106	23	0	3	9	8	0	57	32	8	541	0	
4:45 PM	0	2	232	14	0	13	132	20	0	6	14	10	0	60	35	9	547	2,103	
5:00 PM	1	5	247	13	0	11	109	15	0	7	8	14	0	60	38	7	535	2,124	
5:15 PM	0	4	236	14	0	12	111	13	0	9	10	13	0	62	42	12	538	2,161	
5:30 PM	0	8	277	11	0	12	108	15	0	5	12	18	0	54	35	5	560	2,180	
5:45 PM	0	14	227	9	0	9	92	13	0	3	9	15	0	34	25	8	458	2,091	
Count Total	1	49	1,963	88	0	90	874	138	0	41	83	94	0	449	262	62	4,194	0	
Peak Hour	All	1	19	992	52	0	48	460	63	0	27	44	55	0	236	150	33	2,180	0
	HV	0	1	4	0	0	0	2	0	0	0	0	0	0	0	0	0	7	0
	HV%	0%	5%	0%	0%	-	0%	0%	0%	-	0%	0%	0%	-	0%	0%	0%	0%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	1	0	0	4	0	1	1	4	6	3	0	0	7	10
4:15 PM	2	0	0	0	2	1	3	0	2	6	3	6	2	1	12
4:30 PM	1	1	0	0	2	0	1	0	0	1	1	2	0	4	7
4:45 PM	1	0	0	0	1	2	2	0	0	4	3	2	0	1	6
5:00 PM	2	0	0	0	2	1	2	1	0	4	2	0	1	14	17
5:15 PM	1	1	0	0	2	0	3	1	0	4	3	2	0	15	20
5:30 PM	1	1	0	0	2	2	1	1	0	4	2	3	2	3	10
5:45 PM	1	0	0	0	1	0	7	1	0	8	1	3	2	3	9
Count Total	12	4	0	0	16	6	20	5	6	37	18	18	7	48	91
Peak Hour	5	2	0	0	7	5	8	3	0	16	10	7	3	33	53

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Capitola Rd				Capitola Rd				Chanticlear Ave				Chanticlear Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0
4:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
4:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9
5:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	7
5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	7
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
Count Total	0	1	11	0	0	0	4	0	0	0	0	0	0	0	0	0	16	0
Peak Hour	0	1	4	0	0	0	2	0	0	0	0	0	0	0	0	0	7	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Capitola Rd			Capitola Rd			Chanticlear Ave			Chanticlear Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	1	0	0	0	1	0	1	3	6	0			
4:15 PM	0	1	0	0	3	0	0	0	0	0	1	1	6	0			
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0			
4:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	4	17			
5:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	4	15			
5:15 PM	0	0	0	1	1	1	0	0	1	0	0	0	4	13			
5:30 PM	0	2	0	0	1	0	0	1	0	0	0	0	4	16			
5:45 PM	0	0	0	0	7	0	0	1	0	0	0	0	8	20			
Count Total	0	6	0	2	17	1	0	3	2	0	2	4	37	0			
Peak Hour	0	5	0	2	5	1	0	2	1	0	0	0	16	0			

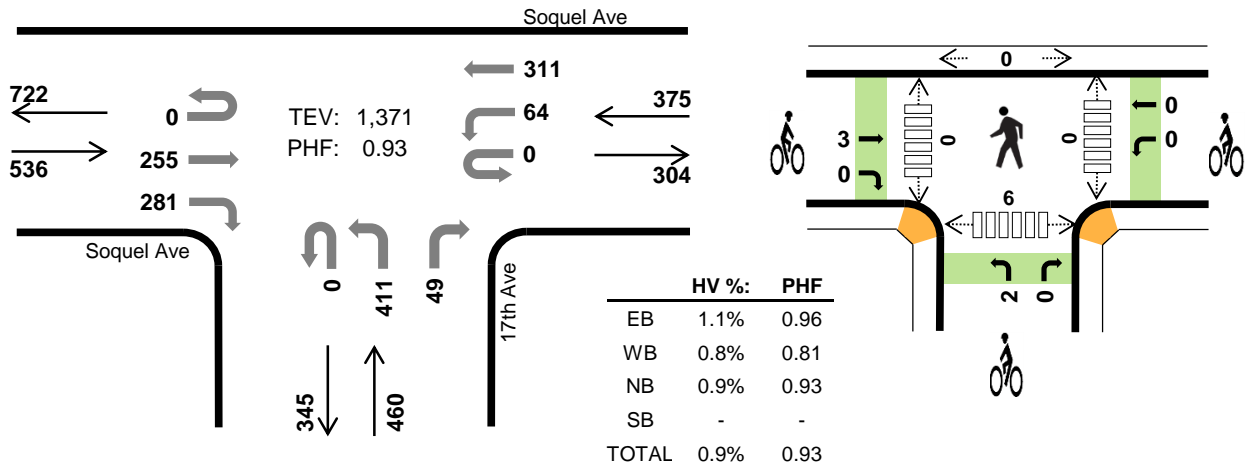
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

17th Ave Soquel Ave



Peak Hour

Date: 11-08-2018
 Count Period: 7:00 AM to 9:00 AM
 Peak Hour: 7:45 AM to 8:45 AM



Two-Hour Count Summaries

Interval Start	Soquel Ave Eastbound				Soquel Ave Westbound				17th Ave Northbound				0 Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	20	35	0	8	67	0	0	85	0	8	0	0	0	0	223	0	
7:15 AM	0	0	36	49	0	11	67	0	0	92	0	7	0	0	0	0	262	0	
7:30 AM	0	0	47	57	0	6	92	0	0	118	0	9	0	0	0	0	329	0	
7:45 AM	0	0	68	68	0	14	102	0	0	103	0	12	0	0	0	0	367	1,181	
8:00 AM	0	0	69	70	0	17	80	0	0	96	0	9	0	0	0	0	341	1,299	
8:15 AM	0	0	67	70	0	13	59	0	0	97	0	20	0	0	0	0	326	1,363	
8:30 AM	0	0	51	73	0	20	70	0	0	115	0	8	0	0	0	0	337	1,371	
8:45 AM	0	0	41	69	0	13	65	0	0	112	0	16	0	0	0	0	316	1,320	
Count Total	0	0	399	491	0	102	602	0	0	818	0	89	0	0	0	0	2,501	0	
Peak Hour	All	0	0	255	281	0	64	311	0	0	411	0	49	0	0	0	0	1,371	0
	HV	0	0	2	4	0	0	3	0	0	3	0	1	0	0	0	0	13	0
	HV%	-	-	1%	1%	-	0%	1%	-	-	1%	-	2%	-	-	-	-	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	2	0	0	5	0	0	0	0	0	0	0	0	4	4
7:15 AM	1	4	0	0	5	0	1	0	0	1	0	0	0	1	1
7:30 AM	3	2	1	0	6	1	0	0	0	1	0	0	0	0	0
7:45 AM	2	1	1	0	4	1	0	0	0	1	0	0	0	0	0
8:00 AM	1	1	0	0	2	1	0	1	0	2	0	0	0	3	3
8:15 AM	1	1	1	0	3	0	0	1	0	1	0	0	0	2	2
8:30 AM	2	0	2	0	4	1	0	0	0	1	0	0	0	1	1
8:45 AM	2	1	6	0	9	0	0	0	0	0	0	0	0	0	0
Count Total	15	12	11	0	38	4	1	2	0	7	0	0	0	11	11
Peak Hr	6	3	4	0	13	3	0	2	0	5	0	0	0	6	6

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Soquel Ave				Soquel Ave				17th Ave				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	1	0	0	2	0	0	0	0	0	0	0	0	0	5	0
7:15 AM	0	0	0	1	0	1	3	0	0	0	0	0	0	0	0	0	5	0
7:30 AM	0	0	0	3	0	0	2	0	0	1	0	0	0	0	0	0	6	0
7:45 AM	0	0	1	1	0	0	1	0	0	1	0	0	0	0	0	0	4	20
8:00 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	17
8:15 AM	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	3	15
8:30 AM	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	4	13
8:45 AM	0	0	0	2	0	0	1	0	0	6	0	0	0	0	0	0	9	18
Count Total	0	0	4	11	0	1	11	0	0	10	0	1	0	0	0	0	38	0
Peak Hour	0	0	2	4	0	0	3	0	0	3	0	1	0	0	0	0	13	0

Two-Hour Count Summaries - Bikes

Interval Start	Soquel Ave			Soquel Ave			17th Ave			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	3
8:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	2	5
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	5
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	4	0	0	1	0	2	0	0	0	0	0	7	0
Peak Hour	0	3	0	0	0	0	2	0	0	0	0	0	5	0

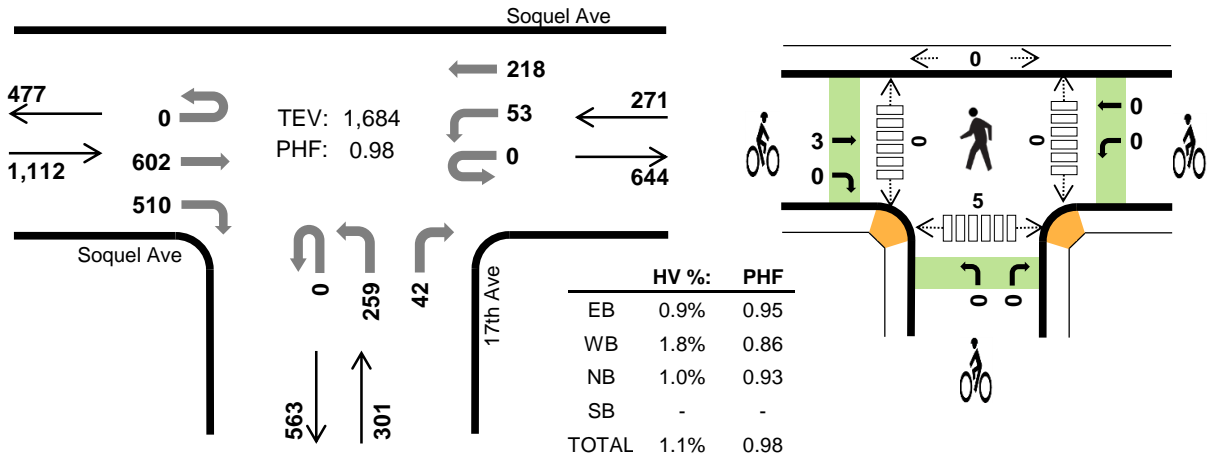
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

17th Ave Soquel Ave



Peak Hour

Date: 11-08-2018
 Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:00 PM to 5:00 PM



Two-Hour Count Summaries

Interval Start	Soquel Ave Eastbound				Soquel Ave Westbound				17th Ave Northbound				0 Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	145	126	0	17	59	0	0	69	0	12	0	0	0	0	428	0	
4:15 PM	0	0	147	127	0	17	62	0	0	72	0	6	0	0	0	0	431	0	
4:30 PM	0	0	161	131	0	14	43	0	0	58	0	14	0	0	0	0	421	0	
4:45 PM	0	0	149	126	0	5	54	0	0	60	0	10	0	0	0	0	404	1,684	
5:00 PM	0	0	143	127	0	10	63	0	0	68	0	9	0	0	0	0	420	1,676	
5:15 PM	0	0	141	117	0	13	51	0	0	64	0	3	0	0	0	0	389	1,634	
5:30 PM	0	0	150	124	0	12	44	0	0	52	0	8	0	0	0	0	390	1,603	
5:45 PM	0	0	124	128	0	9	36	0	0	53	0	9	0	0	0	0	359	1,558	
Count Total	0	0	1,160	1,006	0	97	412	0	0	496	0	71	0	0	0	0	3,242	0	
Peak Hour	All	0	0	602	510	0	53	218	0	0	259	0	42	0	0	0	0	1,684	0
	HV	0	0	4	6	0	1	4	0	0	2	0	1	0	0	0	0	18	0
	HV%	-	-	1%	1%	-	2%	2%	-	-	1%	-	2%	-	-	-	-	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	2	1	0	6	1	0	0	0	1	0	0	0	3	3
4:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	1	1
4:30 PM	1	2	1	0	4	0	0	0	0	0	0	0	0	1	1
4:45 PM	5	1	1	0	7	1	0	0	0	1	0	0	0	0	0
5:00 PM	4	0	0	0	4	2	3	0	0	5	0	0	0	0	0
5:15 PM	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0
5:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	0	1	0	0	0	0	0	2	0	2	0	4
Count Total	19	5	3	0	27	5	4	0	0	9	2	0	2	5	9
Peak Hr	10	5	3	0	18	3	0	0	0	3	0	0	0	5	5

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Soquel Ave				Soquel Ave				17th Ave				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	1	0	0	2	0	0	0	0	1	0	0	0	0	6	0
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0	4	0
4:45 PM	0	0	0	5	0	0	1	0	0	1	0	0	0	0	0	0	7	18
5:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4	16
5:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	17
5:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	15
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9
Count Total	0	0	10	9	0	1	4	0	0	2	0	1	0	0	0	0	27	0
Peak Hour	0	0	4	6	0	1	4	0	0	2	0	1	0	0	0	0	18	0

Two-Hour Count Summaries - Bikes

Interval Start	Soquel Ave			Soquel Ave			17th Ave			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	3
5:00 PM	0	0	2	0	3	0	0	0	0	0	0	0	5	7
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	7
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	7
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Count Total	0	3	2	0	4	0	0	0	0	0	0	0	9	0
Peak Hour	0	3	0	0	0	0	0	0	0	0	0	0	3	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



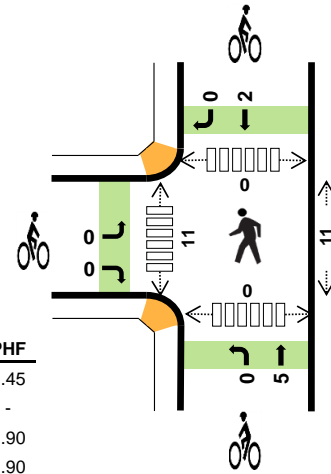
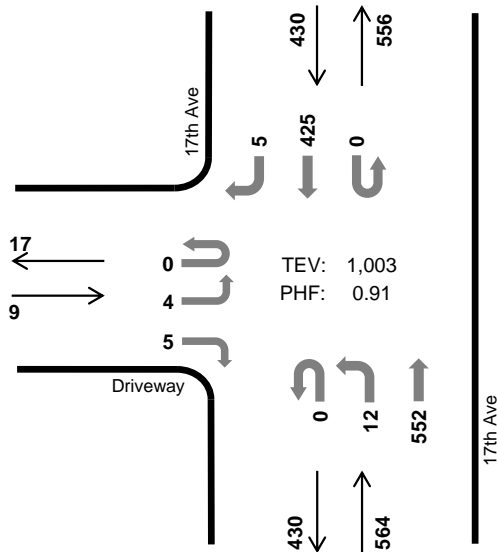
17th Ave

Peak Hour

Date: 11-08-2018

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	0.0%	0.45
WB	-	-
NB	0.5%	0.90
SB	1.2%	0.90
TOTAL	0.8%	0.91

Two-Hour Count Summaries

Interval Start	Driveway				0				17th Ave				17th Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	0	0	0	0	0	0	0	1	88	0	0	0	37	0	126	0	
7:15 AM	0	0	0	1	0	0	0	0	0	1	119	0	0	0	81	0	202	0	
7:30 AM	0	0	0	1	0	0	0	0	0	1	129	0	0	0	70	0	201	0	
7:45 AM	0	0	0	1	0	0	0	0	0	2	155	0	0	0	118	1	277	806	
8:00 AM	0	0	0	1	0	0	0	0	0	3	136	0	0	0	102	1	243	923	
8:15 AM	0	3	0	2	0	0	0	0	0	4	137	0	0	0	104	0	250	971	
8:30 AM	0	1	0	1	0	0	0	0	0	3	124	0	0	0	101	3	233	1,003	
8:45 AM	0	0	0	1	0	0	0	0	0	1	116	0	0	0	89	1	208	934	
Count Total	0	4	0	8	0	0	0	0	0	16	1,004	0	0	0	702	6	1,740	0	
Peak Hour	All	0	4	0	5	0	0	0	0	0	12	552	0	0	0	425	5	1,003	0
	HV	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	8	0
	HV%	-	0%	-	0%	-	-	-	-	-	0%	1%	-	-	-	1%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	1	1	0	0	0	0	0	3	1	0	0	4
7:15 AM	0	0	2	3	5	0	0	1	0	1	0	2	0	0	2
7:30 AM	1	0	3	2	6	0	0	0	2	2	3	3	0	2	8
7:45 AM	0	0	1	1	2	0	0	2	0	2	3	3	0	0	6
8:00 AM	0	0	2	1	3	0	0	0	1	1	1	3	0	0	4
8:15 AM	0	0	0	1	1	0	0	2	1	3	2	3	0	0	5
8:30 AM	0	0	0	2	2	0	0	1	0	1	5	2	0	0	7
8:45 AM	0	0	5	4	9	0	0	0	0	0	1	3	0	0	4
Count Total	1	0	13	15	29	0	0	6	4	10	18	20	0	2	40
Peak Hr	0	0	3	5	8	0	0	5	2	7	11	11	0	0	22

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Driveway				0				17th Ave				17th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	
7:30 AM	0	0	0	1	0	0	0	0	0	0	3	0	0	0	2	0	6	
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	
8:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
8:45 AM	0	0	0	0	0	0	0	0	0	1	4	0	0	0	4	0	9	
Count Total	0	0	0	1	0	0	0	0	0	1	12	0	0	0	15	0	29	
Peak Hour	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	8	

Two-Hour Count Summaries - Bikes																
Interval Start	Driveway			0			17th Ave			17th Ave			15-min Total	Rolling One Hour		
	Eastbound			Westbound			Northbound			Southbound						
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT				
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	10
Peak Hour	0	0	0	0	0	0	0	0	5	0	0	0	2	0	0	7

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



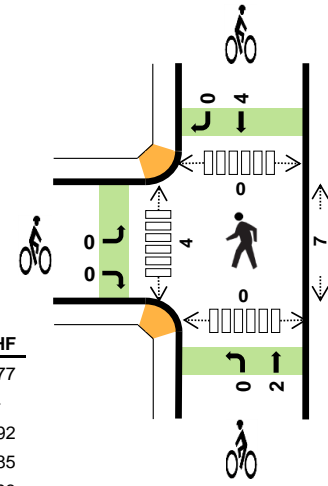
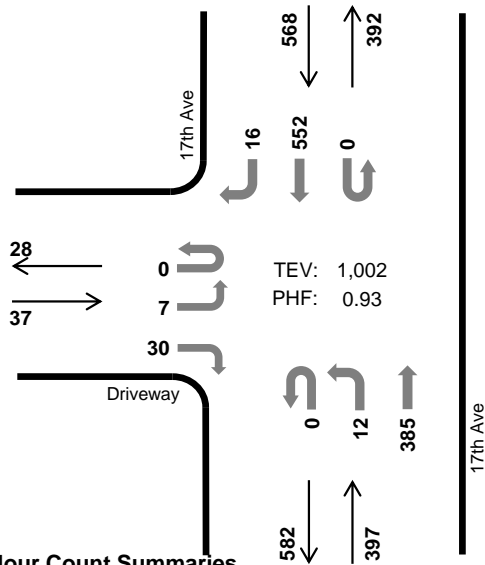
17th Ave

Peak Hour

Date: 11-08-2018

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	0.0%	0.77
WB	-	-
NB	0.0%	0.92
SB	0.2%	0.85
TOTAL	0.1%	0.93

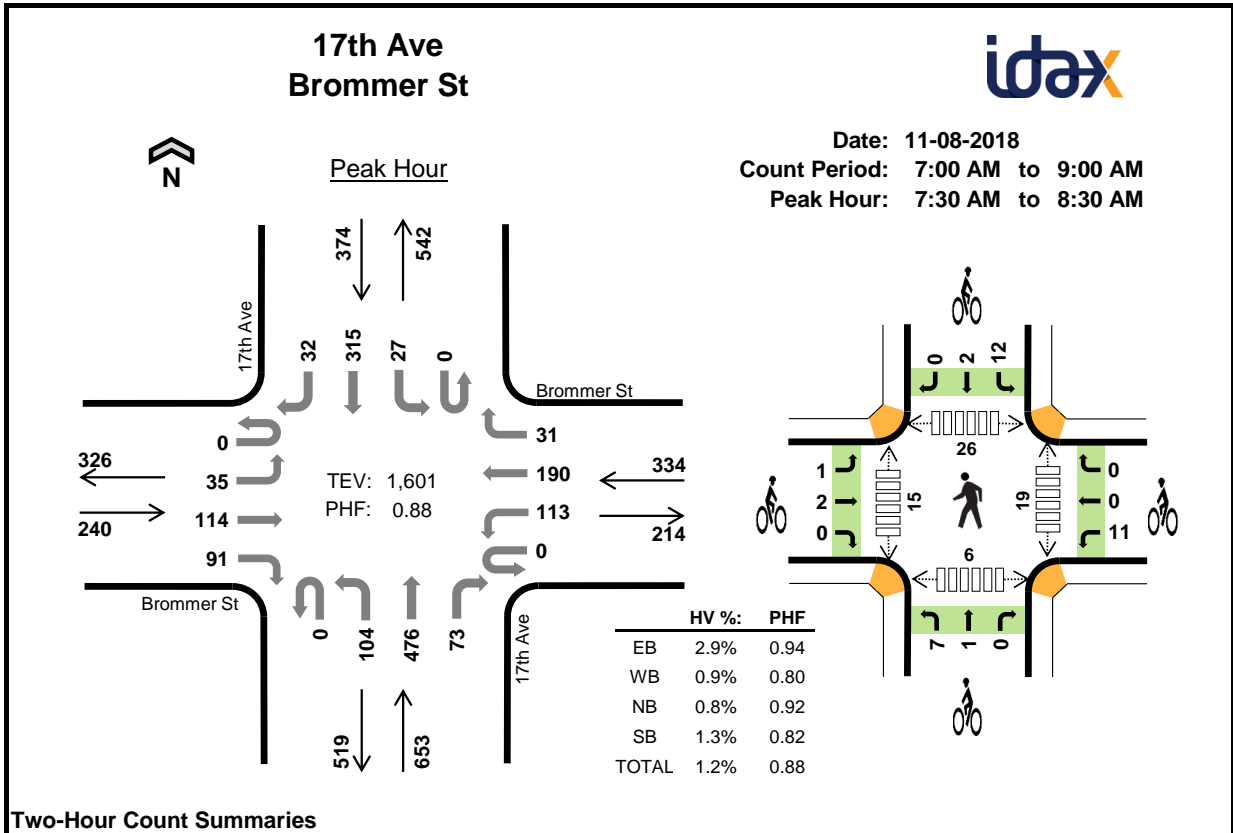
Two-Hour Count Summaries

Interval Start	Driveway			0			17th Ave			17th Ave			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT							
4:00 PM	0	4	0	3	0	0	0	0	0	5	84	0	0	0	118	3	217	0	
4:15 PM	0	0	0	9	0	0	0	0	0	3	85	0	0	0	140	7	244	0	
4:30 PM	0	3	0	6	0	0	0	0	0	4	78	0	0	0	122	3	216	0	
4:45 PM	0	3	0	9	0	0	0	0	0	4	68	0	0	0	139	3	226	903	
5:00 PM	0	3	0	9	0	0	0	0	0	3	95	0	0	0	124	6	240	926	
5:15 PM	0	1	0	9	0	0	0	0	0	1	107	0	0	0	138	3	259	941	
5:30 PM	0	1	0	3	0	0	0	0	0	3	95	0	0	0	164	4	270	995	
5:45 PM	0	2	0	9	0	0	0	0	0	5	88	0	0	0	126	3	233	1,002	
Count Total	0	17	0	57	0	0	0	0	0	28	700	0	0	0	1,071	32	1,905	0	
Peak Hour	All	0	7	0	30	0	0	0	0	0	12	385	0	0	0	552	16	1,002	0
	HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
	HV%	-	0%	-	0%	-	-	-	-	-	0%	0%	-	-	-	0%	0%	0%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	2	1	3	0	0	0	1	1	2	1	0	0	3
4:15 PM	0	0	1	0	1	0	0	2	1	3	1	0	0	0	1
4:30 PM	0	0	0	2	2	0	0	1	1	2	4	2	0	0	6
4:45 PM	0	0	0	5	5	0	0	1	0	1	4	2	0	0	6
5:00 PM	0	0	0	0	0	0	0	1	3	4	0	2	0	0	2
5:15 PM	0	0	0	1	1	0	0	0	1	1	5	1	0	0	6
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
5:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
Count Total	0	0	3	9	12	0	0	6	7	13	18	9	0	0	27
Peak Hr	0	0	0	1	1	0	0	2	4	6	7	4	0	0	11

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Driveway				0				17th Ave				17th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	11
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	3	0	0	0	9	0	12	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Two-Hour Count Summaries - Bikes																		
Interval Start	Driveway			0			17th Ave			17th Ave			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0		
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0		
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0		
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	7		
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	10		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6		
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	6		
Count Total	0	0	0	0	0	0	0	0	6	0	0	0	7	0	13	0		
Peak Hour	0	0	0	0	0	0	0	0	2	0	0	0	4	0	6	0		
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		



Two-Hour Count Summaries

Interval Start	Brommer St Eastbound				Brommer St Westbound				17th Ave Northbound				17th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	3	19	6	0	12	33	3	0	10	69	6	0	1	32	4	198	0	
7:15 AM	0	7	17	13	0	25	29	9	0	27	97	17	0	4	57	9	311	0	
7:30 AM	0	7	29	26	0	22	50	9	0	21	106	13	0	5	55	6	349	0	
7:45 AM	0	9	33	22	0	23	45	10	0	29	125	15	0	3	88	6	408	1,266	
8:00 AM	0	8	30	24	0	49	49	6	0	31	121	25	0	10	98	6	457	1,525	
8:15 AM	0	11	22	19	0	19	46	6	0	23	124	20	0	9	74	14	387	1,601	
8:30 AM	0	7	31	12	0	20	35	5	0	21	95	12	0	14	62	18	332	1,584	
8:45 AM	0	12	26	13	0	20	29	8	0	20	80	14	0	6	53	10	291	1,467	
Count Total	0	64	207	135	0	190	316	56	0	182	817	122	0	52	519	73	2,733	0	
Peak Hour	All	0	35	114	91	0	113	190	31	0	104	476	73	0	27	315	32	1,601	0
	HV	0	5	2	0	0	1	2	0	0	4	1	0	0	5	0	0	20	0
	HV%	-	14%	2%	0%	-	1%	1%	0%	-	4%	0%	0%	-	19%	0%	0%	1%	0

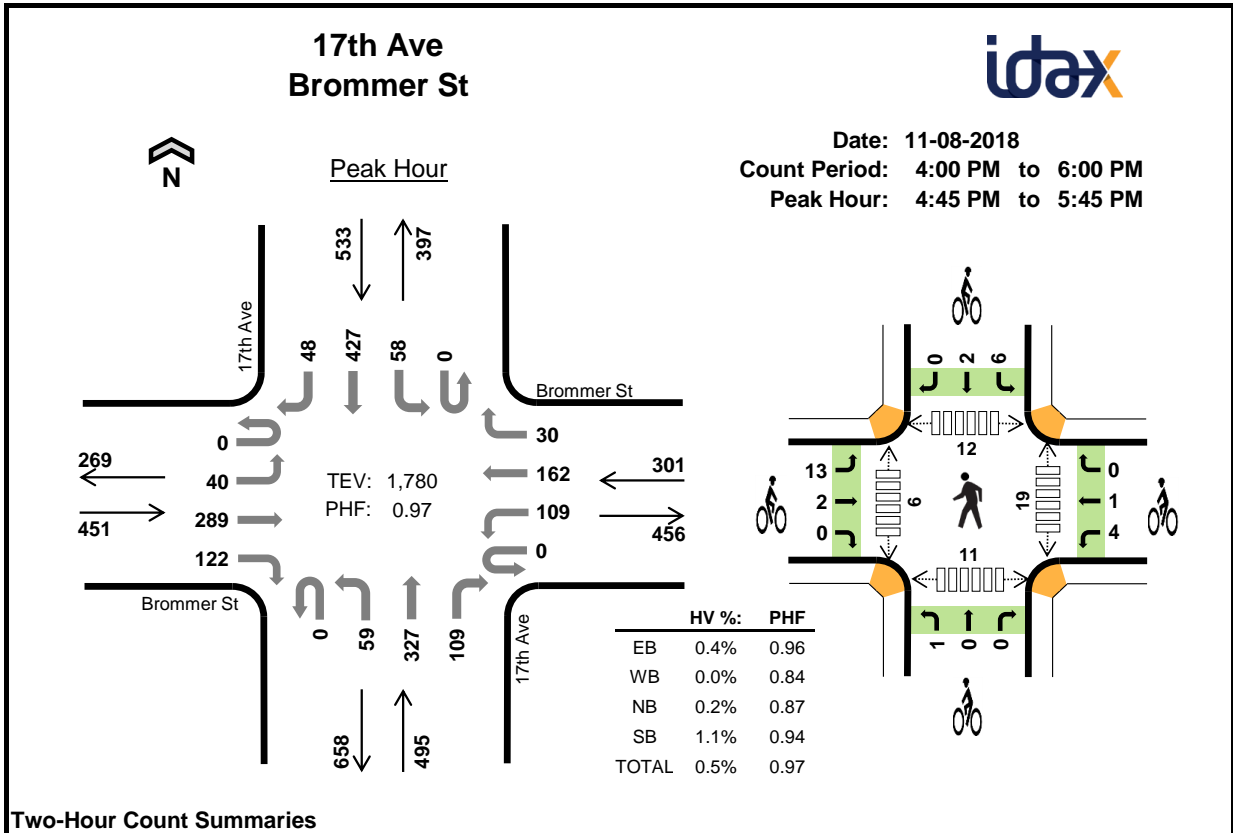
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	1	1	0	0	0	0	0	4	3	1	1	9
7:15 AM	1	1	3	4	9	0	2	0	2	4	2	4	1	1	8
7:30 AM	1	2	3	3	9	1	4	1	5	11	3	0	2	1	6
7:45 AM	2	0	1	1	4	0	1	4	3	8	13	6	8	1	28
8:00 AM	3	1	1	0	5	0	3	0	5	8	0	9	9	4	22
8:15 AM	1	0	0	1	2	2	3	3	1	9	3	0	7	0	10
8:30 AM	0	0	0	1	1	1	0	1	3	5	3	2	0	0	5
8:45 AM	2	1	4	2	9	3	1	2	0	6	2	4	1	0	7
Count Total	10	5	12	13	40	7	14	11	19	51	30	28	29	8	95
Peak Hour	7	3	5	5	20	3	11	8	14	36	19	15	26	6	66

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Brommer St				Brommer St				17th Ave				17th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
7:15 AM	0	0	1	0	0	1	0	0	0	2	1	0	0	1	3	0	9	0
7:30 AM	0	0	1	0	0	1	1	0	0	2	1	0	0	3	0	0	9	0
7:45 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	4	23
8:00 AM	0	2	1	0	0	0	1	0	0	1	0	0	0	0	0	0	5	27
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	20
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	12
8:45 AM	0	1	1	0	0	1	0	0	0	4	0	0	0	2	0	0	9	17
Count Total	0	6	4	0	0	3	2	0	0	10	2	0	0	10	3	0	40	0
Peak Hour	0	5	2	0	0	1	2	0	0	4	1	0	0	5	0	0	20	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Brommer St			Brommer St			17th Ave			17th Ave			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4	0	0	0
7:30 AM	1	0	0	4	0	0	0	1	0	0	0	4	1	0	11	0	0	0
7:45 AM	0	0	0	1	0	0	0	3	1	0	0	3	0	0	8	0	23	0
8:00 AM	0	0	0	3	0	0	0	0	0	0	0	4	1	0	8	0	31	0
8:15 AM	0	2	0	3	0	0	0	3	0	0	0	1	0	0	9	0	36	0
8:30 AM	1	0	0	0	0	0	0	1	0	0	0	2	1	0	5	0	30	0
8:45 AM	3	0	0	1	0	0	0	2	0	0	0	0	0	0	6	0	28	0
Count Total	5	2	0	14	0	0	0	10	1	0	0	16	3	0	51	0	0	0
Peak Hour	1	2	0	11	0	0	0	7	1	0	0	12	2	0	36	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries

Interval Start	Brommer St Eastbound				Brommer St Westbound				17th Ave Northbound				17th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	13	69	27	0	32	37	7	0	21	64	24	0	11	86	5	396	0	
4:15 PM	0	8	84	29	0	22	36	2	0	20	67	30	0	13	81	10	402	0	
4:30 PM	0	12	81	27	0	26	39	6	0	10	70	17	0	13	86	10	397	0	
4:45 PM	0	6	69	29	0	32	38	2	0	11	67	28	0	15	114	9	420	1,615	
5:00 PM	0	11	72	30	0	24	58	8	0	11	87	33	0	13	93	9	449	1,668	
5:15 PM	0	13	78	27	0	23	27	9	0	27	91	24	0	11	114	13	457	1,723	
5:30 PM	0	10	70	36	0	30	39	11	0	10	82	24	0	19	106	17	454	1,780	
5:45 PM	0	10	80	21	0	31	39	9	0	5	72	21	0	17	98	11	414	1,774	
Count Total	0	83	603	226	0	220	313	54	0	115	600	201	0	112	778	84	3,389	0	
Peak Hour	All	0	40	289	122	0	109	162	30	0	59	327	109	0	58	427	48	1,780	0
	HV	0	0	2	0	0	0	0	0	0	0	1	0	0	6	0	0	9	0
	HV%	-	0%	1%	0%	-	0%	0%	0%	-	0%	0%	0%	-	10%	0%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	0	2	1	5	2	2	0	0	4	2	2	5	2	11
4:15 PM	0	0	1	0	1	2	0	2	1	5	1	1	7	0	9
4:30 PM	0	0	0	2	2	4	0	2	1	7	4	2	2	2	10
4:45 PM	1	0	0	5	6	4	0	0	1	5	3	1	3	4	11
5:00 PM	1	0	1	0	2	3	3	1	6	13	7	4	2	6	19
5:15 PM	0	0	0	1	1	6	1	0	0	7	4	1	6	1	12
5:30 PM	0	0	0	0	0	2	1	0	1	4	5	0	1	0	6
5:45 PM	0	0	0	0	0	3	0	1	0	4	1	1	0	0	2
Count Total	4	0	4	9	17	26	7	6	10	49	27	12	26	15	80
Peak Hour	2	0	1	6	9	15	5	1	8	29	19	6	12	11	48

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Brommer St				Brommer St				17th Ave				17th Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	1	1	0	0	0	0	0	0	2	0	0	0	0	1	0	0	5	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0	6	14
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	11
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	11
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	1	3	0	0	0	0	0	0	3	1	0	0	9	0	0	17	0	
Peak Hour	0	0	2	0	0	0	0	0	0	0	1	0	6	0	0	9	0		

Two-Hour Count Summaries - Bikes																	
Interval Start	Brommer St			Brommer St			17th Ave			17th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0
4:15 PM	2	0	0	0	0	0	0	2	0	0	0	1	0	0	5	0	
4:30 PM	1	3	0	0	0	0	0	1	1	0	0	1	0	0	7	0	
4:45 PM	3	1	0	0	0	0	0	0	0	0	0	0	1	0	5	21	
5:00 PM	2	1	0	2	1	0	0	1	0	0	0	5	1	0	13	30	
5:15 PM	6	0	0	1	0	0	0	0	0	0	0	0	0	0	7	32	
5:30 PM	2	0	0	1	0	0	0	0	0	0	0	1	0	0	4	29	
5:45 PM	1	2	0	0	0	0	0	1	0	0	0	0	0	0	4	28	
Count Total	18	8	0	6	1	0	0	5	1	0	0	8	2	0	49	0	
Peak Hour	13	2	0	4	1	0	0	1	0	0	0	6	2	0	29	0	

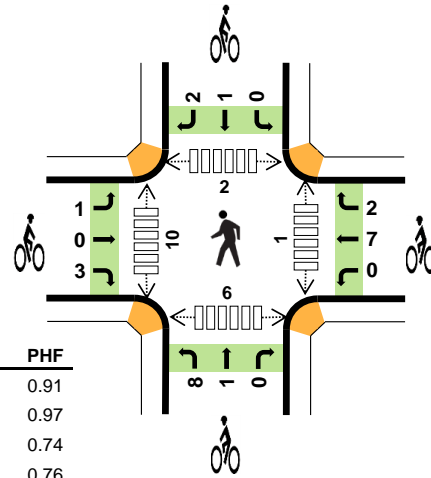
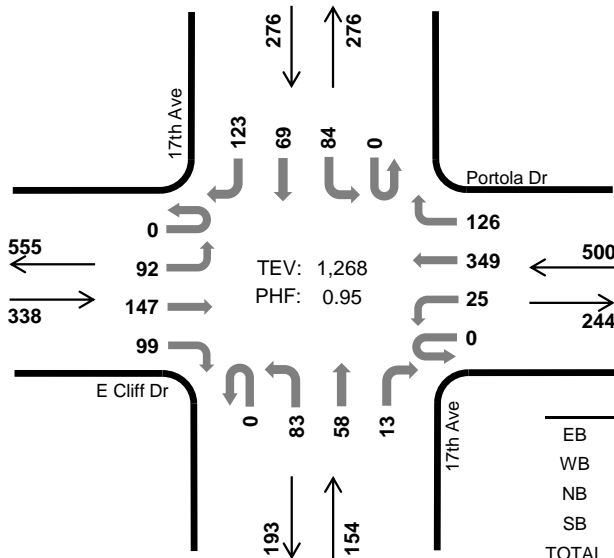
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

17th Ave E Cliff Dr



Peak Hour

Date: 11-08-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	1.8%	0.91
WB	1.6%	0.97
NB	0.0%	0.74
SB	1.4%	0.76
TOTAL	1.4%	0.95

Two-Hour Count Summaries

Interval Start	E Cliff Dr				Portola Dr				17th Ave				17th Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	13	21	15	0	1	46	17	0	14	8	2	0	5	9	11	162	0	
7:15 AM	0	13	28	11	0	5	57	21	0	14	8	6	0	7	11	10	191	0	
7:30 AM	0	13	31	21	0	5	82	22	0	26	13	0	0	10	9	19	251	0	
7:45 AM	0	18	44	16	0	10	80	39	0	25	23	4	0	14	15	24	312	916	
8:00 AM	0	30	25	23	0	10	80	34	0	21	15	3	0	32	18	41	332	1,086	
8:15 AM	0	29	37	27	0	4	97	24	0	22	11	4	0	21	18	39	333	1,228	
8:30 AM	0	15	41	33	0	1	92	29	0	15	9	2	0	17	18	19	291	1,268	
8:45 AM	0	9	47	35	0	3	77	24	0	16	16	4	0	25	15	17	288	1,244	
Count Total	0	140	274	181	0	39	611	210	0	153	103	25	0	131	113	180	2,160	0	
Peak Hour	All	0	92	147	99	0	25	349	126	0	83	58	13	0	84	69	123	1,268	0
	HV	0	2	4	0	0	0	6	2	0	0	0	0	0	2	1	1	18	0
	HV%	-	2%	3%	0%	-	0%	2%	2%	-	0%	0%	0%	-	2%	1%	1%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	1	0	1	5	0	2	0	0	2	0	0	0	0	0
7:15 AM	1	2	1	0	4	1	1	1	1	4	2	1	1	3	7
7:30 AM	1	3	0	1	5	1	1	1	0	3	3	1	1	1	6
7:45 AM	1	1	0	1	3	0	1	2	0	3	1	4	2	3	10
8:00 AM	2	2	0	2	6	3	3	2	1	9	0	4	0	1	5
8:15 AM	0	1	0	0	1	1	3	4	2	10	0	1	0	2	3
8:30 AM	3	4	0	1	8	0	2	1	0	3	0	1	0	0	1
8:45 AM	1	0	1	0	2	4	3	2	0	9	0	2	1	1	4
Count Total	12	14	2	6	34	10	16	13	4	43	6	14	5	11	36
Peak Hour	6	8	0	4	18	4	9	9	3	25	1	10	2	6	19

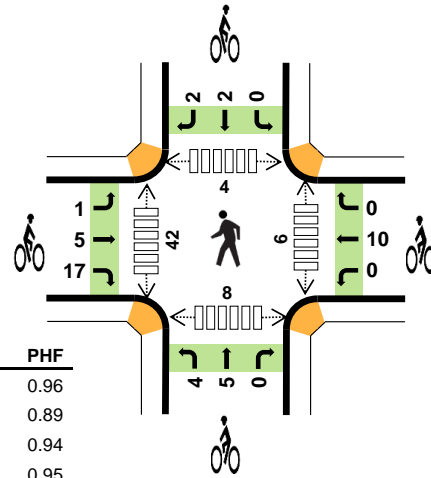
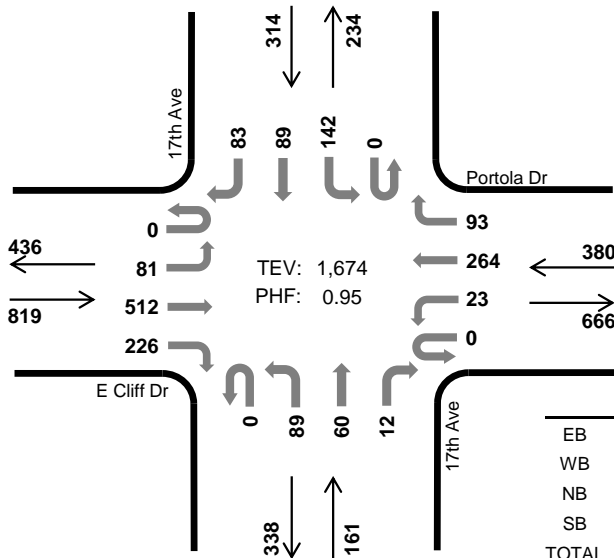
Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	E Cliff Dr				Portola Dr				17th Ave				17th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	1	0	0	0	0	1	0	0	0	0	0	1	0	0	5	0
7:15 AM	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	4	0
7:30 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	1	0	0	5	0
7:45 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	3	17
8:00 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	1	0	1	6	18
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	15
8:30 AM	0	0	3	0	0	0	3	1	0	0	0	0	0	0	1	0	8	18
8:45 AM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	17
Count Total	0	4	7	1	0	0	10	4	0	1	1	0	0	4	1	1	34	0
Peak Hour	0	2	4	0	0	0	6	2	0	0	0	0	0	2	1	1	18	0
Two-Hour Count Summaries - Bikes																		
Interval Start	E Cliff Dr			Portola Dr			17th Ave			17th Ave			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	2	0				
7:15 AM	0	0	1	0	1	0	1	0	0	0	0	1	4	0				
7:30 AM	0	0	1	0	1	0	1	0	0	0	0	0	3	0				
7:45 AM	0	0	0	0	1	0	2	0	0	0	0	0	3	12				
8:00 AM	1	0	2	0	3	0	2	0	0	0	1	1	9	19				
8:15 AM	0	0	1	0	2	1	3	1	0	0	1	1	10	25				
8:30 AM	0	0	0	0	1	1	1	0	0	0	0	0	3	25				
8:45 AM	0	3	1	0	3	0	2	0	0	0	0	0	9	31				
Count Total	1	3	6	0	13	3	12	1	0	0	0	1	43	0				
Peak Hour	1	0	3	0	7	2	8	1	0	0	1	2	25	0				
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

17th Ave E Cliff Dr



Peak Hour

Date: 11-08-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	0.6%	0.96
WB	0.5%	0.89
NB	0.0%	0.94
SB	0.6%	0.95
TOTAL	0.5%	0.95

Two-Hour Count Summaries

Interval Start	E Cliff Dr				Portola Dr				17th Ave				17th Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	14	102	73	0	6	59	21	0	15	9	4	0	40	20	27	390	0	
4:15 PM	0	14	132	72	0	3	71	29	0	20	9	4	0	17	27	20	418	0	
4:30 PM	0	14	141	58	0	5	75	25	0	19	17	5	0	26	25	20	430	0	
4:45 PM	0	17	108	65	0	10	55	21	0	19	16	1	0	32	26	22	392	1,630	
5:00 PM	0	26	131	50	0	4	59	19	0	22	16	3	0	38	20	22	410	1,650	
5:15 PM	0	24	132	53	0	4	75	28	0	29	11	3	0	46	18	19	442	1,674	
5:30 PM	0	19	123	35	0	2	54	22	0	19	8	1	0	49	12	22	366	1,610	
5:45 PM	0	23	110	28	0	1	56	17	0	19	9	0	0	38	16	25	342	1,560	
Count Total	0	151	979	434	0	35	504	182	0	162	95	21	0	286	164	177	3,190	0	
Peak Hour	All	0	81	512	226	0	23	264	93	0	89	60	12	0	142	89	83	1,674	0
	HV	0	0	4	1	0	0	1	1	0	0	0	0	0	2	0	0	9	0
	HV%	-	0%	1%	0%	-	0%	0%	1%	-	0%	0%	0%	-	1%	0%	0%	1%	0

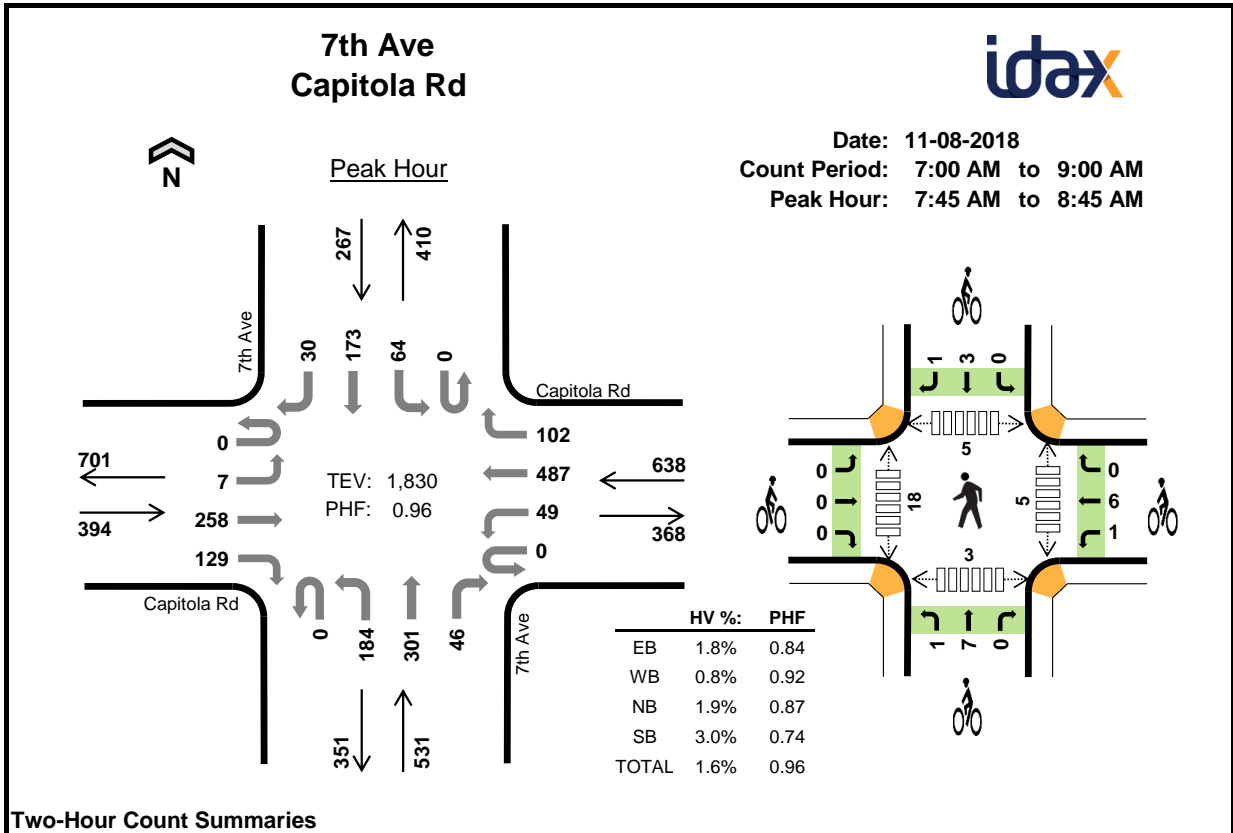
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	0	0	2	5	3	2	3	1	9	0	3	2	0	5
4:15 PM	0	1	0	0	1	3	1	2	3	9	0	6	1	1	8
4:30 PM	4	1	0	0	5	7	1	1	1	10	3	4	0	4	11
4:45 PM	0	0	0	0	0	7	4	4	0	15	0	12	2	0	14
5:00 PM	1	0	0	1	2	6	3	3	2	14	1	15	0	2	18
5:15 PM	0	1	0	1	2	3	2	1	1	7	2	11	2	2	17
5:30 PM	1	1	0	0	2	2	3	2	0	7	2	4	1	2	9
5:45 PM	0	0	0	0	0	11	1	1	0	13	3	4	4	2	13
Count Total	9	4	0	4	17	42	17	17	8	84	11	59	12	13	95
Peak Hour	5	2	0	2	9	23	10	9	4	46	6	42	4	8	60

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	E Cliff Dr				Portola Dr				17th Ave				17th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	1	5	0
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	5	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
5:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2	8
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	9
5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	6
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Count Total	0	1	7	1	0	0	2	2	0	0	0	0	0	3	0	1	17	0
Peak Hour	0	0	4	1	0	0	1	1	0	0	0	0	0	2	0	0	9	0

Two-Hour Count Summaries - Bikes																	
Interval Start	E Cliff Dr			Portola Dr			17th Ave			17th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	1	2	0	2	0	3	0	0	0	1	0	9	0			
4:15 PM	0	1	2	0	1	0	2	0	0	0	2	1	9	0			
4:30 PM	0	0	7	0	1	0	0	1	0	0	1	0	10	0			
4:45 PM	0	2	5	0	4	0	1	3	0	0	0	0	15	43			
5:00 PM	1	1	4	0	3	0	2	1	0	0	1	1	14	48			
5:15 PM	0	2	1	0	2	0	1	0	0	0	0	1	7	46			
5:30 PM	0	0	2	0	2	1	1	1	0	0	0	0	7	43			
5:45 PM	1	9	1	0	0	1	0	0	1	0	0	0	13	41			
Count Total	2	16	24	0	15	2	10	6	1	0	5	3	84	0			
Peak Hour	1	5	17	0	10	0	4	5	0	0	2	2	46	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				7th Ave Northbound				7th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	22	10	0	6	48	19	0	13	44	11	0	4	24	0	201	0	
7:15 AM	0	0	45	20	0	5	85	32	0	32	45	9	0	14	27	2	316	0	
7:30 AM	0	4	48	24	0	5	117	43	0	30	67	9	0	12	28	3	390	0	
7:45 AM	0	3	51	33	0	3	125	32	0	41	95	17	0	12	43	8	463	1,370	
8:00 AM	0	1	53	31	0	15	115	23	0	54	72	12	0	20	62	8	466	1,635	
8:15 AM	0	1	82	34	0	12	144	18	0	51	70	9	0	17	34	7	479	1,798	
8:30 AM	0	2	72	31	0	19	103	29	0	38	64	8	0	15	34	7	422	1,830	
8:45 AM	0	3	69	18	0	16	123	32	0	50	51	14	0	12	36	5	429	1,796	
Count Total	0	14	442	201	0	81	860	228	0	309	508	89	0	106	288	40	3,166	0	
Peak Hour	All	0	7	258	129	0	49	487	102	0	184	301	46	0	64	173	30	1,830	0
	HV	0	0	5	2	0	0	4	1	0	5	5	0	0	3	5	0	30	0
	HV%	-	0%	2%	2%	-	0%	1%	1%	-	3%	2%	0%	-	5%	3%	0%	2%	0

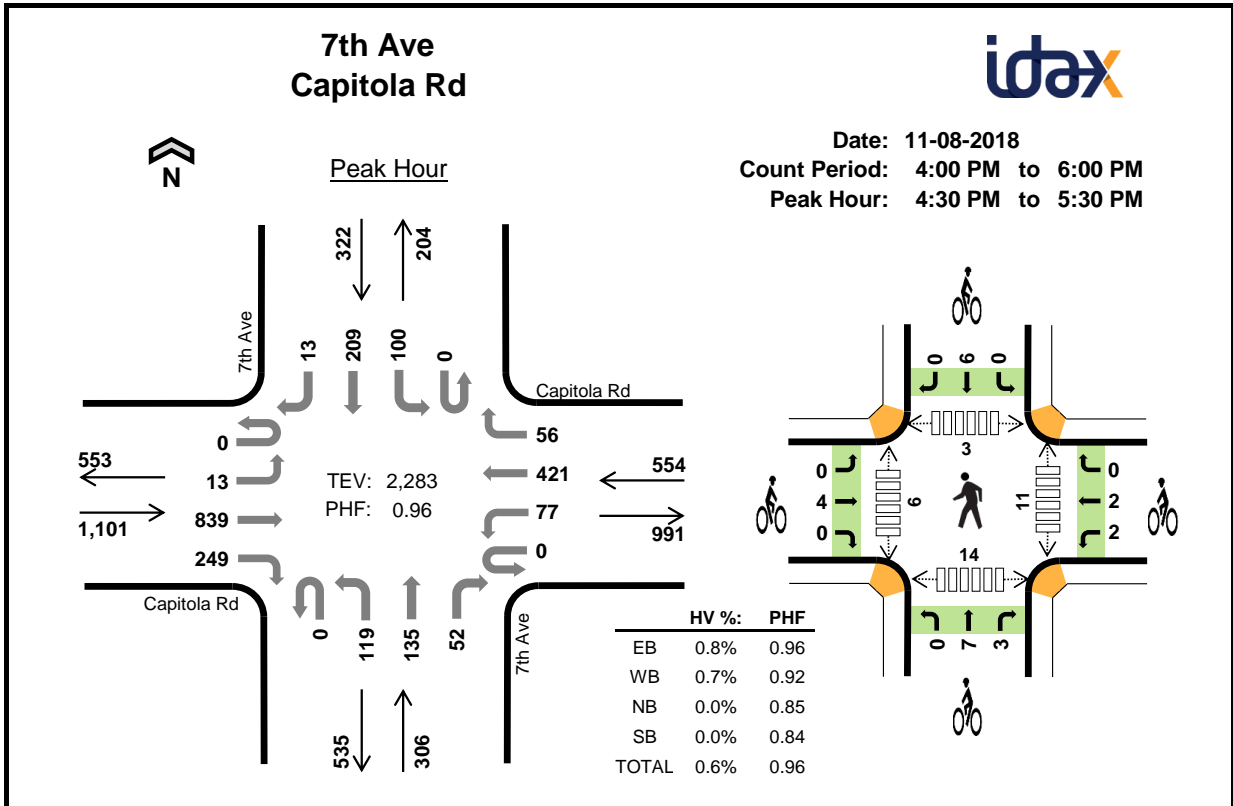
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	2	0	0	3	0	1	2	0	3	0	0	1	0	1
7:15 AM	1	5	2	1	9	1	1	1	1	4	1	0	1	1	3
7:30 AM	0	4	5	3	12	0	4	6	1	11	0	3	4	3	10
7:45 AM	3	0	2	0	5	0	1	3	1	5	2	13	2	3	20
8:00 AM	1	1	4	6	12	0	1	3	1	5	3	1	3	0	7
8:15 AM	3	2	2	2	9	0	2	1	1	4	0	3	0	0	3
8:30 AM	0	2	2	0	4	0	3	1	1	5	0	1	0	0	1
8:45 AM	3	5	1	0	9	0	2	0	0	2	1	1	0	3	5
Count Total	12	21	18	12	63	1	15	17	6	39	7	22	11	10	50
Peak Hour	7	5	10	8	30	0	7	8	4	19	5	18	5	3	31

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Capitola Rd				Capitola Rd				7th Ave				7th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	3	0
7:15 AM	0	0	1	0	0	1	2	2	0	2	0	0	0	0	1	0	9	0
7:30 AM	0	0	0	0	0	1	2	1	0	0	5	0	0	0	1	2	12	0
7:45 AM	0	0	1	2	0	0	0	0	0	1	1	0	0	0	0	0	5	29
8:00 AM	0	0	1	0	0	0	1	0	0	1	3	0	0	2	4	0	12	38
8:15 AM	0	0	3	0	0	0	1	1	0	1	1	0	0	1	1	0	9	38
8:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	30
8:45 AM	0	0	2	1	0	1	3	1	0	1	0	0	0	0	0	0	9	34
Count Total	0	0	9	3	0	3	12	6	0	8	10	0	0	5	7	0	63	0
Peak Hour	0	0	5	2	0	0	4	1	0	5	5	0	0	3	5	0	30	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Capitola Rd			Capitola Rd			7th Ave			7th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	1	0	1	0	1	0	0	0	3	0			
7:15 AM	0	1	0	0	1	0	1	0	0	0	1	0	4	0			
7:30 AM	0	0	0	1	3	0	0	6	0	0	1	0	11	0			
7:45 AM	0	0	0	0	1	0	1	2	0	0	0	1	5	23			
8:00 AM	0	0	0	0	1	0	0	3	0	0	1	0	5	25			
8:15 AM	0	0	0	0	2	0	0	1	0	0	1	0	4	25			
8:30 AM	0	0	0	1	2	0	0	1	0	0	1	0	5	19			
8:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2	16			
Count Total	0	1	0	2	13	0	3	13	1	0	5	1	39	0			
Peak Hour	0	0	0	1	6	0	1	7	0	0	3	1	19	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries

Interval Start	Capitola Rd Eastbound				Capitola Rd Westbound				7th Ave Northbound				7th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	3	197	66	0	14	92	14	0	36	42	9	0	18	46	5	542	0	
4:15 PM	0	5	188	54	0	15	96	16	0	30	37	13	0	21	60	1	536	0	
4:30 PM	0	3	211	73	0	26	92	12	0	33	22	14	0	18	54	2	560	0	
4:45 PM	0	3	202	56	0	20	113	10	0	24	35	14	0	32	62	2	573	2,211	
5:00 PM	0	2	208	65	0	14	98	19	0	23	37	14	0	28	43	3	554	2,223	
5:15 PM	0	5	218	55	0	17	118	15	0	39	41	10	0	22	50	6	596	2,283	
5:30 PM	0	4	204	62	0	13	63	10	0	30	30	10	0	28	61	7	522	2,245	
5:45 PM	0	2	192	43	0	18	85	17	0	26	30	13	0	23	53	1	503	2,175	
Count Total	0	27	1,620	474	0	137	757	113	0	241	274	97	0	190	429	27	4,386	0	
Peak Hour	All	0	13	839	249	0	77	421	56	0	119	135	52	0	100	209	13	2,283	0
	HV	0	0	5	4	0	0	4	0	0	0	0	0	0	0	0	0	13	0
	HV%	-	0%	1%	2%	-	0%	1%	0%	-	0%	0%	0%	-	0%	0%	0%	1%	0

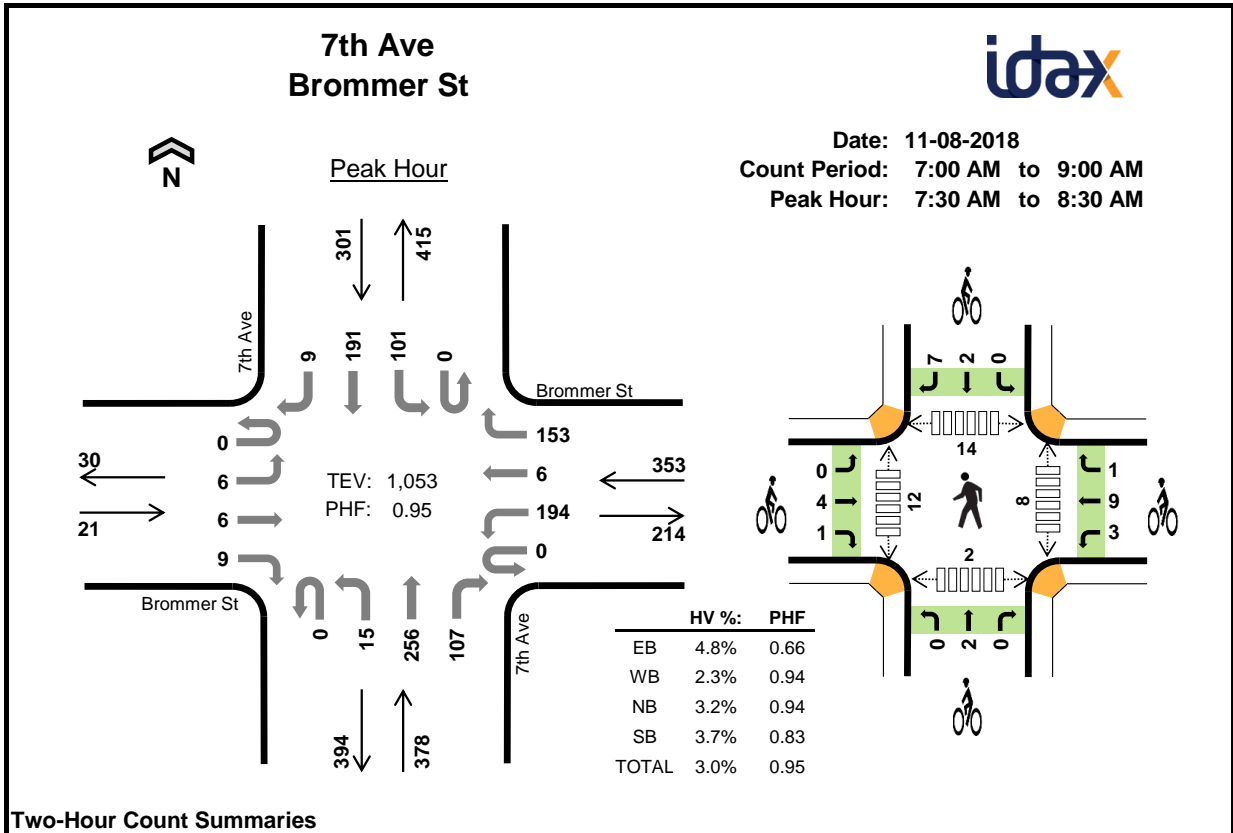
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	2	0	0	4	0	1	0	1	2	0	7	0	4	11
4:15 PM	2	1	2	1	6	1	1	4	1	7	3	2	4	4	13
4:30 PM	3	2	0	0	5	0	2	1	0	3	2	3	0	2	7
4:45 PM	3	1	0	0	4	1	1	2	1	5	2	1	1	5	9
5:00 PM	2	0	0	0	2	1	0	4	3	8	4	0	1	3	8
5:15 PM	1	1	0	0	2	2	1	3	2	8	3	2	1	4	10
5:30 PM	1	1	1	0	3	0	2	6	1	9	1	1	0	3	5
5:45 PM	0	0	1	0	1	0	0	2	0	2	0	1	0	3	4
Count Total	14	8	4	1	27	5	8	22	9	44	15	17	7	28	67
Peak Hour	9	4	0	0	13	4	4	10	6	24	11	6	3	14	34

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Capitola Rd				Capitola Rd				7th Ave				7th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	4	0
4:15 PM	0	0	2	0	0	0	1	0	0	2	0	0	0	0	1	0	6	0
4:30 PM	0	0	2	1	0	0	2	0	0	0	0	0	0	0	0	0	5	0
4:45 PM	0	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	4	19
5:00 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	17
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	13
5:30 PM	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	11
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	8
Count Total	0	0	9	5	0	1	6	1	0	4	0	0	0	0	1	0	27	0
Peak Hour	0	0	5	4	0	0	4	0	0	0	0	0	0	0	0	0	13	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Capitola Rd			Capitola Rd			7th Ave			7th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2	0			
4:15 PM	0	1	0	0	1	0	0	3	1	0	1	0	7	0			
4:30 PM	0	0	0	1	1	0	0	1	0	0	0	0	3	0			
4:45 PM	0	1	0	1	0	0	0	2	0	0	1	0	5	17			
5:00 PM	0	1	0	0	0	0	0	2	2	0	3	0	8	23			
5:15 PM	0	2	0	0	1	0	0	2	1	0	2	0	8	24			
5:30 PM	0	0	0	1	1	0	0	5	1	0	1	0	9	30			
5:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	27			
Count Total	0	5	0	3	5	0	0	17	5	0	9	0	44	0			
Peak Hour	0	4	0	2	2	0	0	7	3	0	6	0	24	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



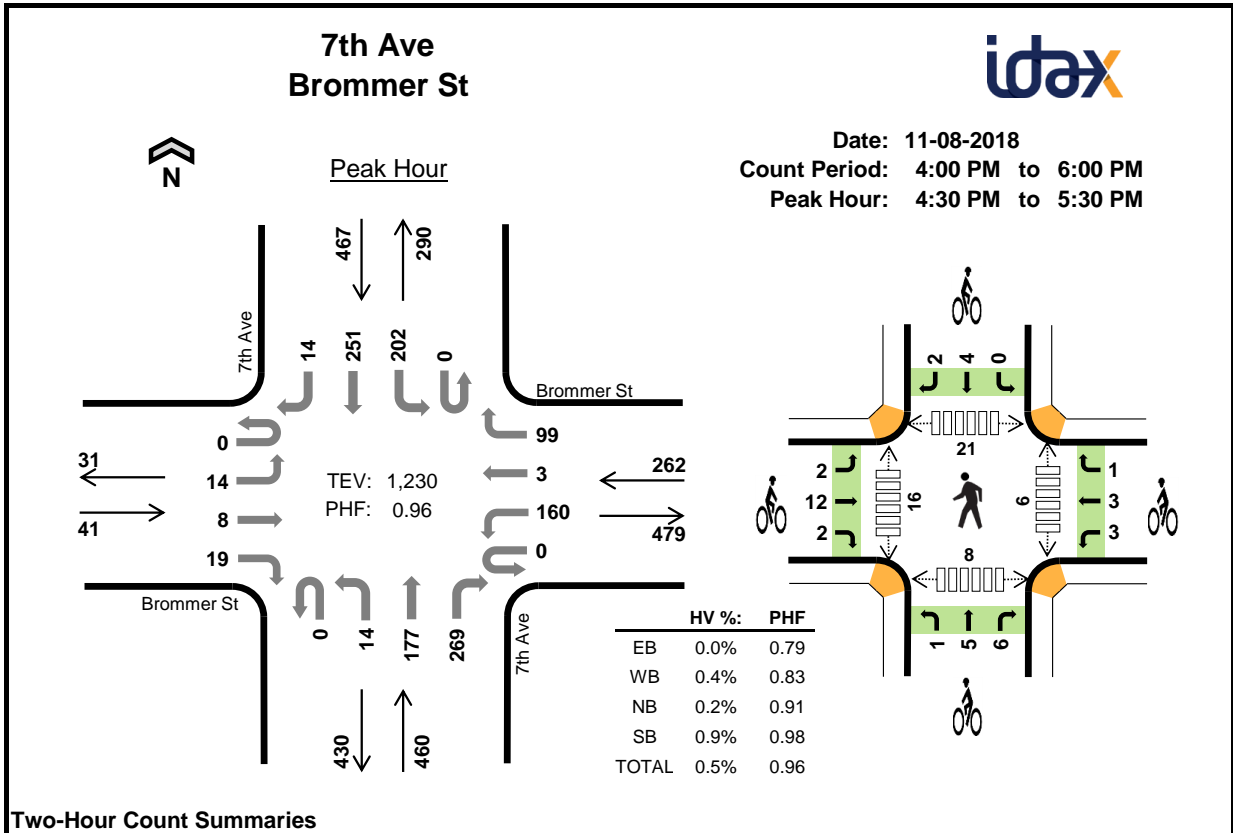
Two-Hour Count Summaries

Interval Start	Brommer St Eastbound				Brommer St Westbound				7th Ave Northbound				7th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	4	1	1	0	32	1	13	0	1	29	11	0	11	24	4	132	0	
7:15 AM	0	3	2	0	0	39	0	26	1	0	34	14	0	22	19	5	165	0	
7:30 AM	0	1	1	1	0	58	1	29	0	7	53	27	0	20	38	3	239	0	
7:45 AM	0	0	3	3	0	56	2	29	0	1	67	27	0	30	44	1	263	799	
8:00 AM	0	4	2	2	0	30	3	51	0	3	64	28	0	29	60	2	278	945	
8:15 AM	0	1	0	3	0	50	0	44	0	4	72	25	0	22	49	3	273	1,053	
8:30 AM	0	5	2	1	0	44	1	27	0	1	43	31	0	22	48	2	227	1,041	
8:45 AM	0	3	1	2	0	41	0	40	0	4	50	24	0	22	49	2	238	1,016	
Count Total	0	21	12	13	0	350	8	259	1	21	412	187	0	178	331	22	1,815	0	
Peak Hour	All	0	6	6	9	0	194	6	153	0	15	256	107	0	101	191	9	1,053	0
	HV	0	0	1	0	0	2	1	5	0	2	8	2	0	4	5	2	32	0
	HV%	-	0%	17%	0%	-	1%	17%	3%	-	13%	3%	2%	-	4%	3%	22%	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	0	1	3	0	0	4	3	1	1	1	6
7:15 AM	0	3	1	1	5	1	2	4	2	9	4	1	1	1	7
7:30 AM	0	3	3	4	10	1	5	0	1	7	1	1	8	0	10
7:45 AM	1	1	3	1	6	2	4	0	3	9	4	6	0	0	10
8:00 AM	0	3	3	5	11	1	3	2	3	9	1	3	4	1	9
8:15 AM	0	1	3	1	5	1	1	0	2	4	2	2	2	1	7
8:30 AM	1	0	3	0	4	2	2	0	3	7	1	1	2	1	5
8:45 AM	0	2	1	2	5	3	3	0	1	7	0	3	5	1	9
Count Total	2	13	17	14	46	12	23	6	15	56	16	18	23	6	63
Peak Hour	1	8	12	11	32	5	13	2	9	29	8	12	14	2	36

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Brommer St				Brommer St				7th Ave				7th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	2	0	1	1	0	0	0	0	0	1	0	0	
7:30 AM	0	0	0	0	0	0	0	3	0	1	2	0	0	2	0	2	10	
7:45 AM	0	0	1	0	0	0	1	0	0	0	2	1	0	1	0	0	6	
8:00 AM	0	0	0	0	0	1	0	2	0	0	2	1	0	1	4	0	11	
8:15 AM	0	0	0	0	0	1	0	0	0	1	2	0	0	0	1	0	5	
8:30 AM	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	4	
8:45 AM	0	0	0	0	0	1	0	1	0	0	0	1	0	1	1	0	5	
Count Total	0	1	1	0	0	5	1	7	1	3	9	4	0	6	6	2	46	
Peak Hour	0	0	1	0	0	2	1	5	0	2	8	2	0	4	5	2	32	
Two-Hour Count Summaries - Bikes																		
Interval Start	Brommer St			Brommer St			7th Ave			7th Ave			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	1	0	1	2	0	0	0	0	0	0	4	0				
7:15 AM	0	0	1	0	1	1	0	4	0	0	1	1	9	0				
7:30 AM	0	1	0	2	3	0	0	0	0	0	1	1	7	0				
7:45 AM	0	1	1	0	3	1	0	0	0	0	0	2	9	29				
8:00 AM	0	1	0	1	2	0	0	2	0	0	1	2	9	34				
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	2	4	29				
8:30 AM	0	2	0	1	1	0	0	0	0	0	2	1	7	29				
8:45 AM	0	2	1	1	2	0	0	0	0	0	0	1	7	27				
Count Total	0	8	4	5	14	4	0	6	0	0	5	10	56	0				
Peak Hour	0	4	1	3	9	1	0	2	0	0	2	7	29	0				
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		



Two-Hour Count Summaries

Interval Start	Brommer St Eastbound				Brommer St Westbound				7th Ave Northbound				7th Ave Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	6	4	6	0	35	2	23	0	3	44	49	0	54	60	1	287	0	
4:15 PM	0	2	4	1	0	40	1	26	0	4	55	64	1	37	63	3	301	0	
4:30 PM	0	3	2	6	0	34	0	23	0	7	41	71	0	48	67	4	306	0	
4:45 PM	0	4	4	2	0	40	2	18	0	0	39	60	0	51	60	5	285	1,179	
5:00 PM	0	3	0	4	0	41	1	24	0	3	51	73	0	47	68	4	319	1,211	
5:15 PM	0	4	2	7	0	45	0	34	0	4	46	65	0	56	56	1	320	1,230	
5:30 PM	0	3	2	2	0	42	3	27	0	2	34	61	0	49	62	1	288	1,212	
5:45 PM	0	2	1	3	0	42	1	20	0	5	42	70	0	34	49	3	272	1,199	
Count Total	0	27	19	31	0	319	10	195	0	28	352	513	1	376	485	22	2,378	0	
Peak Hour	All	0	14	8	19	0	160	3	99	0	14	177	269	0	202	251	14	1,230	0
	HV	0	0	0	0	0	0	0	1	0	0	0	1	0	2	1	1	6	0
	HV%	-	0%	0%	0%	-	0%	0%	1%	-	0%	0%	0%	-	1%	0%	7%	0%	0

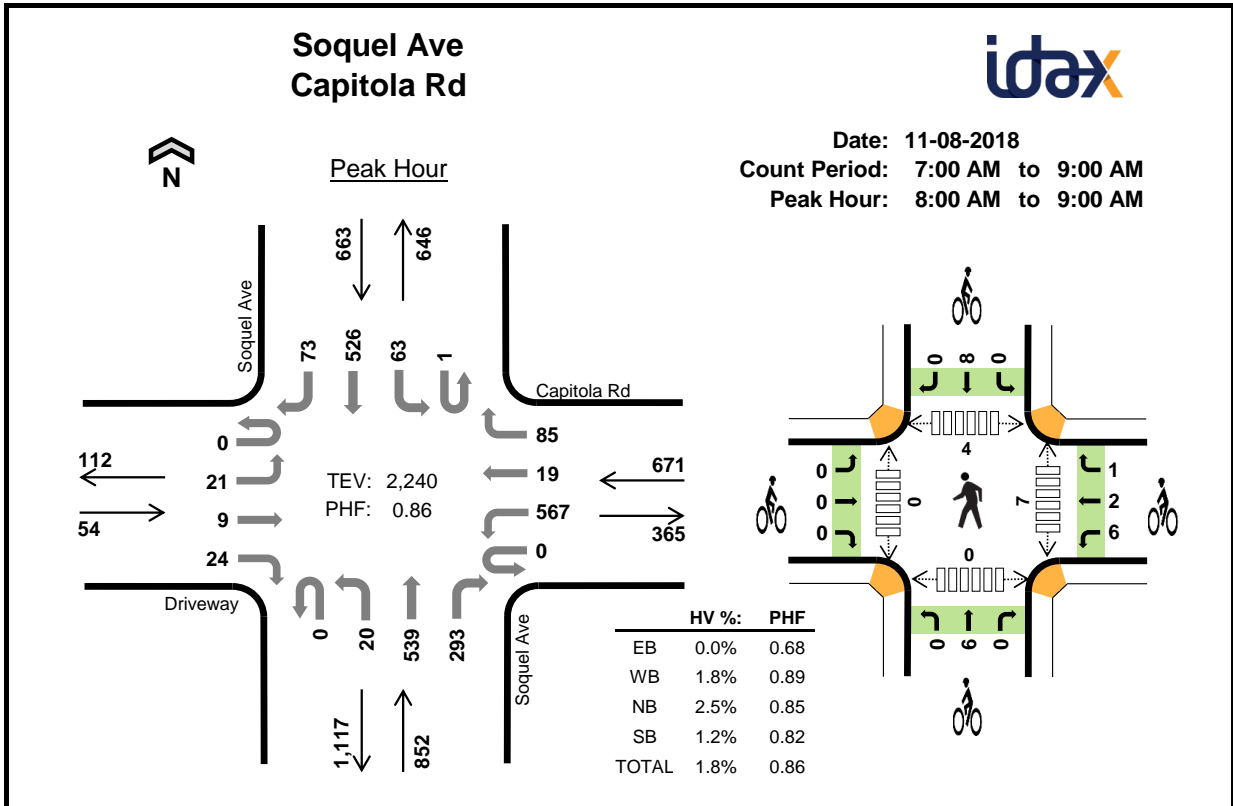
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	2	3	2	3	0	3	8	0	0	6	0	6
4:15 PM	1	1	0	2	4	5	0	7	1	13	2	0	2	0	4
4:30 PM	0	0	0	0	0	3	2	3	3	11	0	5	7	0	12
4:45 PM	0	0	1	2	3	3	1	2	0	6	2	2	3	5	12
5:00 PM	0	0	0	2	2	5	1	5	2	13	4	6	5	1	16
5:15 PM	0	1	0	0	1	5	3	2	1	11	0	3	6	2	11
5:30 PM	0	0	0	0	0	4	5	2	1	12	0	1	6	1	8
5:45 PM	1	0	0	0	1	4	1	2	0	7	3	0	4	2	9
Count Total	2	2	2	8	14	31	16	23	11	81	11	17	39	11	78
Peak Hour	0	1	1	4	6	16	7	12	6	41	6	16	21	8	51

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Brommer St				Brommer St				7th Ave				7th Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3	0
4:15 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	0	4	0
4:30 PM	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	1	0	1	0	1	3	10
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	9
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	6
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
Count Total	0	2	0	0	0	0	0	2	0	0	0	2	0	3	4	1	14	0
Peak Hour	0	0	0	0	0	0	0	1	0	0	0	1	0	2	1	1	6	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Brommer St			Brommer St			7th Ave			7th Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	2	0	0	3	0	0	0	0	1	0	2	8	0			
4:15 PM	0	5	0	0	0	0	0	6	1	0	1	0	13	0			
4:30 PM	0	3	0	2	0	0	0	0	3	0	2	1	11	0			
4:45 PM	1	1	1	0	1	0	0	2	0	0	0	0	6	38			
5:00 PM	1	3	1	0	1	0	1	3	1	0	2	0	13	43			
5:15 PM	0	5	0	1	1	1	0	0	2	0	0	1	11	41			
5:30 PM	0	4	0	3	2	0	0	1	1	0	0	1	12	42			
5:45 PM	1	2	1	1	0	0	0	1	1	0	0	0	7	43			
Count Total	3	25	3	7	8	1	1	13	9	1	5	5	81	0			
Peak Hour	2	12	2	3	3	1	1	5	6	0	4	2	41	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



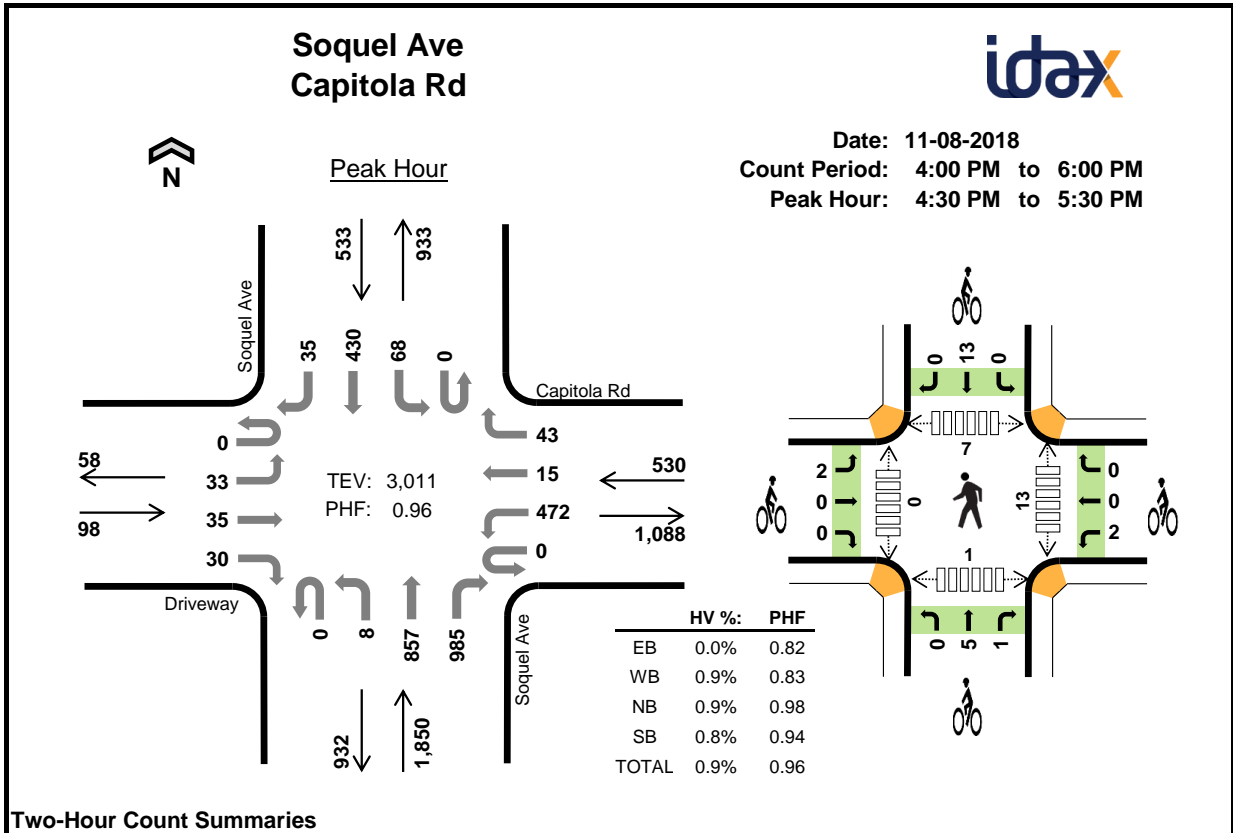
Two-Hour Count Summaries

Interval Start	Driveway				Capitola Rd				Soquel Ave				Soquel Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	3	0	1	0	47	3	8	0	3	58	32	0	0	66	9	230	0	
7:15 AM	0	3	5	2	0	81	2	24	0	2	93	47	0	13	80	8	360	0	
7:30 AM	0	4	2	4	0	115	9	15	0	3	102	59	0	13	83	9	418	0	
7:45 AM	0	5	3	2	0	148	6	14	0	5	132	73	0	11	118	11	528	1,536	
8:00 AM	0	2	0	4	0	130	5	38	0	1	151	62	0	11	130	22	556	1,862	
8:15 AM	0	2	3	5	0	150	7	32	0	7	168	77	1	29	157	16	654	2,156	
8:30 AM	0	9	3	6	0	131	2	6	0	8	107	81	0	14	114	17	498	2,236	
8:45 AM	0	8	3	9	0	156	5	9	0	4	113	73	0	9	125	18	532	2,240	
Count Total	0	36	19	33	0	958	39	146	0	33	924	504	1	100	873	110	3,776	0	
Peak Hour	All	0	21	9	24	0	567	19	85	0	20	539	293	1	63	526	73	2,240	0
	HV	0	0	0	0	0	12	0	0	0	0	14	7	0	0	8	0	41	0
	HV%	-	0%	0%	0%	-	2%	0%	0%	-	0%	3%	2%	0%	0%	2%	0%	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	1	2	3	6	0	1	0	3	4	3	0	2	1	6
7:15 AM	0	4	2	0	6	0	0	1	4	5	0	0	1	0	1
7:30 AM	0	1	2	2	5	0	4	3	0	7	0	0	0	0	0
7:45 AM	1	2	4	5	12	0	2	2	4	8	1	0	2	0	3
8:00 AM	0	1	4	5	10	0	2	2	4	8	3	0	1	0	4
8:15 AM	0	3	7	0	10	0	2	2	1	5	0	0	0	0	0
8:30 AM	0	4	4	1	9	0	3	1	1	5	2	0	3	0	5
8:45 AM	0	4	6	2	12	0	2	1	2	5	2	0	0	0	2
Count Total	1	20	31	18	70	0	16	12	19	47	11	0	9	1	21
Peak Hour	0	12	21	8	41	0	9	6	8	23	7	0	4	0	11

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Driveway				Capitola Rd				Soquel Ave				Soquel Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	3	0	6	0
7:15 AM	0	0	0	0	0	4	0	0	0	0	0	1	1	0	0	0	0	6	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	2	0	5	0
7:45 AM	0	1	0	0	0	2	0	0	0	0	0	2	2	0	0	5	0	12	29
8:00 AM	0	0	0	0	0	1	0	0	0	0	0	3	1	0	0	5	0	10	33
8:15 AM	0	0	0	0	0	3	0	0	0	0	0	5	2	0	0	0	0	10	37
8:30 AM	0	0	0	0	0	4	0	0	0	0	0	3	1	0	0	1	0	9	41
8:45 AM	0	0	0	0	0	4	0	0	0	0	0	3	3	0	0	2	0	12	41
Count Total	0	1	0	0	0	20	0	0	0	0	0	20	11	0	0	18	0	70	0
Peak Hour	0	0	0	0	0	12	0	0	0	0	0	14	7	0	0	8	0	41	0
Two-Hour Count Summaries - Bikes																			
Interval Start	Driveway			Capitola Rd			Soquel Ave			Soquel Ave			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT							
7:00 AM	0	0	0	1	0	0	0	0	0	0	3	0	4	0					
7:15 AM	0	0	0	0	0	0	0	1	0	0	4	0	5	0					
7:30 AM	0	0	0	4	0	0	0	3	0	0	0	0	7	0					
7:45 AM	0	0	0	2	0	0	0	2	0	0	4	0	8	24					
8:00 AM	0	0	0	1	1	0	0	2	0	0	4	0	8	28					
8:15 AM	0	0	0	1	0	1	0	2	0	0	1	0	5	28					
8:30 AM	0	0	0	2	1	0	0	1	0	0	1	0	5	26					
8:45 AM	0	0	0	2	0	0	0	1	0	0	2	0	5	23					
Count Total	0	0	0	13	2	1	0	12	0	0	19	0	47	0					
Peak Hour	0	0	0	6	2	1	0	6	0	0	8	0	23	0					
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																			



Two-Hour Count Summaries

Interval Start	Driveway				Capitola Rd				Soquel Ave				Soquel Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	13	12	12	0	125	1	10	0	1	214	245	0	20	95	8		
4:15 PM	0	12	6	6	0	128	3	5	0	4	210	234	0	14	123	16		
4:30 PM	0	10	10	10	0	109	2	7	0	2	221	248	0	18	97	14		
4:45 PM	0	10	6	4	0	111	5	15	0	3	203	247	0	16	107	5		
5:00 PM	0	5	12	9	0	107	6	9	0	0	228	231	0	16	120	6		
5:15 PM	0	8	7	7	0	145	2	12	0	3	205	259	0	18	106	10		
5:30 PM	0	5	3	5	0	88	4	6	0	4	246	250	1	19	94	5		
5:45 PM	0	13	6	6	0	105	2	9	0	1	258	214	0	7	85	3		
Count Total	0	76	62	59	0	918	25	73	0	18	1,785	1,928	1	128	827	67		
Peak Hour	All	0	33	35	30	0	472	15	43	0	8	857	985	0	68	430	35	
	HV	0	0	0	0	0	5	0	0	0	0	10	7	0	0	4	0	
	HV%	-	0%	0%	0%	-	1%	0%	0%	-	0%	1%	1%	-	0%	1%	0%	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	3	3	6	0	1	1	2	4	2	0	0	1	3
4:15 PM	0	3	6	1	10	0	1	3	3	7	4	0	2	0	6
4:30 PM	0	2	6	0	8	1	1	2	1	5	6	0	0	0	6
4:45 PM	0	1	7	2	10	1	0	1	2	4	3	0	5	0	8
5:00 PM	0	1	3	0	4	0	0	0	6	6	1	0	2	0	3
5:15 PM	0	1	1	2	4	0	1	3	4	8	3	0	0	1	4
5:30 PM	0	2	2	0	4	0	0	4	2	6	1	0	1	0	2
5:45 PM	0	1	2	1	4	0	0	3	0	3	1	0	0	0	1
Count Total	0	11	30	9	50	2	4	17	20	43	21	0	10	2	33
Peak Hour	0	5	17	4	26	2	2	6	13	23	13	0	7	1	21

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Driveway				Capitola Rd				Soquel Ave				Soquel Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	6	0
4:15 PM	0	0	0	0	0	3	0	0	0	0	4	2	0	0	1	0	10	0
4:30 PM	0	0	0	0	0	2	0	0	0	0	3	3	0	0	0	0	8	0
4:45 PM	0	0	0	0	0	1	0	0	0	0	4	3	0	0	2	0	10	34
5:00 PM	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	4	32
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	4	26
5:30 PM	0	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0	4	22
5:45 PM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	1	0	4	16
Count Total	0	0	0	0	0	11	0	0	0	0	18	12	0	0	9	0	50	0
Peak Hour	0	0	0	0	0	5	0	0	0	0	10	7	0	0	4	0	26	0
Two-Hour Count Summaries - Bikes																		
Interval Start	Driveway			Capitola Rd			Soquel Ave			Soquel Ave			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	1	0	0	0	1	0	0	0	2	0	4	0			
4:15 PM	0	0	0	1	0	0	0	0	3	0	0	3	0	7	0			
4:30 PM	1	0	0	1	0	0	0	0	2	0	0	1	0	5	0			
4:45 PM	1	0	0	0	0	0	0	0	0	1	0	2	0	4	20			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	6	0	6	22			
5:15 PM	0	0	0	1	0	0	0	0	3	0	0	4	0	8	23			
5:30 PM	0	0	0	0	0	0	0	0	4	0	0	2	0	6	24			
5:45 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	3	23			
Count Total	2	0	0	4	0	0	0	0	16	1	0	20	0	43	0			
Peak Hour	2	0	0	2	0	0	0	0	5	1	0	13	0	23	0			

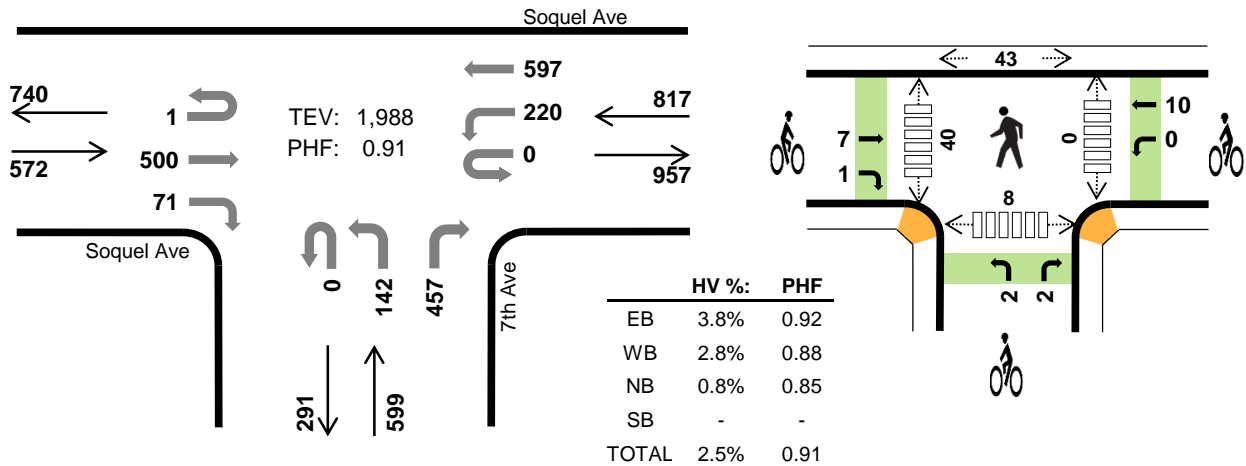
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

7th Ave Soquel Ave



Peak Hour

Date: 11-08-2018
 Count Period: 7:00 AM to 9:00 AM
 Peak Hour: 7:45 AM to 8:45 AM



Two-Hour Count Summaries

Interval Start	Soquel Ave Eastbound				Soquel Ave Westbound				7th Ave Northbound				0 Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	51	2	0	45	84	0	0	7	0	77	0	0	0	0	266	0	
7:15 AM	0	0	80	6	0	47	112	0	0	18	0	85	0	0	0	0	348	0	
7:30 AM	0	0	124	15	0	35	106	0	0	15	0	112	0	0	0	0	407	0	
7:45 AM	0	0	121	18	0	70	132	0	0	43	0	134	0	0	0	0	518	1,539	
8:00 AM	0	0	135	20	0	57	176	0	0	54	0	105	0	0	0	0	547	1,820	
8:15 AM	1	0	138	17	0	54	179	0	0	21	0	101	0	0	0	0	511	1,983	
8:30 AM	0	0	106	16	0	39	110	0	0	24	0	117	0	0	0	0	412	1,988	
8:45 AM	0	0	133	9	1	57	150	0	0	22	0	99	0	0	0	0	471	1,941	
Count Total	1	0	888	103	1	404	1,049	0	0	204	0	830	0	0	0	0	3,480	0	
Peak Hour	All	1	0	500	71	0	220	597	0	0	142	0	457	0	0	0	0	1,988	0
	HV	0	0	19	3	0	9	14	0	0	1	0	4	0	0	0	0	50	0
	HV%	0%	-	4%	4%	-	4%	2%	-	-	1%	-	1%	-	-	-	-	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	1	1	0	4	0	3	1	0	4	0	5	2	1	8
7:15 AM	2	2	2	0	6	0	2	1	0	3	0	4	4	0	8
7:30 AM	2	6	4	0	12	1	0	3	0	4	0	4	6	2	12
7:45 AM	4	2	1	0	7	3	2	1	0	6	0	7	7	2	16
8:00 AM	4	13	3	0	20	2	5	3	0	10	0	16	15	3	34
8:15 AM	11	2	0	0	13	0	1	0	0	1	0	17	18	2	37
8:30 AM	3	6	1	0	10	3	2	0	0	5	0	0	3	1	4
8:45 AM	5	2	1	0	8	1	4	0	0	5	0	1	2	1	4
Count Total	33	34	13	0	80	10	19	9	0	38	0	54	57	12	123
Peak Hr	22	23	5	0	50	8	10	4	0	22	0	40	43	8	91

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Soquel Ave				Soquel Ave				7th Ave				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	4	0
7:15 AM	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	6	0
7:30 AM	0	0	2	0	0	2	4	0	0	0	0	4	0	0	0	0	12	0
7:45 AM	0	0	3	1	0	0	2	0	0	0	0	1	0	0	0	0	7	29
8:00 AM	0	0	4	0	0	8	5	0	0	1	0	2	0	0	0	0	20	45
8:15 AM	0	0	9	2	0	0	2	0	0	0	0	0	0	0	0	0	13	52
8:30 AM	0	0	3	0	0	1	5	0	0	0	0	1	0	0	0	0	10	50
8:45 AM	0	0	2	3	0	1	1	0	0	0	0	1	0	0	0	0	8	51
Count Total	0	0	27	6	0	14	20	0	0	1	0	12	0	0	0	0	80	0
Peak Hour	0	0	19	3	0	9	14	0	0	1	0	4	0	0	0	0	50	0

Two-Hour Count Summaries - Bikes

Interval Start	Soquel Ave			Soquel Ave			7th Ave			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	3	0	0	0	1	0	0	0	4	0
7:15 AM	0	0	0	0	2	0	1	0	0	0	0	0	3	0
7:30 AM	0	1	0	0	0	0	0	0	3	0	0	0	4	0
7:45 AM	0	3	0	0	2	0	1	0	0	0	0	0	6	17
8:00 AM	0	2	0	0	5	0	1	0	2	0	0	0	10	23
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	21
8:30 AM	0	2	1	0	2	0	0	0	0	0	0	0	5	22
8:45 AM	0	1	0	0	4	0	0	0	0	0	0	0	5	21
Count Total	0	9	1	0	19	0	3	0	6	0	0	0	38	0
Peak Hour	0	7	1	0	10	0	2	0	2	0	0	0	22	0

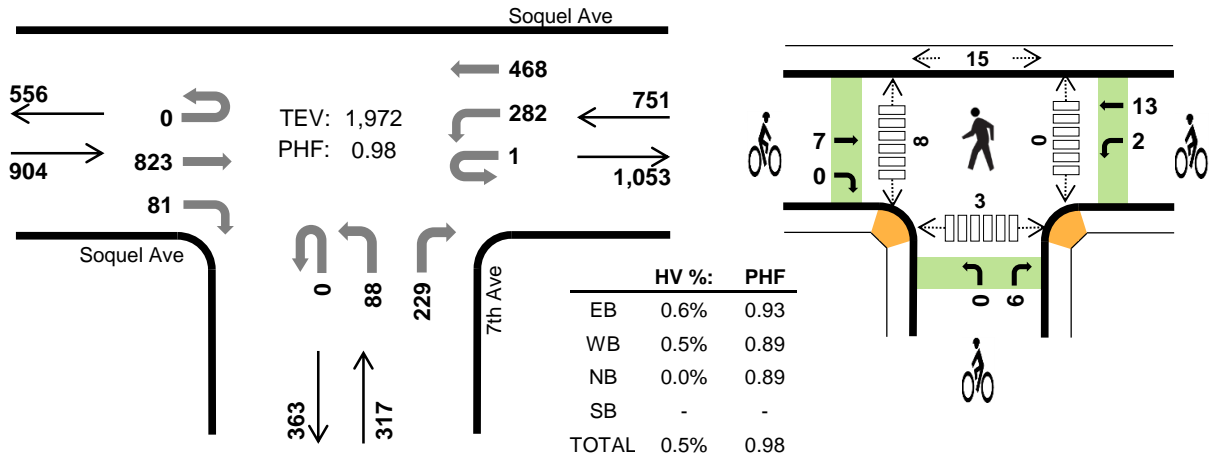
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

7th Ave Soquel Ave



Peak Hour

Date: 11-08-2018
 Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:45 PM to 5:45 PM



Two-Hour Count Summaries

Interval Start	Soquel Ave Eastbound				Soquel Ave Westbound				7th Ave Northbound				0 Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	228	14	0	77	106	0	0	14	0	65	0	0	0	0	504	0	
4:15 PM	0	0	191	14	0	66	129	0	0	19	0	64	0	0	0	0	483	0	
4:30 PM	0	0	217	13	0	67	103	0	0	19	0	53	0	0	0	0	472	0	
4:45 PM	0	0	183	20	0	82	128	0	0	25	0	64	0	0	0	0	502	1,961	
5:00 PM	0	0	206	17	0	83	115	0	0	19	0	58	0	0	0	0	498	1,955	
5:15 PM	0	0	209	25	0	47	112	0	0	15	0	67	0	0	0	0	475	1,947	
5:30 PM	0	0	225	19	1	70	113	0	0	29	0	40	0	0	0	0	497	1,972	
5:45 PM	0	0	232	14	0	67	68	0	0	18	0	50	0	0	0	0	449	1,919	
Count Total	0	0	1,691	136	1	559	874	0	0	158	0	461	0	0	0	0	3,880	0	
Peak Hour	All	0	0	823	81	1	282	468	0	0	88	0	229	0	0	0	0	1,972	0
	HV	0	0	5	0	0	0	4	0	0	0	0	0	0	0	0	0	9	0
	HV%	-	-	1%	0%	0%	0%	1%	-	-	0%	-	0%	-	-	-	-	0%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	5	2	0	8	2	2	0	0	4	0	1	1	0	2
4:15 PM	4	1	1	0	6	1	3	3	0	7	0	2	4	1	7
4:30 PM	3	1	0	0	4	3	0	2	0	5	0	2	6	1	9
4:45 PM	0	2	0	0	2	1	1	1	0	3	0	2	10	2	14
5:00 PM	4	0	0	0	4	1	9	2	0	12	0	0	1	1	2
5:15 PM	0	1	0	0	1	3	3	2	0	8	0	2	1	0	3
5:30 PM	1	1	0	0	2	2	2	1	0	5	0	4	3	0	7
5:45 PM	1	1	0	0	2	1	2	2	0	5	0	6	4	0	10
Count Total	14	12	3	0	29	14	22	13	0	49	0	19	30	5	54
Peak Hr	5	4	0	0	9	7	15	6	0	28	0	8	15	3	26

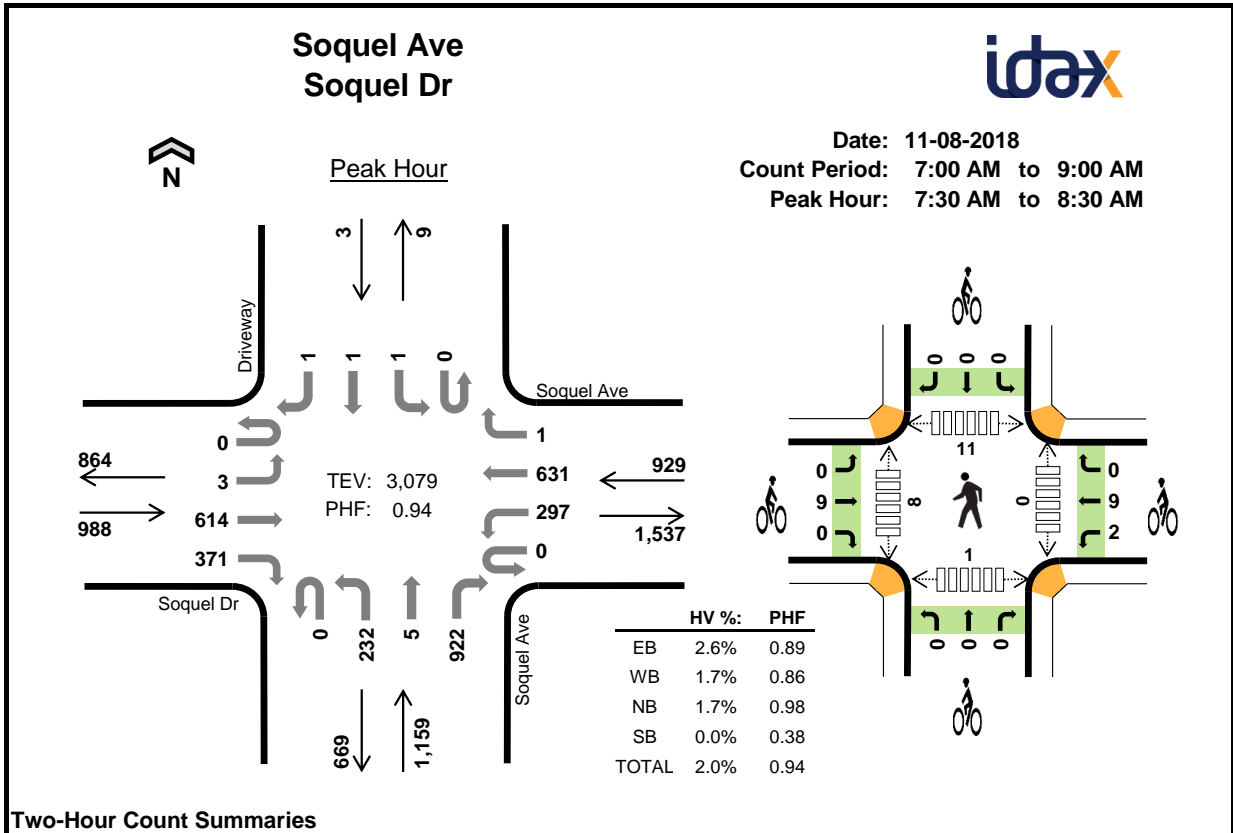
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Soquel Ave				Soquel Ave				7th Ave				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	0	5	0	0	0	0	2	0	0	0	0	8	0
4:15 PM	0	0	4	0	0	0	1	0	0	0	0	1	0	0	0	0	6	0
4:30 PM	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0
4:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	20
5:00 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	16
5:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	11
5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	9
5:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	9
Count Total	0	0	14	0	0	1	11	0	0	0	0	3	0	0	0	0	29	0
Peak Hour	0	0	5	0	0	0	4	0	0	0	0	0	0	0	0	0	9	0

Two-Hour Count Summaries - Bikes

Interval Start	Soquel Ave			Soquel Ave			7th Ave			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	1	0	2	0	0	0	0	0	0	4	0	
4:15 PM	0	1	0	0	3	0	1	0	2	0	0	7	0	
4:30 PM	0	3	0	0	0	0	0	0	2	0	0	5	0	
4:45 PM	0	1	0	0	1	0	0	0	1	0	0	3	19	
5:00 PM	0	1	0	2	7	0	0	0	2	0	0	12	27	
5:15 PM	0	3	0	0	3	0	0	0	2	0	0	8	28	
5:30 PM	0	2	0	0	2	0	0	0	1	0	0	5	28	
5:45 PM	0	1	0	2	0	0	0	0	2	0	0	5	30	
Count Total	0	13	1	4	18	0	1	0	12	0	0	49	0	
Peak Hour	0	7	0	2	13	0	0	0	6	0	0	28	0	

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



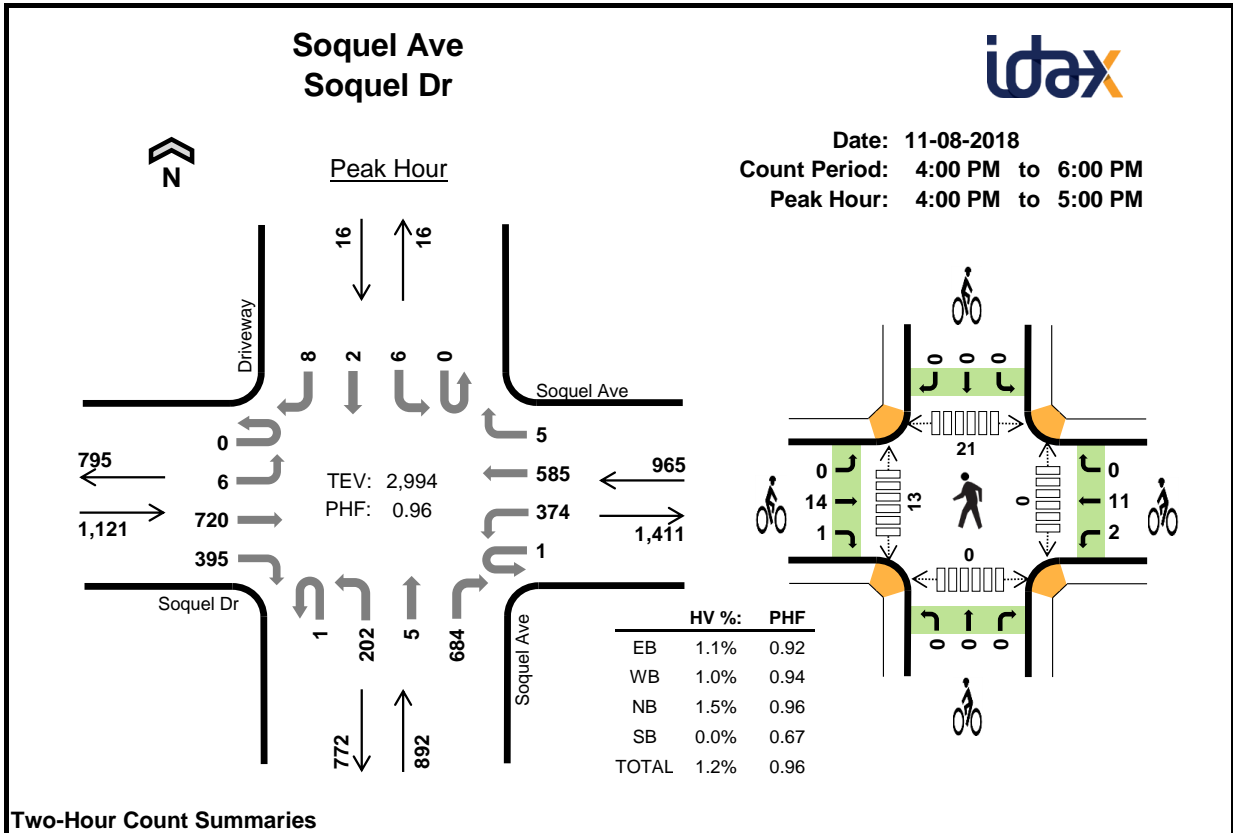
Two-Hour Count Summaries

Interval Start	Soquel Dr				Soquel Ave				Soquel Ave				Driveway				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Westbound		Northbound		Southbound		Southbound		Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	81	53	0	54	99	0	0	42	0	177	0	1	0	0	507	0	
7:15 AM	0	0	108	68	0	47	136	0	0	41	0	180	0	0	0	0	580	0	
7:30 AM	0	0	145	82	0	78	109	0	0	47	0	238	0	0	0	0	699	0	
7:45 AM	0	2	162	115	0	68	160	0	0	55	0	234	0	0	0	0	796	2,582	
8:00 AM	0	1	158	98	0	85	185	0	0	72	1	217	0	0	0	1	818	2,893	
8:15 AM	0	0	149	76	0	66	177	1	0	58	4	233	0	1	1	0	766	3,079	
8:30 AM	0	1	155	105	0	73	108	1	0	47	1	188	0	2	0	2	683	3,063	
8:45 AM	0	2	142	74	0	70	146	0	0	75	0	224	0	0	1	1	735	3,002	
Count Total	0	6	1,100	671	0	541	1,120	2	0	437	6	1,691	0	4	2	4	5,584	0	
Peak Hour	All	0	3	614	371	0	297	631	1	0	232	5	922	0	1	1	1	3,079	0
	HV	0	0	22	4	0	2	14	0	0	11	0	9	0	0	0	0	62	0
	HV%	-	0%	4%	1%	-	1%	2%	0%	-	5%	0%	1%	-	0%	0%	0%	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	2	1	0	6	1	3	0	0	4	0	0	1	0	1
7:15 AM	4	1	2	0	7	0	3	0	0	3	0	2	1	0	3
7:30 AM	5	2	4	0	11	3	1	0	0	4	0	2	1	1	4
7:45 AM	5	2	5	0	12	4	3	0	0	7	0	0	2	0	2
8:00 AM	5	10	7	0	22	2	5	0	0	7	0	2	2	0	4
8:15 AM	11	2	4	0	17	0	2	0	0	2	0	4	6	0	10
8:30 AM	6	7	5	1	19	1	2	0	0	3	0	2	2	0	4
8:45 AM	5	4	3	0	12	1	4	0	0	5	0	4	6	0	10
Count Total	44	30	31	1	106	12	23	0	0	35	0	16	21	1	38
Peak Hour	26	16	20	0	62	9	11	0	0	20	0	8	11	1	20

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Soquel Dr				Soquel Ave				Soquel Ave				Driveway				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	2	1	0	1	1	0	0	1	0	0	0	0	0	0	0	6	0
7:15 AM	0	0	4	0	0	0	1	0	0	1	0	1	0	0	0	0	0	7	0
7:30 AM	0	0	4	1	0	0	2	0	0	4	0	0	0	0	0	0	0	11	0
7:45 AM	0	0	4	1	0	1	1	0	0	2	0	3	0	0	0	0	0	12	36
8:00 AM	0	0	5	0	0	1	9	0	0	4	0	3	0	0	0	0	0	22	52
8:15 AM	0	0	9	2	0	0	2	0	0	1	0	3	0	0	0	0	0	17	62
8:30 AM	0	0	0	6	0	1	5	1	0	0	0	5	0	0	0	1	19	70	
8:45 AM	0	0	3	2	0	2	2	0	0	0	0	3	0	0	0	0	12	70	
Count Total	0	0	31	13	0	6	23	1	0	13	0	18	0	0	0	1	106	0	
Peak Hour	0	0	22	4	0	2	14	0	0	11	0	9	0	0	0	0	62	0	
Two-Hour Count Summaries - Bikes																			
Interval Start	Soquel Dr			Soquel Ave			Soquel Ave			Driveway			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT							
7:00 AM	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	4	0		
7:15 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0		
7:30 AM	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0		
7:45 AM	0	4	0	1	2	0	0	0	0	0	0	0	0	0	0	7	18		
8:00 AM	0	2	0	0	5	0	0	0	0	0	0	0	0	0	0	7	21		
8:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	20		
8:30 AM	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3	19		
8:45 AM	0	1	0	0	4	0	0	0	0	0	0	0	0	0	0	5	17		
Count Total	0	12	0	2	21	0	0	0	0	0	0	0	0	0	0	35	0		
Peak Hour	0	9	0	2	9	0	0	0	0	0	0	0	0	0	0	20	0		
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																			



Two-Hour Count Summaries

Interval Start	Soquel Dr				Soquel Ave				Soquel Ave				Driveway				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT		LT		TH		RT				
4:00 PM	0	1	207	98	1	85	144	1	1	41	1	190	0	2	1	3	776	0	
4:15 PM	0	1	167	112	0	93	145	2	0	64	1	167	0	1	0	1	754	0	
4:30 PM	0	1	168	101	0	100	135	1	0	41	3	158	0	1	1	2	712	0	
4:45 PM	0	3	178	84	0	96	161	1	0	56	0	169	0	2	0	2	752	2,994	
5:00 PM	0	0	156	111	0	91	150	1	0	44	2	182	0	0	2	1	740	2,958	
5:15 PM	1	1	170	111	0	79	118	3	0	36	1	134	0	0	1	1	656	2,860	
5:30 PM	1	2	169	114	0	85	138	3	0	45	2	167	0	1	3	2	732	2,880	
5:45 PM	0	3	176	105	1	51	107	1	0	33	1	148	0	1	0	1	628	2,756	
Count Total	2	12	1,391	836	2	680	1,098	13	1	360	11	1,315	0	8	8	13	5,750	0	
Peak Hour	All	0	6	720	395	1	374	585	5	1	202	5	684	0	6	2	8	2,994	0
	HV	0	0	9	3	1	2	7	0	0	3	0	10	0	0	0	0	35	0
	HV%	-	0%	1%	1%	100%	1%	1%	0%	0%	1%	0%	1%	-	0%	0%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	5	6	0	15	2	2	0	0	4	0	1	3	0	4
4:15 PM	5	1	2	0	8	5	3	0	0	8	0	2	2	0	4
4:30 PM	2	3	2	0	7	4	3	0	0	7	0	1	5	0	6
4:45 PM	1	1	3	0	5	4	5	0	0	9	0	9	11	0	20
5:00 PM	4	0	2	0	6	3	11	0	0	14	0	0	0	0	0
5:15 PM	0	2	2	0	4	5	1	1	0	7	0	2	2	0	4
5:30 PM	1	1	1	0	3	4	2	1	0	7	0	0	6	0	6
5:45 PM	1	1	0	0	2	3	1	0	0	4	0	1	1	0	2
Count Total	18	14	18	0	50	30	28	2	0	60	0	16	30	0	46
Peak Hour	12	10	13	0	35	15	13	0	0	28	0	13	21	0	34

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Soquel Dr				Soquel Ave				Soquel Ave				Driveway				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	3	1	1	0	4	0	0	1	0	5	0	0	0	0	15	0
4:15 PM	0	0	3	2	0	0	1	0	0	0	0	2	0	0	0	0	8	0
4:30 PM	0	0	2	0	0	2	1	0	0	1	0	1	0	0	0	0	7	0
4:45 PM	0	0	1	0	0	0	1	0	0	1	0	2	0	0	0	0	5	35
5:00 PM	0	0	2	2	0	0	0	0	0	0	0	2	0	0	0	0	6	26
5:15 PM	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	4	22
5:30 PM	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	3	18
5:45 PM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	15
Count Total	0	0	12	6	1	4	9	0	0	4	0	14	0	0	0	0	50	0
Peak Hour	0	0	9	3	1	2	7	0	0	3	0	10	0	0	0	0	35	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Soquel Dr			Soquel Ave			Soquel Ave			Driveway			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4	0			
4:15 PM	0	5	0	0	3	0	0	0	0	0	0	0	8	0			
4:30 PM	0	3	1	0	3	0	0	0	0	0	0	0	7	0			
4:45 PM	0	4	0	2	3	0	0	0	0	0	0	0	9	28			
5:00 PM	0	3	0	1	10	0	0	0	0	0	0	0	14	38			
5:15 PM	0	5	0	0	1	0	1	0	0	0	0	0	7	37			
5:30 PM	0	3	1	0	2	0	0	0	1	0	0	0	7	37			
5:45 PM	0	3	0	0	1	0	0	0	0	0	0	0	4	32			
Count Total	0	28	2	3	25	0	1	0	1	0	0	0	60	0			
Peak Hour	0	14	1	2	11	0	0	0	0	0	0	0	28	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix C

Intersection
Level of Service
Calculations

Existing
Conditions

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	13	363	565	28	23	30
Future Vol, veh/h	13	363	565	28	23	30
Conflicting Peds, #/hr	15	0	0	15	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	25	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	382	595	29	24	32

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	639	0	-	0	1020 620
Stage 1	-	-	-	-	610 -
Stage 2	-	-	-	-	410 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	945	-	-	-	262 488
Stage 1	-	-	-	-	542 -
Stage 2	-	-	-	-	670 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	932	-	-	-	251 476
Mov Cap-2 Maneuver	-	-	-	-	377 -
Stage 1	-	-	-	-	526 -
Stage 2	-	-	-	-	661 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	932	-	-	-	427
HCM Lane V/C Ratio	0.015	-	-	-	0.131
HCM Control Delay (s)	8.9	-	-	-	14.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	386	586	19	9	7
Future Vol, veh/h	0	386	586	19	9	7
Conflicting Peds, #/hr	18	0	0	18	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	25	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	406	617	20	9	7

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	655	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	932	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	916	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	916	-	-	-	310
HCM Lane V/C Ratio	-	-	-	-	0.054
HCM Control Delay (s)	0	-	-	-	17.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Existing AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	244	100	64	397	64	139	363	54	59	268	65
Future Volume (veh/h)	36	244	100	64	397	64	139	363	54	59	268	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	246	101	65	401	65	140	367	55	60	271	66
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	482	191	101	655	105	178	586	88	97	470	114
Arrive On Green	0.04	0.20	0.20	0.06	0.21	0.21	0.10	0.37	0.37	0.05	0.32	0.32
Sat Flow, veh/h	1781	2460	976	1781	3050	490	1781	1584	237	1781	1449	353
Grp Volume(v), veh/h	36	175	172	65	232	234	140	0	422	60	0	337
Grp Sat Flow(s),veh/h/ln	1781	1777	1658	1781	1777	1763	1781	0	1821	1781	0	1801
Q Serve(g_s), s	1.1	4.9	5.2	2.0	6.6	6.7	4.3	0.0	10.6	1.8	0.0	8.7
Cycle Q Clear(g_c), s	1.1	4.9	5.2	2.0	6.6	6.7	4.3	0.0	10.6	1.8	0.0	8.7
Prop In Lane	1.00		0.59	1.00		0.28	1.00		0.13	1.00		0.20
Lane Grp Cap(c), veh/h	68	349	325	101	382	378	178	0	674	97	0	585
V/C Ratio(X)	0.53	0.50	0.53	0.64	0.61	0.62	0.79	0.00	0.63	0.62	0.00	0.58
Avail Cap(c_a), veh/h	160	573	535	160	573	569	188	0	674	160	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	20.0	20.1	25.7	19.8	19.8	24.5	0.0	14.4	25.8	0.0	15.7
Incr Delay (d2), s/veh	6.2	1.1	1.3	6.6	1.6	1.6	18.8	0.0	4.4	6.4	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.0	2.0	1.0	2.6	2.7	2.6	0.0	4.6	0.9	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	21.1	21.4	32.3	21.4	21.5	43.3	0.0	18.8	32.2	0.0	19.8
LnGrp LOS	C	C	C	C	C	C	D	A	B	C	A	B
Approach Vol, veh/h		383			531			562				397
Approach Delay, s/veh		22.3			22.8			24.9				21.6
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	25.1	7.7	15.4	10.1	22.6	6.6	16.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.9	18.1	5.0	18.0				
Max Q Clear Time (g_c+I1), s	3.8	12.6	4.0	7.2	6.3	10.7	3.1	8.7				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.5	0.0	1.2	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

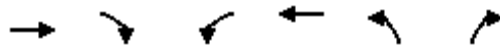
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	277	56	68	423	135	69	119	57	71	95	34
Future Volume (veh/h)	18	277	56	68	423	135	69	119	57	71	95	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	19	289	58	71	441	141	72	124	59	74	99	35
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	651	128	106	687	217	107	402	191	108	443	156
Arrive On Green	0.02	0.22	0.22	0.06	0.26	0.26	0.06	0.34	0.34	0.06	0.34	0.34
Sat Flow, veh/h	1781	2903	569	1781	2632	832	1781	1195	568	1781	1313	464
Grp Volume(v), veh/h	19	174	173	71	296	286	72	0	183	74	0	134
Grp Sat Flow(s),veh/h/ln	1781	1777	1695	1781	1777	1687	1781	0	1763	1781	0	1778
Q Serve(g_s), s	0.6	4.8	5.0	2.2	8.3	8.5	2.2	0.0	4.3	2.3	0.0	3.0
Cycle Q Clear(g_c), s	0.6	4.8	5.0	2.2	8.3	8.5	2.2	0.0	4.3	2.3	0.0	3.0
Prop In Lane	1.00		0.34	1.00		0.49	1.00		0.32	1.00		0.26
Lane Grp Cap(c), veh/h	41	399	380	106	464	440	107	0	593	108	0	599
V/C Ratio(X)	0.47	0.44	0.45	0.67	0.64	0.65	0.67	0.00	0.31	0.68	0.00	0.22
Avail Cap(c_a), veh/h	158	567	541	158	567	539	158	0	593	174	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.2	18.8	18.9	26.0	18.5	18.5	26.0	0.0	13.9	25.9	0.0	13.4
Incr Delay (d2), s/veh	8.1	0.8	0.8	7.1	1.7	2.0	7.2	0.0	1.4	7.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.9	1.9	1.1	3.3	3.2	1.1	0.0	1.8	1.1	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	19.6	19.7	33.1	20.2	20.5	33.1	0.0	15.2	33.3	0.0	14.3
LnGrp LOS	D	B	B	C	C	C	C	A	B	C	A	B
Approach Vol, veh/h		366			653			255			208	
Approach Delay, s/veh		20.5			21.7			20.3			21.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	23.5	7.9	17.1	7.9	23.5	5.8	19.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.3	6.3	4.2	7.0	4.2	5.0	2.6	10.5				
Green Ext Time (p_c), s	0.0	0.7	0.0	1.5	0.0	0.5	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay				21.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

5: 17th Ave & Soquel Ave

Existing AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖↗	↗
Traffic Volume (veh/h)	255	281	64	311	411	49
Future Volume (veh/h)	255	281	64	311	411	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	274	302	69	334	491	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	433	998	115	742	1433	648
Arrive On Green	0.23	0.23	0.06	0.40	0.40	0.00
Sat Flow, veh/h	1870	1554	1781	1870	3563	1610
Grp Volume(v), veh/h	274	302	69	334	491	0
Grp Sat Flow(s),veh/h/ln	1870	1554	1781	1870	1781	1610
Q Serve(g_s), s	5.9	4.0	1.7	5.9	4.3	0.0
Cycle Q Clear(g_c), s	5.9	4.0	1.7	5.9	4.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	433	998	115	742	1433	648
V/C Ratio(X)	0.63	0.30	0.60	0.45	0.34	0.00
Avail Cap(c_a), veh/h	752	1263	219	1170	1433	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.5	3.7	20.4	9.9	9.3	0.0
Incr Delay (d2), s/veh	1.5	0.2	5.0	0.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.5	0.8	2.0	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.0	3.9	25.4	10.3	9.9	0.0
LnGrp LOS	B	A	C	B	A	A
Approach Vol, veh/h	576			403	491	
Approach Delay, s/veh	10.1			12.9	9.9	
Approach LOS	B			B	A	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.4	14.9		22.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.5	18.0		28.0
Max Q Clear Time (g_c+I1), s		6.3	3.7	7.9		7.9
Green Ext Time (p_c), s		1.5	0.0	2.0		1.9

Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	4	5	12	552	425	5
Future Vol, veh/h	4	5	12	552	425	5
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	5	13	607	467	5

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1116	483	485	0	0
Stage 1	483	-	-	-	-
Stage 2	633	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	230	584	1078	-	-
Stage 1	620	-	-	-	-
Stage 2	529	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	222	577	1065	-	-
Mov Cap-2 Maneuver	353	-	-	-	-
Stage 1	605	-	-	-	-
Stage 2	523	-	-	-	-






















Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1065	-	450	-	-
HCM Lane V/C Ratio	0.012	-	0.022	-	-
HCM Control Delay (s)	8.4	-	13.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th Signalized Intersection Summary

7: 17th Ave & Brommer St

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	114	91	113	190	31	104	476	73	27	315	32
Future Volume (veh/h)	35	114	91	113	190	31	104	476	73	27	315	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.91	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	130	103	128	216	35	118	541	83	31	358	36
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	191	151	161	397	64	150	677	104	57	627	63
Arrive On Green	0.04	0.20	0.20	0.09	0.26	0.26	0.08	0.43	0.43	0.03	0.38	0.38
Sat Flow, veh/h	1767	934	740	1781	1547	251	1781	1576	242	1781	1663	167
Grp Volume(v), veh/h	40	0	233	128	0	251	118	0	624	31	0	394
Grp Sat Flow(s),veh/h/ln	1767	0	1675	1781	0	1798	1781	0	1817	1781	0	1830
Q Serve(g_s), s	1.6	0.0	9.5	5.2	0.0	8.9	4.8	0.0	22.0	1.3	0.0	12.6
Cycle Q Clear(g_c), s	1.6	0.0	9.5	5.2	0.0	8.9	4.8	0.0	22.0	1.3	0.0	12.6
Prop In Lane	1.00		0.44	1.00		0.14	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	67	0	342	161	0	461	150	0	781	57	0	690
V/C Ratio(X)	0.60	0.00	0.68	0.79	0.00	0.54	0.78	0.00	0.80	0.55	0.00	0.57
Avail Cap(c_a), veh/h	137	0	409	181	0	483	210	0	781	123	0	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	27.1	32.9	0.0	23.7	33.1	0.0	18.3	35.2	0.0	18.2
Incr Delay (d2), s/veh	8.2	0.0	3.6	19.2	0.0	1.1	12.1	0.0	8.4	7.9	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	4.0	3.0	0.0	3.8	2.5	0.0	10.2	0.7	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	30.7	52.1	0.0	24.8	45.2	0.0	26.7	43.1	0.0	21.7
LnGrp LOS	D	A	C	D	A	C	D	A	C	D	A	C
Approach Vol, veh/h		273			379			742			425	
Approach Delay, s/veh		32.5			34.0			29.6			23.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	36.2	11.2	19.5	10.7	32.3	7.3	23.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	31.4	7.5	18.0	8.7	27.8	5.7	19.8				
Max Q Clear Time (g_c+I1), s	3.3	24.0	7.2	11.5	6.8	14.6	3.6	10.9				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.7	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			29.5									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Existing AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	147	99	25	349	126	83	58	13	84	69	123
Future Volume (veh/h)	92	147	99	25	349	126	83	58	13	84	69	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	155	0	26	367	0	87	61	14	88	73	129
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	538		52	462		115	460	105	115	188	332
Arrive On Green	0.07	0.29	0.00	0.03	0.25	0.00	0.06	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1466	337	1781	599	1059
Grp Volume(v), veh/h	97	155	0	26	367	0	87	0	75	88	0	202
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1803	1781	0	1658
Q Serve(g_s), s	3.2	3.8	0.0	0.8	10.8	0.0	2.8	0.0	1.8	2.9	0.0	5.6
Cycle Q Clear(g_c), s	3.2	3.8	0.0	0.8	10.8	0.0	2.8	0.0	1.8	2.9	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.64
Lane Grp Cap(c), veh/h	124	538		52	462		115	0	565	115	0	520
V/C Ratio(X)	0.78	0.29		0.50	0.79		0.76	0.00	0.13	0.76	0.00	0.39
Avail Cap(c_a), veh/h	166	586		151	570		151	0	565	151	0	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	16.3	0.0	28.2	20.8	0.0	27.2	0.0	14.5	27.2	0.0	15.8
Incr Delay (d2), s/veh	15.6	0.3	0.0	7.1	6.2	0.0	14.6	0.0	0.5	15.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.5	0.0	0.4	5.1	0.0	1.6	0.0	0.7	1.6	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	16.6	0.0	35.3	27.0	0.0	41.8	0.0	15.0	42.4	0.0	18.0
LnGrp LOS	D	B		D	C		D	A	B	D	A	B
Approach Vol, veh/h		252	A		393	A		162			290	
Approach Delay, s/veh		26.6			27.6			29.4			25.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	23.0	6.2	21.5	8.3	23.0	8.6	19.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	4.9	3.8	2.8	5.8	4.8	7.6	5.2	12.8				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.6	0.0	0.8	0.0	1.0				

Intersection Summary

HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: 7th Ave & Capitola Rd

Existing AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	258	129	49	487	102	184	301	46	64	173	30
Future Volume (veh/h)	7	258	129	49	487	102	184	301	46	64	173	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	7	269	134	51	507	106	192	314	48	67	180	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	16	728	322	87	712	148	174	632	529	157	505	87
Arrive On Green	0.01	0.20	0.20	0.05	0.24	0.24	0.10	0.34	0.34	0.09	0.33	0.33
Sat Flow, veh/h	1781	3554	1573	1781	2913	606	1781	1870	1567	1767	1537	265
Grp Volume(v), veh/h	7	269	134	51	308	305	192	314	48	67	0	211
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1742	1781	1870	1567	1767	0	1802
Q Serve(g_s), s	0.2	3.7	4.2	1.6	8.9	9.0	5.5	7.5	0.8	2.0	0.0	5.0
Cycle Q Clear(g_c), s	0.2	3.7	4.2	1.6	8.9	9.0	5.5	7.5	0.8	2.0	0.0	5.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	16	728	322	87	434	426	174	632	529	157	0	592
V/C Ratio(X)	0.43	0.37	0.42	0.59	0.71	0.72	1.10	0.50	0.09	0.43	0.00	0.36
Avail Cap(c_a), veh/h	158	1137	503	158	568	557	174	632	529	157	0	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.7	19.2	19.4	26.2	19.4	19.5	25.4	14.8	6.0	24.3	0.0	14.4
Incr Delay (d2), s/veh	16.6	0.3	0.9	6.1	2.8	3.0	98.4	2.8	0.3	1.8	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	1.5	0.8	3.7	3.7	6.9	3.3	0.4	0.9	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.3	19.6	20.3	32.3	22.2	22.5	123.8	17.6	6.3	26.1	0.0	16.0
LnGrp LOS	D	B	C	C	C	C	F	B	A	C	A	B
Approach Vol, veh/h		410			664			554			278	
Approach Delay, s/veh		20.2			23.1			53.4			18.5	
Approach LOS		C			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	7.2	16.0	10.0	23.0	5.0	18.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.0	9.5	3.6	6.2	7.5	7.0	2.2	11.0				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.7	0.0	0.8	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			30.6									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	14.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	6	6	9	194	6	153	15	256	107	101	191	9
Future Vol, veh/h	6	6	9	194	6	153	15	256	107	101	191	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	5	5	5	2	2	2	3	3	3	4	4	4
Mvmt Flow	6	6	9	204	6	161	16	269	113	106	201	9
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10.1	12.9	16.6	14.8
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	4%	29%	97%	0%	34%
Vol Thru, %	68%	29%	3%	0%	63%
Vol Right, %	28%	43%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	378	21	200	153	301
LT Vol	15	6	194	0	101
Through Vol	256	6	6	0	191
RT Vol	107	9	0	153	9
Lane Flow Rate	398	22	211	161	317
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.604	0.041	0.41	0.26	0.51
Departure Headway (Hd)	5.466	6.685	7.012	5.804	5.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	657	531	512	617	618
Service Time	3.519	4.779	4.768	3.561	3.857
HCM Lane V/C Ratio	0.606	0.041	0.412	0.261	0.513
HCM Control Delay	16.6	10.1	14.6	10.6	14.8
HCM Lane LOS	C	B	B	B	B
HCM 95th-tile Q	4.1	0.1	2	1	2.9

HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	539	293	64	526	73	567	19	85	21	9	24
Future Volume (veh/h)	20	539	293	64	526	73	567	19	85	21	9	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	23	627	0	74	612	85	675	0	0	24	10	28
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	2	2	2
Cap, veh/h	45	767		95	762	106	934	0		297	124	370
Arrive On Green	0.03	0.22	0.00	0.05	0.24	0.24	0.26	0.00	0.00	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	3122	433	3534	0	1572	1275	531	1585
Grp Volume(v), veh/h	23	627	0	74	348	349	675	0	0	34	0	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1777	1767	0	1572	1807	0	1585
Q Serve(g_s), s	1.0	13.0	0.0	3.2	14.2	14.3	13.4	0.0	0.0	1.1	0.0	1.1
Cycle Q Clear(g_c), s	1.0	13.0	0.0	3.2	14.2	14.3	13.4	0.0	0.0	1.1	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	45	767		95	434	434	934	0		421	0	370
V/C Ratio(X)	0.51	0.82		0.78	0.80	0.81	0.72	0.00		0.08	0.00	0.08
Avail Cap(c_a), veh/h	118	833		127	434	434	934	0		421	0	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.1	28.8	0.0	36.1	27.4	27.4	25.8	0.0	0.0	23.1	0.0	23.1
Incr Delay (d2), s/veh	8.7	6.0	0.0	19.4	10.4	10.6	4.8	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.9	0.0	1.9	7.0	7.1	6.0	0.0	0.0	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	34.8	0.0	55.5	37.8	38.1	30.6	0.0	0.0	23.5	0.0	23.5
LnGrp LOS	D	C		E	D	D	C	A		C	A	C
Approach Vol, veh/h		650	A		771			675	A		62	
Approach Delay, s/veh		35.2			39.6			30.6			23.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.9	8.6	21.2		22.5	6.4	23.3				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.4	5.5	18.1		18.0	5.1	18.5				
Max Q Clear Time (g_c+I1), s		15.4	5.2	15.0		3.1	3.0	16.3				
Green Ext Time (p_c), s		1.3	0.0	1.2		0.1	0.0	1.0				

Intersection Summary



















HCM 6th Ctrl Delay	35.0
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
12: 7th Ave & Soquel Ave

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	500	71	220	597	0	142	0	457	0	0	0
Future Volume (veh/h)	0	500	71	220	597	0	142	0	457	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1856	1856	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	549	78	242	656	0	156	0	502	0	0	0
Peak Hour Factor	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	3	3	0	2	2	2	2	2	2
Cap, veh/h	0	772	109	294	1768	0	587	0	508	0	621	0
Arrive On Green	0.00	0.25	0.25	0.17	0.50	0.00	0.33	0.00	0.33	0.00	0.00	0.00
Sat Flow, veh/h	0	3154	433	1767	3618	0	1366	0	1528	0	1870	0
Grp Volume(v), veh/h	0	313	314	242	656	0	156	0	502	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1749	1747	1767	1763	0	1366	0	1528	0	1870	0
Q Serve(g_s), s	0.0	8.8	8.9	7.2	6.2	0.0	4.7	0.0	17.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.8	8.9	7.2	6.2	0.0	4.7	0.0	17.7	0.0	0.0	0.0
Prop In Lane	0.00		0.25	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	441	440	294	1768	0	587	0	508	0	621	0
V/C Ratio(X)	0.00	0.71	0.71	0.82	0.37	0.00	0.27	0.00	0.99	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	581	580	343	2148	0	587	0	508	0	621	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.5	18.5	21.8	8.3	0.0	13.6	0.0	18.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.7	2.8	13.1	0.1	0.0	1.1	0.0	37.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	3.6	3.8	1.9	0.0	1.4	0.0	10.6	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.1	21.3	34.9	8.4	0.0	14.7	0.0	55.3	0.0	0.0	0.0
LnGrp LOS	A	C	C	C	A	A	B	A	E	A	A	A
Approach Vol, veh/h		627			898			658				0
Approach Delay, s/veh		21.2			15.5			45.7				0.0
Approach LOS		C			B			D				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	13.5	18.2		22.5		31.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		19.7	9.2	10.9		0.0		8.2				
Green Ext Time (p_c), s		0.0	0.1	2.2		0.0		4.8				
Intersection Summary												
HCM 6th Ctrl Delay				26.3								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑			↑	↗		↕	
Traffic Volume (veh/h)	3	614	371	297	631	1	232	5	922	1	1	1
Future Volume (veh/h)	3	614	371	297	631	1	232	5	922	1	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	653	0	316	671	1	247	5	981	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	804		384	1601	2	351	5	851	83	80	40
Arrive On Green	0.00	0.23	0.00	0.22	0.44	0.44	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1767	3526	1572	1781	3641	5	707	14	1585	0	248	124
Grp Volume(v), veh/h	3	653	0	316	327	345	252	0	981	3	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1869	721	0	1585	371	0	0
Q Serve(g_s), s	0.1	10.1	0.0	9.7	7.3	7.3	0.0	0.0	18.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	10.1	0.0	9.7	7.3	7.3	18.5	0.0	18.5	18.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.98		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	7	804		384	781	822	356	0	851	203	0	0
V/C Ratio(X)	0.42	0.81		0.82	0.42	0.42	0.71	0.00	1.15	0.01	0.00	0.00
Avail Cap(c_a), veh/h	154	889		728	1019	1072	356	0	851	203	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.6	21.0	0.0	21.5	11.1	11.1	20.3	0.0	13.3	15.1	0.0	0.0
Incr Delay (d2), s/veh	34.3	5.3	0.0	4.5	0.4	0.3	11.3	0.0	81.8	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.4	0.0	4.2	2.5	2.6	4.2	0.0	27.6	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.8	26.3	0.0	26.0	11.4	11.4	31.6	0.0	95.1	15.2	0.0	0.0
LnGrp LOS	E	C		C	B	B	C	A	F	B	A	A
Approach Vol, veh/h		656	A		988			1233				3
Approach Delay, s/veh		26.5			16.1			82.2				15.2
Approach LOS		C			B			F				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	16.9	17.6		23.0	4.7	29.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	23.5	14.5		18.5	5.0	33.0				
Max Q Clear Time (g_c+I1), s		20.5	11.7	12.1		20.5	2.1	9.3				
Green Ext Time (p_c), s		0.0	0.8	1.0		0.0	0.0	4.3				

Intersection Summary

HCM 6th Ctrl Delay	46.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↘
Traffic Vol, veh/h	20	902	488	18	12	22
Future Vol, veh/h	20	902	488	18	12	22
Conflicting Peds, #/hr	20	0	0	20	0	8
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	25	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	960	519	19	13	23

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	558	0	-	0	1541 547
Stage 1	-	-	-	-	539 -
Stage 2	-	-	-	-	1002 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1013	-	-	-	127 537
Stage 1	-	-	-	-	585 -
Stage 2	-	-	-	-	355 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	994	-	-	-	120 523
Mov Cap-2 Maneuver	-	-	-	-	238 -
Stage 1	-	-	-	-	562 -
Stage 2	-	-	-	-	348 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	994	-	-	-	368
HCM Lane V/C Ratio	0.021	-	-	-	0.098
HCM Control Delay (s)	8.7	-	-	-	15.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	
Traffic Vol, veh/h	0	914	498	14	14	8
Future Vol, veh/h	0	914	498	14	14	8
Conflicting Peds, #/hr	25	0	0	25	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	25	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	5	5
Mvmt Flow	0	972	530	15	15	9

























Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	570	0	-	0	1529 555
Stage 1	-	-	-	-	555 -
Stage 2	-	-	-	-	974 -
Critical Hdwy	4.12	-	-	-	6.45 6.25
Critical Hdwy Stg 1	-	-	-	-	5.45 -
Critical Hdwy Stg 2	-	-	-	-	5.45 -
Follow-up Hdwy	2.218	-	-	-	3.545 3.345
Pot Cap-1 Maneuver	1002	-	-	-	127 526
Stage 1	-	-	-	-	569 -
Stage 2	-	-	-	-	361 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	978	-	-	-	121 513
Mov Cap-2 Maneuver	-	-	-	-	121 -
Stage 1	-	-	-	-	555 -
Stage 2	-	-	-	-	352 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	29.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	978	-	-	-	168
HCM Lane V/C Ratio	-	-	-	-	0.139
HCM Control Delay (s)	0	-	-	-	29.9
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.5

HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd





















Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	26	702	112	103	381	43	81	215	77	200	367	26
Future Volume (veh/h)	26	702	112	103	381	43	81	215	77	200	367	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	739	118	108	401	45	85	226	81	211	386	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	847	135	137	1048	117	109	350	125	252	600	42
Arrive On Green	0.03	0.28	0.28	0.08	0.33	0.33	0.06	0.27	0.27	0.14	0.35	0.35
Sat Flow, veh/h	1781	3057	488	1781	3218	359	1781	1309	469	1781	1727	121
Grp Volume(v), veh/h	27	429	428	108	220	226	85	0	307	211	0	413
Grp Sat Flow(s),veh/h/ln	1781	1777	1768	1781	1777	1800	1781	0	1778	1781	0	1848
Q Serve(g_s), s	1.1	17.5	17.5	4.5	7.2	7.3	3.6	0.0	11.6	8.8	0.0	14.3
Cycle Q Clear(g_c), s	1.1	17.5	17.5	4.5	7.2	7.3	3.6	0.0	11.6	8.8	0.0	14.3
Prop In Lane	1.00		0.28	1.00		0.20	1.00		0.26	1.00		0.07
Lane Grp Cap(c), veh/h	51	492	490	137	579	586	109	0	475	252	0	642
V/C Ratio(X)	0.53	0.87	0.87	0.79	0.38	0.38	0.78	0.00	0.65	0.84	0.00	0.64
Avail Cap(c_a), veh/h	129	526	524	157	579	586	157	0	475	293	0	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	26.2	26.2	34.4	19.7	19.7	35.1	0.0	24.6	31.8	0.0	20.8
Incr Delay (d2), s/veh	8.3	14.2	14.3	20.3	0.4	0.4	14.2	0.0	6.6	16.8	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	8.9	8.9	2.7	2.9	3.0	1.9	0.0	5.5	4.8	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.7	40.4	40.5	54.7	20.1	20.2	49.3	0.0	31.3	48.6	0.0	25.7
LnGrp LOS	D	D	D	D	C	C	D	A	C	D	A	C
Approach Vol, veh/h		884			554			392			624	
Approach Delay, s/veh		40.6			26.9			35.2			33.5	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.2	24.8	10.4	25.5	9.2	30.9	6.7	29.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	20.3	6.7	22.5	6.7	26.1	5.5	23.7				
Max Q Clear Time (g_c+I1), s	10.8	13.6	6.5	19.5	5.6	16.3	3.1	9.3				
Green Ext Time (p_c), s	0.1	1.0	0.0	1.5	0.0	1.8	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			34.8									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

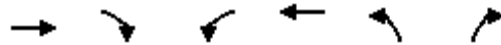
4: Chanticleer Ave & Capitola Rd

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	992	52	48	460	63	27	44	55	236	150	33
Future Volume (veh/h)	20	992	52	48	460	63	27	44	55	236	150	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	1023	54	49	474	65	28	45	57	243	155	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	1096	58	75	1063	145	52	184	234	282	559	123
Arrive On Green	0.02	0.32	0.32	0.04	0.34	0.34	0.03	0.25	0.25	0.16	0.38	0.38
Sat Flow, veh/h	1781	3421	181	1781	3135	428	1781	743	941	1781	1484	325
Grp Volume(v), veh/h	21	531	546	49	268	271	28	0	102	243	0	189
Grp Sat Flow(s),veh/h/ln	1781	1777	1824	1781	1777	1786	1781	0	1685	1781	0	1809
Q Serve(g_s), s	0.9	22.5	22.6	2.1	9.1	9.2	1.2	0.0	3.8	10.3	0.0	5.7
Cycle Q Clear(g_c), s	0.9	22.5	22.6	2.1	9.1	9.2	1.2	0.0	3.8	10.3	0.0	5.7
Prop In Lane	1.00		0.10	1.00		0.24	1.00		0.56	1.00		0.18
Lane Grp Cap(c), veh/h	42	569	585	75	602	605	52	0	418	282	0	682
V/C Ratio(X)	0.50	0.93	0.93	0.66	0.44	0.45	0.54	0.00	0.24	0.86	0.00	0.28
Avail Cap(c_a), veh/h	115	573	589	117	602	605	126	0	418	286	0	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.5	25.6	25.6	36.7	20.0	20.0	37.2	0.0	23.4	31.9	0.0	16.9
Incr Delay (d2), s/veh	9.1	22.4	22.0	9.3	0.5	0.5	8.4	0.0	1.4	22.5	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	12.5	12.8	1.1	3.7	3.7	0.6	0.0	1.6	6.1	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.6	48.0	47.6	46.0	20.5	20.6	45.6	0.0	24.8	54.5	0.0	17.9
LnGrp LOS	D	D	D	D	C	C	D	A	C	D	A	B
Approach Vol, veh/h		1098			588			130				432
Approach Delay, s/veh		47.8			22.7			29.3				38.5
Approach LOS		D			C			C				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	23.8	7.8	29.4	6.8	33.8	6.3	30.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	19.3	5.1	25.1	5.5	26.3	5.0	25.2				
Max Q Clear Time (g_c+I1), s	12.3	5.8	4.1	24.6	3.2	7.7	2.9	11.2				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.4	0.0	0.9	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay				38.4								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
5: 17th Ave & Soquel Ave

Existing PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖↗	↗
Traffic Volume (veh/h)	602	510	53	218	259	42
Future Volume (veh/h)	602	510	53	218	259	42
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	614	520	54	222	304	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	717	1114	91	963	1152	520
Arrive On Green	0.38	0.38	0.05	0.52	0.32	0.00
Sat Flow, veh/h	1870	1569	1781	1870	3563	1610
Grp Volume(v), veh/h	614	520	54	222	304	0
Grp Sat Flow(s),veh/h/ln	1870	1569	1781	1870	1781	1610
Q Serve(g_s), s	16.8	8.1	1.7	3.6	3.5	0.0
Cycle Q Clear(g_c), s	16.8	8.1	1.7	3.6	3.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	717	1114	91	963	1152	520
V/C Ratio(X)	0.86	0.47	0.60	0.23	0.26	0.00
Avail Cap(c_a), veh/h	789	1174	160	1108	1152	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	3.6	25.9	7.4	13.9	0.0
Incr Delay (d2), s/veh	8.6	0.3	6.1	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	5.3	0.8	1.2	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.3	3.9	32.0	7.5	14.5	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	1134			276	304	
Approach Delay, s/veh	15.0			12.3	14.5	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.3	25.9		33.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.0	23.5		33.0
Max Q Clear Time (g_c+I1), s		5.5	3.7	18.8		5.6
Green Ext Time (p_c), s		0.8	0.0	2.6		1.3

Intersection Summary

HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	30	12	385	552	16
Future Vol, veh/h	7	30	12	385	552	16
Conflicting Peds, #/hr	0	0	8	0	0	8
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	32	13	414	594	17






















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1051	611	619	0	-	0
Stage 1	611	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	251	494	961	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	243	490	954	-	-	-
Mov Cap-2 Maneuver	373	-	-	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	644	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	954	-	463	-	-
HCM Lane V/C Ratio	0.014	-	0.086	-	-
HCM Control Delay (s)	8.8	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	289	122	109	162	30	59	327	109	58	427	48
Future Volume (veh/h)	40	289	122	109	162	30	59	327	109	58	427	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	298	126	112	167	31	61	337	112	60	440	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	328	139	142	473	88	85	488	162	84	605	67
Arrive On Green	0.04	0.27	0.27	0.08	0.31	0.31	0.05	0.37	0.37	0.05	0.37	0.37
Sat Flow, veh/h	1781	1222	517	1781	1526	283	1781	1326	441	1781	1648	184
Grp Volume(v), veh/h	41	0	424	112	0	198	61	0	449	60	0	489
Grp Sat Flow(s),veh/h/ln	1781	0	1739	1781	0	1809	1781	0	1767	1781	0	1832
Q Serve(g_s), s	1.7	0.0	17.9	4.7	0.0	6.4	2.6	0.0	16.4	2.5	0.0	17.5
Cycle Q Clear(g_c), s	1.7	0.0	17.9	4.7	0.0	6.4	2.6	0.0	16.4	2.5	0.0	17.5
Prop In Lane	1.00		0.30	1.00		0.16	1.00		0.25	1.00		0.10
Lane Grp Cap(c), veh/h	68	0	466	142	0	561	85	0	650	84	0	673
V/C Ratio(X)	0.60	0.00	0.91	0.79	0.00	0.35	0.72	0.00	0.69	0.71	0.00	0.73
Avail Cap(c_a), veh/h	143	0	492	176	0	561	120	0	650	120	0	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	26.9	34.3	0.0	20.3	35.7	0.0	20.4	35.7	0.0	20.7
Incr Delay (d2), s/veh	8.3	0.0	20.3	17.0	0.0	0.4	11.5	0.0	5.9	10.7	0.0	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	9.7	2.6	0.0	2.7	1.4	0.0	7.4	1.3	0.0	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.3	0.0	47.2	51.3	0.0	20.7	47.2	0.0	26.3	46.4	0.0	27.5
LnGrp LOS	D	A	D	D	A	C	D	A	C	D	A	C
Approach Vol, veh/h		465			310			510			549	
Approach Delay, s/veh		46.9			31.7			28.8			29.6	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	32.4	10.6	24.9	8.1	32.4	7.4	28.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	27.9	7.5	21.5	5.1	27.9	6.1	22.9				
Max Q Clear Time (g_c+I1), s	4.5	18.4	6.7	19.9	4.6	19.5	3.7	8.4				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.4	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			34.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	512	220	23	264	93	89	60	12	142	89	83
Future Volume (veh/h)	81	512	220	23	264	93	89	60	12	142	89	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	539	0	24	278	0	94	63	13	149	94	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	603		48	383		121	419	86	187	273	253
Arrive On Green	0.14	0.32	0.00	0.03	0.20	0.00	0.07	0.28	0.28	0.10	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1496	309	1781	861	796
Grp Volume(v), veh/h	85	539	0	24	278	0	94	0	76	149	0	181
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1804	1781	0	1657
Q Serve(g_s), s	2.9	18.6	0.0	0.9	9.4	0.0	3.5	0.0	2.1	5.5	0.0	5.7
Cycle Q Clear(g_c), s	2.9	18.6	0.0	0.9	9.4	0.0	3.5	0.0	2.1	5.5	0.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.48
Lane Grp Cap(c), veh/h	257	603		48	383		121	0	506	187	0	526
V/C Ratio(X)	0.33	0.89		0.50	0.73		0.78	0.00	0.15	0.80	0.00	0.34
Avail Cap(c_a), veh/h	257	676		131	560		176	0	506	223	0	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	21.9	0.0	32.5	25.2	0.0	31.1	0.0	18.3	29.6	0.0	17.7
Incr Delay (d2), s/veh	0.7	13.4	0.0	7.9	2.6	0.0	12.5	0.0	0.6	15.4	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.7	0.0	0.5	4.2	0.0	1.9	0.0	0.9	3.1	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	35.3	0.0	40.5	27.8	0.0	43.6	0.0	19.0	45.1	0.0	19.5
LnGrp LOS	C	D		D	C		D	A	B	D	A	B
Approach Vol, veh/h		624	A		302	A		170			330	
Approach Delay, s/veh		34.1			28.8			32.6			31.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	23.5	6.3	26.4	9.1	26.0	14.3	18.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	19.0	5.0	24.5	6.7	20.8	9.2	20.3				
Max Q Clear Time (g_c+I1), s	7.5	4.1	2.9	20.6	5.5	7.7	4.9	11.4				
Green Ext Time (p_c), s	0.0	0.2	0.0	1.3	0.0	0.8	0.1	1.0				

Intersection Summary

HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C
























Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

9: 7th Ave & Capitola Rd

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	839	249	77	421	56	119	135	52	100	209	13
Future Volume (veh/h)	13	839	249	77	421	56	119	135	52	100	209	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	874	259	80	439	58	124	141	54	104	218	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	1032	446	103	1045	137	157	548	456	157	509	33
Arrive On Green	0.02	0.29	0.29	0.06	0.33	0.33	0.09	0.29	0.29	0.09	0.29	0.29
Sat Flow, veh/h	1781	3554	1536	1781	3153	414	1781	1870	1556	1781	1737	112
Grp Volume(v), veh/h	14	874	259	80	246	251	124	141	54	104	0	232
Grp Sat Flow(s),veh/h/ln	1781	1777	1536	1781	1777	1791	1781	1870	1556	1781	0	1848
Q Serve(g_s), s	0.5	15.4	9.6	2.9	7.2	7.2	4.5	3.8	1.2	3.8	0.0	6.8
Cycle Q Clear(g_c), s	0.5	15.4	9.6	2.9	7.2	7.2	4.5	3.8	1.2	3.8	0.0	6.8
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	31	1032	446	103	589	593	157	548	456	157	0	541
V/C Ratio(X)	0.46	0.85	0.58	0.77	0.42	0.42	0.79	0.26	0.12	0.66	0.00	0.43
Avail Cap(c_a), veh/h	134	1094	473	147	589	593	174	548	456	174	0	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.4	22.2	20.2	30.9	17.3	17.3	29.7	18.0	9.1	29.4	0.0	19.0
Incr Delay (d2), s/veh	10.4	6.1	1.6	14.8	0.5	0.5	19.4	1.1	0.5	7.8	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.8	3.4	1.6	2.8	2.8	2.7	1.7	0.6	1.9	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	28.3	21.8	45.8	17.8	17.8	49.2	19.1	9.6	37.2	0.0	21.5
LnGrp LOS	D	C	C	D	B	B	D	B	A	D	A	C
Approach Vol, veh/h		1147			577			319			336	
Approach Delay, s/veh		27.0			21.7			29.2			26.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	24.0	8.4	23.8	10.4	24.0	5.6	26.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	19.5	5.5	20.5	6.5	19.5	5.0	21.0				
Max Q Clear Time (g_c+I1), s	5.8	5.8	4.9	17.4	6.5	8.8	2.5	9.2				
Green Ext Time (p_c), s	0.0	0.7	0.0	1.9	0.0	0.9	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			25.9									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	22.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	14	8	19	160	3	99	14	177	269	202	251	14
Future Vol, veh/h	14	8	19	160	3	99	14	177	269	202	251	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	8	20	167	3	103	15	184	280	210	261	15
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	11.2	13.4	22.7	28.3
HCM LOS	B	B	C	D

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	34%	98%	0%	43%
Vol Thru, %	38%	20%	2%	0%	54%
Vol Right, %	58%	46%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	460	41	163	99	467
LT Vol	14	14	160	0	202
Through Vol	177	8	3	0	251
RT Vol	269	19	0	99	14
Lane Flow Rate	479	43	170	103	486
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.74	0.088	0.367	0.188	0.799
Departure Headway (Hd)	5.558	7.387	7.771	6.549	5.912
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	652	483	464	548	613
Service Time	3.574	5.456	5.518	4.295	3.928
HCM Lane V/C Ratio	0.735	0.089	0.366	0.188	0.793
HCM Control Delay	22.7	11.2	15	10.8	28.3
HCM Lane LOS	C	B	B	B	D
HCM 95th-tile Q	6.5	0.3	1.7	0.7	7.9

HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Existing PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↗	↗		↗	↗
Traffic Volume (veh/h)	8	857	985	68	430	35	472	15	43	33	35	30
Future Volume (veh/h)	8	857	985	68	430	35	472	15	43	33	35	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	893	0	71	448	36	503	0	0	34	36	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1139		91	1203	96	773	0		182	193	324
Arrive On Green	0.01	0.32	0.00	0.05	0.36	0.36	0.22	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1585	1781	3326	266	3563	0	1585	887	939	1578
Grp Volume(v), veh/h	8	893	0	71	238	246	503	0	0	70	0	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1816	1781	0	1585	1826	0	1578
Q Serve(g_s), s	0.4	20.0	0.0	3.4	8.7	8.7	11.3	0.0	0.0	2.8	0.0	1.4
Cycle Q Clear(g_c), s	0.4	20.0	0.0	3.4	8.7	8.7	11.3	0.0	0.0	2.8	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	0.49		1.00
Lane Grp Cap(c), veh/h	18	1139		91	643	657	773	0		375	0	324
V/C Ratio(X)	0.44	0.78		0.78	0.37	0.37	0.65	0.00		0.19	0.00	0.10
Avail Cap(c_a), veh/h	102	1620		104	812	830	773	0		375	0	324
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.1	27.0	0.0	41.0	20.6	20.6	31.2	0.0	0.0	28.7	0.0	28.2
Incr Delay (d2), s/veh	16.3	1.7	0.0	27.5	0.4	0.4	4.2	0.0	0.0	1.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.4	0.0	2.2	3.5	3.7	5.2	0.0	0.0	1.3	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	28.7	0.0	68.6	21.0	21.0	35.5	0.0	0.0	29.8	0.0	28.8
LnGrp LOS	E	C		E	C	C	D	A		C	A	C
Approach Vol, veh/h		901	A		555			503	A		101	
Approach Delay, s/veh		28.9			27.1			35.5			29.5	
Approach LOS		C			C			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	9.0	32.6		22.5	5.4	36.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	5.1	39.9		18.0	5.0	40.0				
Max Q Clear Time (g_c+I1), s		13.3	5.4	22.0		4.8	2.4	10.7				
Green Ext Time (p_c), s		1.0	0.0	6.1		0.3	0.0	3.1				

Intersection Summary



















HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
12: 7th Ave & Soquel Ave

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	823	81	283	468	0	88	0	229	0	0	0
Future Volume (veh/h)	0	823	81	283	468	0	88	0	229	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	840	83	289	478	0	90	0	234	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	957	95	315	1940	0	550	0	475	0	566	0
Arrive On Green	0.00	0.29	0.29	0.18	0.55	0.00	0.30	0.00	0.30	0.00	0.00	0.00
Sat Flow, veh/h	0	3354	322	1781	3647	0	1418	0	1569	0	1870	0
Grp Volume(v), veh/h	0	458	465	289	478	0	90	0	234	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1777	1806	1781	1777	0	1418	0	1569	0	1870	0
Q Serve(g_s), s	0.0	14.6	14.6	9.5	4.2	0.0	2.8	0.0	7.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.6	14.6	9.5	4.2	0.0	2.8	0.0	7.3	0.0	0.0	0.0
Prop In Lane	0.00		0.18	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	522	530	315	1940	0	550	0	475	0	566	0
V/C Ratio(X)	0.00	0.88	0.88	0.92	0.25	0.00	0.16	0.00	0.49	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	538	547	315	1972	0	550	0	475	0	566	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.0	20.0	24.1	7.1	0.0	15.4	0.0	17.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	14.9	14.7	30.7	0.1	0.0	0.6	0.0	3.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	7.7	6.4	1.3	0.0	0.9	0.0	2.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.9	34.7	54.7	7.1	0.0	16.1	0.0	20.6	0.0	0.0	0.0
LnGrp LOS	A	C	C	D	A	A	B	A	C	A	A	A
Approach Vol, veh/h		923			767			324				0
Approach Delay, s/veh		34.8			25.1			19.3				0.0
Approach LOS		C			C			B				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	15.0	22.0		22.5		37.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		9.3	11.5	16.6		0.0		6.2				
Green Ext Time (p_c), s		0.9	0.0	0.8		0.0		3.4				
Intersection Summary												
HCM 6th Ctrl Delay				28.6								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Existing PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑			↑	↗		↕	
Traffic Volume (veh/h)	6	720	395	375	585	5	202	5	684	6	2	8
Future Volume (veh/h)	6	720	395	375	585	5	202	5	684	6	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	750	0	391	609	5	210	5	712	6	2	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	849		437	1720	14	383	7	872	101	52	75
Arrive On Green	0.01	0.24	0.00	0.25	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3611	30	892	23	1585	76	169	245
Grp Volume(v), veh/h	6	750	0	391	300	314	215	0	712	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1864	916	0	1585	491	0	0
Q Serve(g_s), s	0.2	13.0	0.0	13.6	6.8	6.8	0.0	0.0	19.5	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	13.0	0.0	13.6	6.8	6.8	16.1	0.0	19.5	16.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.98		1.00	0.37		0.50
Lane Grp Cap(c), veh/h	14	849		437	846	888	390	0	872	227	0	0
V/C Ratio(X)	0.43	0.88		0.89	0.35	0.35	0.55	0.00	0.82	0.07	0.00	0.00
Avail Cap(c_a), veh/h	139	861		459	846	888	390	0	872	227	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.6	23.5	0.0	23.3	10.6	10.6	21.1	0.0	11.8	16.9	0.0	0.0
Incr Delay (d2), s/veh	19.1	10.7	0.0	19.1	0.3	0.2	5.5	0.0	8.3	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.3	0.0	7.6	2.4	2.5	3.4	0.0	8.6	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	34.2	0.0	42.4	10.8	10.8	26.6	0.0	20.1	17.5	0.0	0.0
LnGrp LOS	D	C		D	B	B	C	A	C	B	A	A
Approach Vol, veh/h		756	A		1005			927				16
Approach Delay, s/veh		34.3			23.1			21.6				17.5
Approach LOS		C			C			C				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	20.2	19.8		24.0	5.0	35.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	16.5	15.5		19.5	5.0	27.0				
Max Q Clear Time (g_c+I1), s		21.5	15.6	15.0		18.1	2.2	8.8				
Green Ext Time (p_c), s		0.0	0.1	0.2		0.0	0.0	3.6				

Intersection Summary

HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Appendix D

Project

Trip Generation

Letter



Jeff Waller Consulting

September 4, 2018

Ashley Schweickart
MidPen Housing
275 Main Street, Suite 204
Watsonville, CA 95076

Re: 1412, 1438, 1500 and 1514 Capitola Road Mixed-Use Development, Santa Cruz County, CA

Dear Ashley,

Jeff Waller Consulting has prepared a trip generation estimate for your proposed mixed-use project at 1412, 1438, 1500 and 1514 Capitola Road (“project”) in the Live Oak neighborhood of Santa Cruz County, California. The proposed project includes 60 affordable housing units (plus 1 manager’s unit), clinics and office space for the Santa Cruz Community Health Center and Dientes Community Dental, and a small amount of commercial retail space. **Exhibit 1** depicts the location of the proposed project. **Exhibit 2** depicts the proposed site plan for the project.

A trip generation estimate has been prepared for the project. The potential project trips on adjacent roadways has also been estimated. Using this information, the study network for a future traffic impact analysis for this project is recommended.

A. Project Trip Generation, Distribution and Assignment

The proposed project is composed of the following elements:

1. 60 affordable rental apartments, plus 1 manager’s unit
2. Dental Clinic (“Dientes”)
 - a. Clinic: 5,192 square feet
 - b. Office (Administrative): 5,340 square feet
3. Health Clinic (“SCCHC”):
 - a. Clinic: 15,300 square feet
 - b. Office (Administrative): 2,700 square feet
4. Commercial Retail: 1,000 square feet

The apartments and retail would be new to the area. The Dientes clinic would also be new, supplementing the existing nearby Dientes clinic on Commercial Way near the intersection of Thurber Lane and Soquel Drive. However, the Dientes office space would be relocated from its existing location on Soquel Avenue near Chanticleer Avenue in Live Oak. The SCCHC clinic and offices would also relocate from their existing location in the Twin Lakes neighborhood at the East Cliff Village

Shopping Center between 17th and 14th Avenues. The total relocated clinic and office space on the project site will be larger than at either of the current sites.

Exhibit 3 contains the estimated trip generation for the project. This trip generation estimate was developed using rates from *Trip Generation Manual*, 10th Edition, published by the Institute of Transportation Engineers in 2017. As the clinic buildings will also include separate administrative office space, the trip generation for this office space was estimated separately from the clinic space.

The retail space is envisioned as either a bakery or delicatessen. The trip generation estimate for this component of the project reflects that potential, which would generate more traffic than a similar amount of generic retail space.

Adjustments were also made to the ITE mode split (i.e., percentage of trips made by various travel modes, such as driving, walking, biking, and transit) based on a survey of over 300 patients at the two clinics. This survey, whose summarized results are shown in **Appendix A**, found that approximately 14% of patients traveled via modes other than driving, much higher than the ITE percentage of less than 5%. As the clinic uses would generate the majority (but not all) of the traffic from the project, only 11% of project traffic is assumed to use travel modes other than driving.

Note: The transit frequency for the bus routes on Capitola Road near the project site – Route 69A and 69W – are about one bus every 30 minutes, which is similar to the frequency near the existing Dientes clinic (serviced by Route 71) and more frequent than the current SCCHC clinic (serviced by Route 68). The overall route origin, destination and alignment for Routes 69A/69W and 71 are also very similar – both travel between Santa Cruz and Watsonville and both have stops that are one block (or less) from the current and proposed clinic sites. Therefore, the high rate of transit use is anticipated to continue at about the same rate for the clinics at the project site.

Exhibit 4 depicts the anticipated trip distribution for the project trips. This trip distribution was also developed based on the aforementioned client survey plus the anticipated travel directions for residents and clinic staff. The project would generate an estimated 1,398 daily trips, with 101 trips during the AM (69 in, 32 out) and 108 trips during the PM (41 in, 67 out).



Combining the data in **Exhibits 3 and 4**, the following table summarizes the anticipated project vehicle trip assignment by street in the study area:

Street	Project Trip Assignment			
	AM Peak Hour		PM Peak Hour	
	Inbound to Project	Outbound from Project	Inbound to Project	Outbound from Project
Soquel Ave. (East of 17 th)	3	1	2	3
Soquel Ave. (West of 17 th)	27	12	16	26
Capitola Rd. (East of 17 th)	6	3	4	6
Capitola Rd. (West of Project)	17	8	10	17
Brommer St. (East of 17 th)	1	1	1	1
Brommer St. (West of 17 th)	11	5	6	10
17 th Ave. (South of Brommer)	4	2	2	4

Note that as the relocated clinic (SCCHC) and office space (SCCHC and Dientes) are currently located in the greater Live Oak area, the net traffic increase in Live Oak would likely be smaller than as estimated above. Thus, this is a conservative trip generation estimate.

B. Project Access

As shown on **Exhibit 2**, the project will have two access points off Capitola Road – 1) opposite the 15th Avenue / Capitola Road intersection; and 2) just west of the 16th Avenue / Capitola Road intersection. A third access to the site – jointly using the existing Live Oak Supermarket driveway on 17th Avenue – may also be possible once future development occurs at the parcel immediately east of the project site. Development of that adjacent site would be performed by others, independent of the study project. This theoretical third access point would be predicated on alignment of vehicular circulation routes between the two sites.

C. Recommended Study Area

Based on a review of the project trip generation, trip distribution, trip assignment and project site plan, the following intersections are recommended for inclusion in a formal traffic impact analysis for the project:

1. 17th Avenue / Capitola Road;
2. 16th Avenue / Capitola Road;
3. 15th Avenue / Capitola Road;
4. 17th Avenue / Soquel Avenue;
5. 17th Avenue / Brommer Street; and
6. 17th Avenue / Market Driveway



Ashley Schweickart
September 4, 2018

Notes:

1. The 16th Avenue / Capitola Road and 15th Avenue / Capitola Road intersections are recommended for inclusion in the full traffic impact analysis study due to their immediate proximity to the proposed project driveways.
2. The 17th Avenue / Market Driveway intersection is recommended for inclusion in the fully traffic impact analysis study to assess how its operations would change if it were connected to the project site.

Exhibit 5 depicts the locations of the recommended study intersections relative to the project site.

Impacts to State Route 1 are anticipated to be minimal, as most of the existing clinic traffic using State Route 1 would continue to use it and will likely choose to use the same interchanges as they do now – Soquel Drive and 41st Avenue. The two clinics (and their office space) would generate approximately 70% of the total traffic from the project. Additionally, due to its small size, the retail space is intended to only service the immediate vicinity of the Live Oak community, hence its patrons would not use State Route 1 to access the site. As a result, it is not recommended that operations of State Route 1 near the project site be analyzed.

D. CONCLUSION

If you have any questions regarding the contents of this letter or need additional information, please contact me at your convenience. Thank you for the opportunity to assist you with this project.

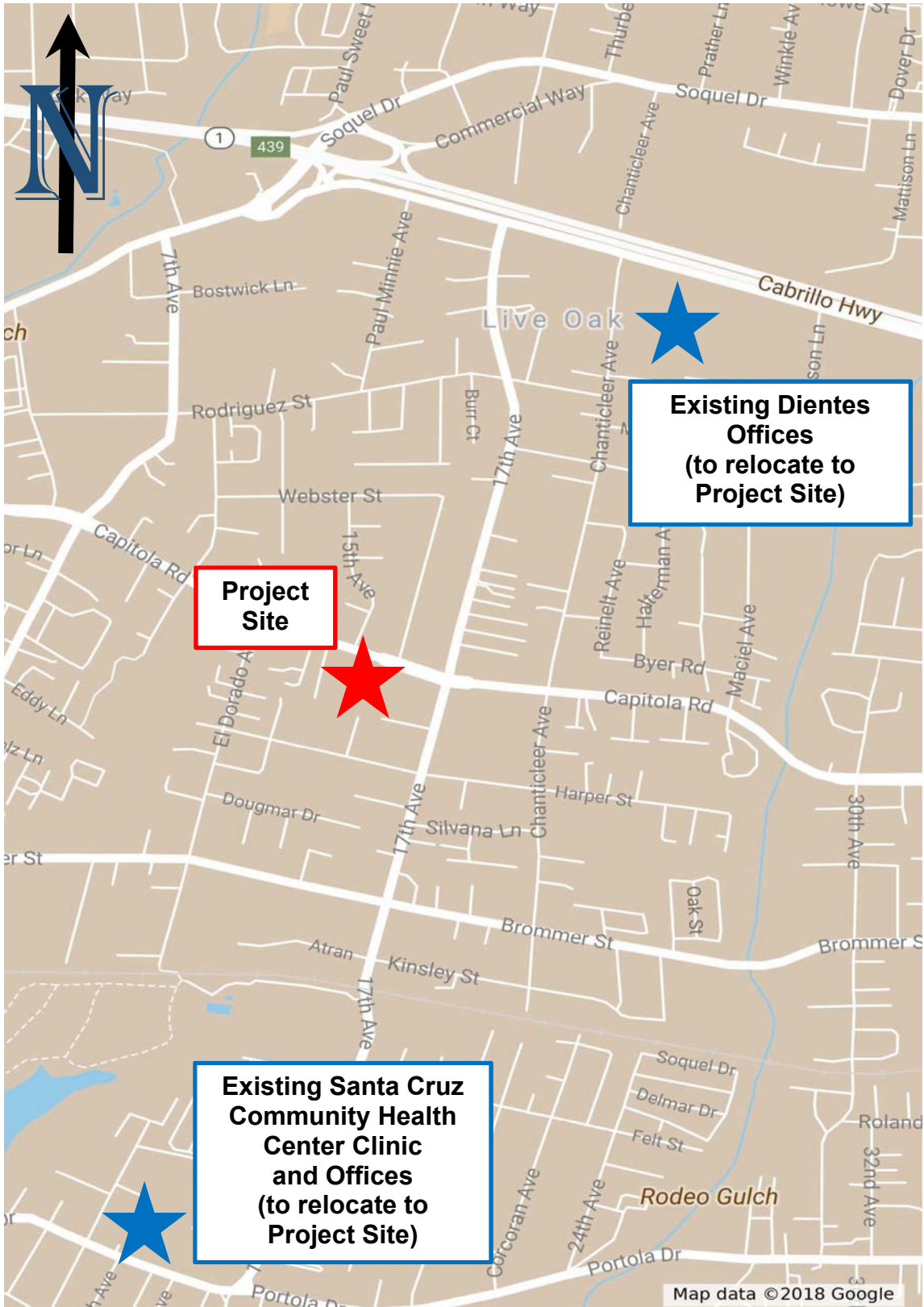
Respectfully submitted,



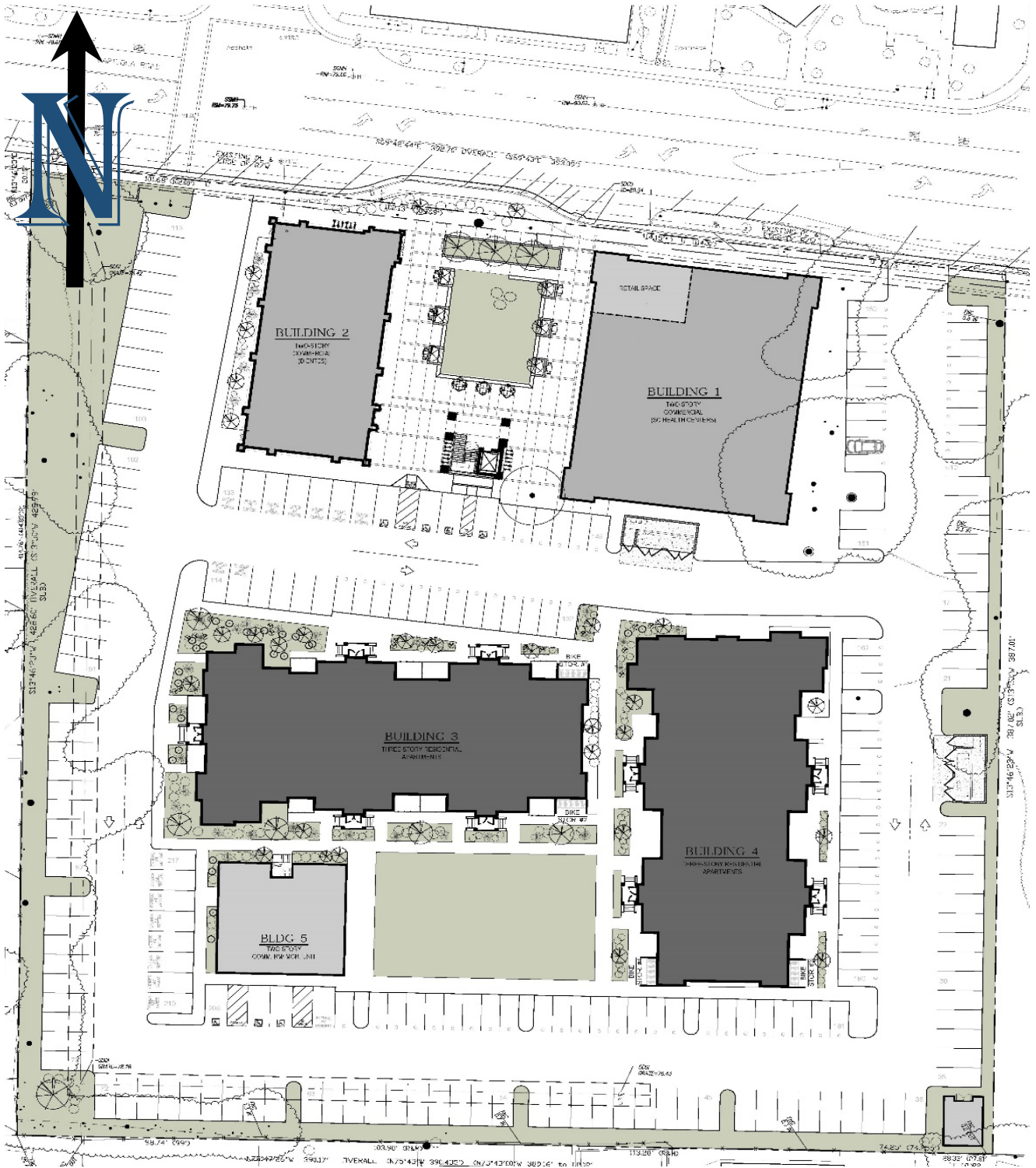
Jeff Waller, TE
Owner / Senior Analyst
T: (408) 607-1454
E: jeffwallerconsulting@gmail.com

Cc: Carlos Jurado, MidPen Housing





Basemap Source: Google Maps, 2018.



Source: Wald Ruhnke & Dost Architects, July 2018.

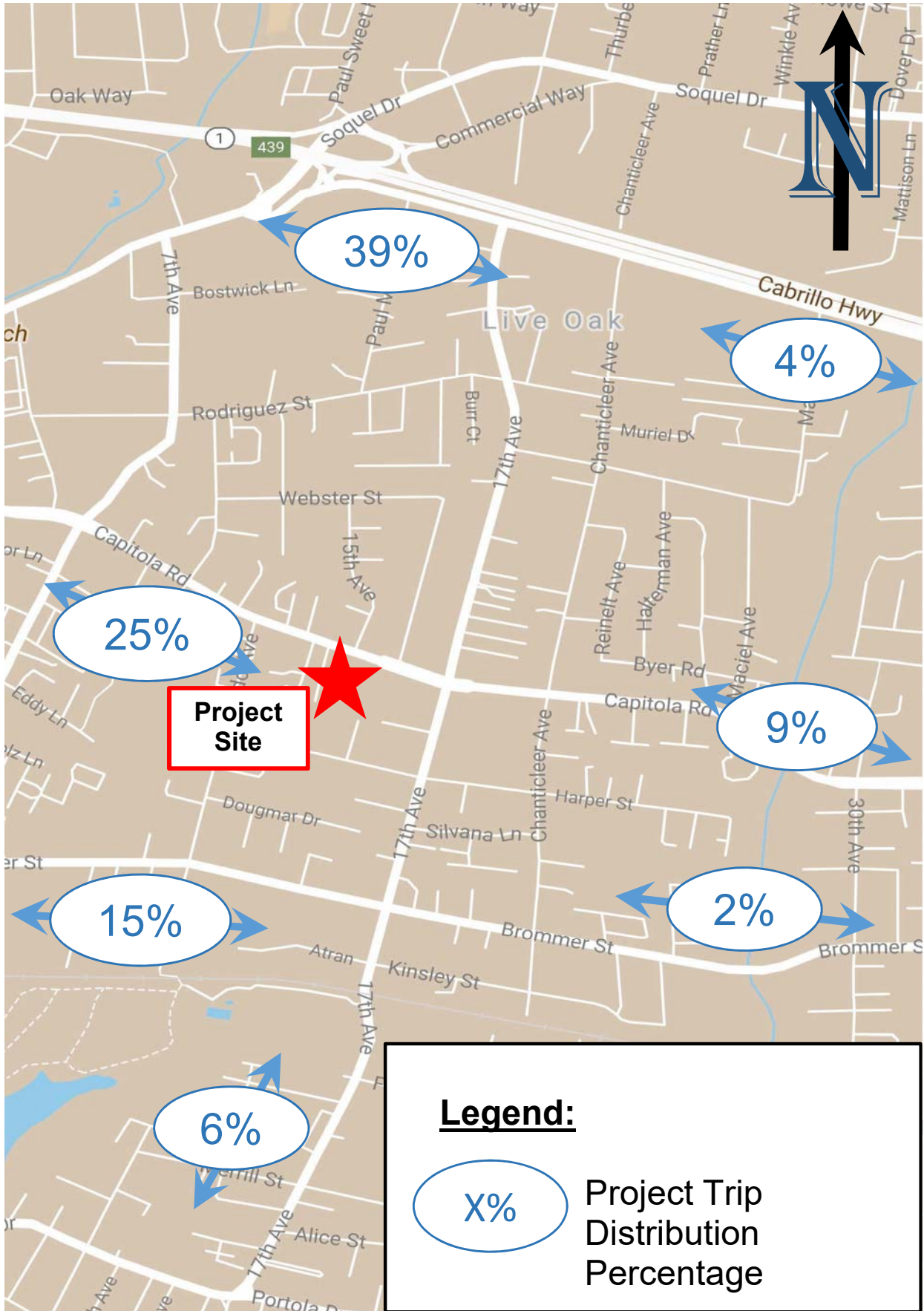
TRIP GENERATION RATES	ITE LAND USE CODE	DAILY TRIP RATE	AM PEAK HOUR				PM PEAK HOUR			
			PEAK HOUR RATE	% OF ADT	% IN	% OUT	PEAK HOUR RATE	% OF ADT	% IN	% OUT
Multifamily Housing (Mid-Rise) (per unit)	221	5.44	0.36	7%	26%	74%	0.44	0.08	0.61	0.39
Clinic (per 1,000 sq. ft.)	630	38.16	3.69	10%	78%	22%	3.28	9%	29%	71%
General Office Building (per 1,000 sq. ft.)	710	9.74	1.16	12%	86%	14%	1.15	12%	16%	84%
Fast Casual Restaurant (per 1,000 sq. ft.)	930	315.17	2.07	1%	67%	33%	14.13	4%	55%	45%

PROPOSED USE ²	PROJECT SIZE	DAILY TRIPS	AM PEAK HOUR				PM PEAK HOUR			
			PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT	PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT
Apartments	61 units	332	22	7%	6	16	27	8%	16	11
Clinics	20,492 sq. ft.	782	76	10%	59	17	67	9%	19	48
Office	8,060 sq. ft.	79	9	11%	8	1	9	11%	1	8
Bakery/Deli	1,000 sq. ft.	315	2	1%	1	1	14	4%	8	6
Subtotal:		1,508	109		74	35	117		44	73

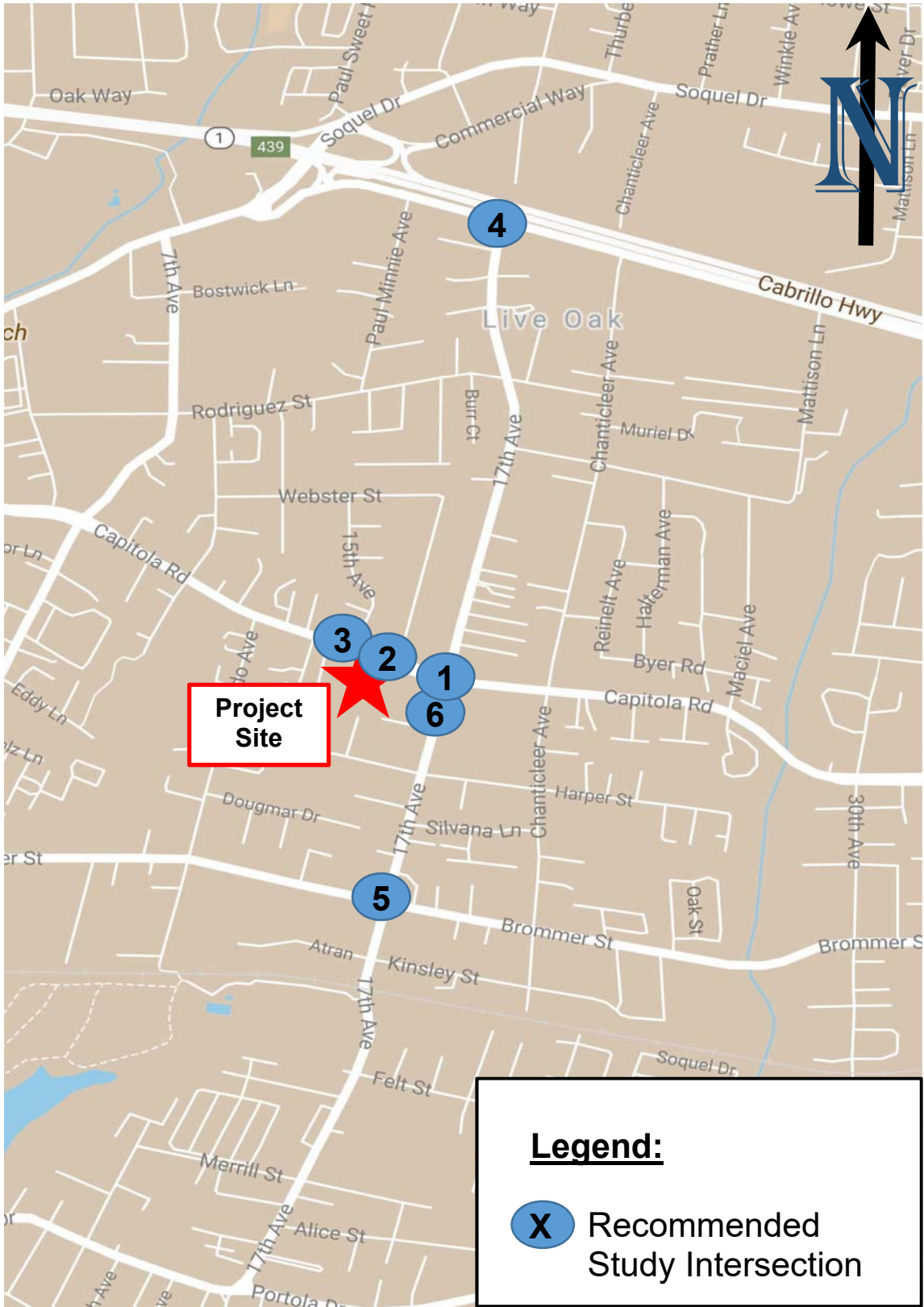
MODE SPLIT ADJUSTMENTS		
	Base	Anticipated
Vehicle Trip Percentage:	96%	89%
Pedestrian Trip Percentage:	2%	4%
Bicycle Trip Percentage:	1%	1%
Transit Trip Percentage:	1%	6%
	100%	100%

PROPOSED USE	DAILY TRIPS	AM PEAK HOUR				PM PEAK HOUR			
		PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT	PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT
Adjusted Vehicle Trips:	1,398	101		69	32	108		41	67

- Notes:
1. Trip generation rates published by Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017.
 2. Project definition includes following components:
 - a. Apartments: 60 Apartments plus 1 manager's unit.
 - b. Clinics: Two medical office/clinics, 8,970 and 15,371 square feet each.
 - c. Office: Office space associated with each clinic, 1,582 and 2,713 square feet each.
 - d. Bakery/Deli: 1,000 square feet.
 3. Base mode splits based upon data in source cited in Note 1.
 4. Anticipated mode splits are based upon anticipated pedestrian, bicycle and transit trips for project. This was partially based on results of a clinic patient survey found in **Appendix A**.



Basemap Source: Google Maps, 2018.



Basemap Source: Google Maps, 2018.

Appendix A

Clinic Survey Results

Survey Dates: July 16 - 20, 2018

Question: Travel Mode of Patients

Mode	Number		% of Each		% Total	
	Dientes	East Cliff	Dientes	East Cliff	Average	Weighted
Car	182	78	85.45%	86.67%	85.81%	85.81%
Bus	17	4	7.98%	4.44%	6.93%	7.31%
Bicycle	3	1	1.41%	1.11%	1.32%	1.33%
On Foot	7	7	3.29%	7.78%	4.62%	5.53%
Drop-off	3	0	1.41%	0.00%	0.99%	1.41%
Uber/Lyft	1	0	0.47%	0.00%	0.33%	0.47%
Total:	213	90	100.00%	100.00%	100.00%	101.86%

Question: Where Patients Live

Location	Number		% of Each		% Total	
	Dientes	East Cliff	Dientes	East Cliff	Average	Weighted
Aptos	12	5	5.80%	5.68%	5.76%	5.76%
Boulder Creek	8	1	3.86%	1.14%	3.05%	3.56%
Capitola	16	6	7.73%	6.82%	7.46%	7.48%
Davenport	2	2	0.97%	2.27%	1.36%	1.62%
Felton	7	2	3.38%	2.27%	3.05%	3.14%
Live Oak	22	7	10.63%	7.95%	9.83%	9.98%
Santa Cruz	80	43	38.65%	48.86%	41.69%	42.22%
Scotts Valley	4	2	1.93%	2.27%	2.03%	2.05%
Soquel	17	7	8.21%	7.95%	8.14%	8.14%
Watsonville	29	8	14.01%	9.09%	12.54%	12.95%
La Selva Beach	2	0	0.97%	0.00%	0.68%	0.97%
Big Sur	1	0	0.48%	0.00%	0.34%	0.48%
Prunedale	2	0	0.97%	0.00%	0.68%	0.97%
Salinas	3	0	1.45%	0.00%	1.02%	1.45%
Bonny Doon	1	0	0.48%	0.00%	0.34%	0.48%
Other S.C. Co.	1	1	0.48%	1.14%	0.68%	0.81%
Hollister	0	1	0.00%	1.14%	0.34%	1.14%
Corralitos	0	1	0.00%	1.14%	0.34%	1.14%
Ben Lomond	0	1	0.00%	1.14%	0.34%	1.14%
Castroville	0	1	0.00%	1.14%	0.34%	1.14%
Total:	207	88	100.00%	100.00%	100.00%	106.59%

Note: "Weighted" means averaging using the relative number of answered surveys by clinic.

Appendix E

Clinic Survey

Summary

Clinic Survey Results

Survey Dates: July 16 - 20, 2018

Question: Travel Mode of Patients

Mode	Number		% of Each		% Total	
	Dientes	SCCHC	Dientes	SCCHC	Average	Weighted
Car	182	78	85.45%	86.67%	85.81%	85.81%
Bus	17	4	7.98%	4.44%	6.93%	7.31%
Bicycle	3	1	1.41%	1.11%	1.32%	1.33%
On Foot	7	7	3.29%	7.78%	4.62%	5.53%
Drop-off	3	0	1.41%	0.00%	0.99%	1.41%
Uber/Lyft	1	0	0.47%	0.00%	0.33%	0.47%
Total:	213	90	100.00%	100.00%	100.00%	101.86%

Question: Where Patients Live

Location	Number		% of Each		% Total	
	Dientes	SCCHC	Dientes	SCCHC	Average	Weighted
Aptos	12	5	5.80%	5.68%	5.76%	5.76%
Boulder Creek	8	1	3.86%	1.14%	3.05%	3.56%
Capitola	16	6	7.73%	6.82%	7.46%	7.48%
Davenport	2	2	0.97%	2.27%	1.36%	1.62%
Felton	7	2	3.38%	2.27%	3.05%	3.14%
Live Oak	22	7	10.63%	7.95%	9.83%	9.98%
Santa Cruz	80	43	38.65%	48.86%	41.69%	42.22%
Scotts Valley	4	2	1.93%	2.27%	2.03%	2.05%
Soquel	17	7	8.21%	7.95%	8.14%	8.14%
Watsonville	29	8	14.01%	9.09%	12.54%	12.95%
La Selva Beach	2	0	0.97%	0.00%	0.68%	0.97%
Big Sur	1	0	0.48%	0.00%	0.34%	0.48%
Prunedale	2	0	0.97%	0.00%	0.68%	0.97%
Salinas	3	0	1.45%	0.00%	1.02%	1.45%
Bonny Doon	1	0	0.48%	0.00%	0.34%	0.48%
Other S.C. Co.	1	1	0.48%	1.14%	0.68%	0.81%
Hollister	0	1	0.00%	1.14%	0.34%	1.14%
Corralitos	0	1	0.00%	1.14%	0.34%	1.14%
Ben Lomond	0	1	0.00%	1.14%	0.34%	1.14%
Castroville	0	1	0.00%	1.14%	0.34%	1.14%
Total:	207	88	100.00%	100.00%	100.00%	106.59%

Notes:

1. Survey data collected as part of trip generation letter in **Appendix D**.
2. Weighted means averaging using the relative number of answered surveys by clinic.

Appendix F

Intersection

Level of Service

Calculations

Existing Plus Project

Conditions

HCM 6th TWSC
 1: Project Dwy (West)/15th Ave & Capitola Road

Existing Plus Project AM

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖	↖		↔			↔	
Traffic Vol, veh/h	13	373	11	41	568	28	6	0	6	23	0	30
Future Vol, veh/h	13	373	11	41	568	28	6	0	6	23	0	30
Conflicting Peds, #/hr	15	0	6	6	0	15	10	0	0	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	25	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	393	12	43	598	29	6	0	6	24	0	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	642	0	0	411	0	0	1158	1161	209	924	1138	623
Stage 1	-	-	-	-	-	-	433	433	-	699	699	-
Stage 2	-	-	-	-	-	-	725	728	-	225	439	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	941	-	-	1146	-	-	162	195	798	237	201	485
Stage 1	-	-	-	-	-	-	572	581	-	429	441	-
Stage 2	-	-	-	-	-	-	416	428	-	758	577	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	928	-	-	1139	-	-	143	181	793	223	187	474
Mov Cap-2 Maneuver	-	-	-	-	-	-	143	181	-	223	187	-
Stage 1	-	-	-	-	-	-	560	569	-	417	419	-
Stage 2	-	-	-	-	-	-	370	406	-	741	565	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.5			20.7			18.7		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	242	928	-	-	1139	-	-	318
HCM Lane V/C Ratio	0.052	0.015	-	-	0.038	-	-	0.175
HCM Control Delay (s)	20.7	8.9	-	-	8.3	-	-	18.7
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.6

HCM 6th TWSC
 2: Project Dwy (East)/16th Ave & Capitola Road

Existing Plus Project AM

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖	↖			↖		↔	
Traffic Vol, veh/h	0	392	10	0	630	19	0	0	17	9	0	7
Future Vol, veh/h	0	392	10	0	630	19	0	0	17	9	0	7
Conflicting Peds, #/hr	18	0	7	7	0	18	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	25	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	413	11	0	663	20	0	0	18	9	0	7





















Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	701	0	0	-	-	0	-	-	221	890	1112	681
Stage 1	-	-	-	-	-	-	-	-	-	681	681	-
Stage 2	-	-	-	-	-	-	-	-	-	209	431	-
Critical Hdwy	4.13	-	-	-	-	-	-	-	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	-	-	-	-	-	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	894	-	-	0	-	-	0	0	783	250	208	449
Stage 1	-	-	-	0	-	-	0	0	-	439	449	-
Stage 2	-	-	-	0	-	-	0	0	-	774	582	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	879	-	-	-	-	-	-	-	776	240	203	441
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	347	318	-
Stage 1	-	-	-	-	-	-	-	-	-	432	441	-
Stage 2	-	-	-	-	-	-	-	-	-	755	578	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		9.7		14.8	
HCM LOS					A		B	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	776	879	-	-	-	-	383
HCM Lane V/C Ratio	0.023	-	-	-	-	-	0.044
HCM Control Delay (s)	9.7	0	-	-	-	-	14.8
HCM Lane LOS	A	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	-	-	0.1






















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Existing Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	249	104	64	407	64	147	363	54	59	268	91
Future Volume (veh/h)	50	249	104	64	407	64	147	363	54	59	268	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	252	105	65	411	65	148	367	55	60	271	92
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	507	204	100	658	103	184	581	87	96	422	143
Arrive On Green	0.05	0.21	0.21	0.06	0.21	0.21	0.10	0.37	0.37	0.05	0.32	0.32
Sat Flow, veh/h	1781	2448	986	1781	3062	480	1781	1584	237	1781	1330	452
Grp Volume(v), veh/h	51	181	176	65	237	239	148	0	422	60	0	363
Grp Sat Flow(s),veh/h/ln	1781	1777	1658	1781	1777	1765	1781	0	1821	1781	0	1782
Q Serve(g_s), s	1.6	5.1	5.4	2.0	6.9	7.0	4.6	0.0	10.9	1.9	0.0	10.0
Cycle Q Clear(g_c), s	1.6	5.1	5.4	2.0	6.9	7.0	4.6	0.0	10.9	1.9	0.0	10.0
Prop In Lane	1.00		0.59	1.00		0.27	1.00		0.13	1.00		0.25
Lane Grp Cap(c), veh/h	87	368	344	100	382	379	184	0	668	96	0	566
V/C Ratio(X)	0.59	0.49	0.51	0.65	0.62	0.63	0.80	0.00	0.63	0.63	0.00	0.64
Avail Cap(c_a), veh/h	156	561	523	156	561	557	184	0	668	156	0	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	19.9	20.1	26.4	20.3	20.3	25.0	0.0	14.9	26.4	0.0	16.7
Incr Delay (d2), s/veh	6.2	1.0	1.2	6.8	1.6	1.7	22.1	0.0	4.5	6.5	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.0	2.0	1.0	2.8	2.8	3.0	0.0	4.7	0.9	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	21.0	21.2	33.2	21.9	22.1	47.1	0.0	19.4	33.0	0.0	22.2
LnGrp LOS	C	C	C	C	C	C	D	A	B	C	A	C
Approach Vol, veh/h		408			541			570			423	
Approach Delay, s/veh		22.6			23.3			26.6			23.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	25.4	7.7	16.3	10.4	22.6	7.3	16.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.9	18.1	5.0	18.0				
Max Q Clear Time (g_c+I1), s	3.9	12.9	4.0	7.4	6.6	12.0	3.6	9.0				
Green Ext Time (p_c), s	0.0	1.3	0.0	1.5	0.0	1.1	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				24.2								
HCM 6th LOS				C								

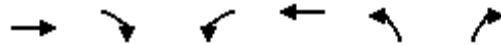
HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

Existing Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	279	56	68	428	135	70	119	57	71	95	35
Future Volume (veh/h)	21	279	56	68	428	135	70	119	57	71	95	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	291	58	71	446	141	73	124	59	74	99	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	662	129	106	689	216	107	400	190	108	437	159
Arrive On Green	0.03	0.23	0.23	0.06	0.26	0.26	0.06	0.33	0.33	0.06	0.34	0.34
Sat Flow, veh/h	1781	2908	566	1781	2640	826	1781	1195	568	1781	1302	474
Grp Volume(v), veh/h	22	175	174	71	299	288	73	0	183	74	0	135
Grp Sat Flow(s),veh/h/ln	1781	1777	1697	1781	1777	1689	1781	0	1763	1781	0	1776
Q Serve(g_s), s	0.7	4.8	5.0	2.2	8.5	8.6	2.3	0.0	4.4	2.3	0.0	3.1
Cycle Q Clear(g_c), s	0.7	4.8	5.0	2.2	8.5	8.6	2.3	0.0	4.4	2.3	0.0	3.1
Prop In Lane	1.00		0.33	1.00		0.49	1.00		0.32	1.00		0.27
Lane Grp Cap(c), veh/h	46	404	386	106	464	441	107	0	590	108	0	595
V/C Ratio(X)	0.48	0.43	0.45	0.67	0.64	0.65	0.68	0.00	0.31	0.68	0.00	0.23
Avail Cap(c_a), veh/h	157	564	539	157	564	536	157	0	590	173	0	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.2	18.8	18.8	26.1	18.6	18.7	26.1	0.0	14.0	26.1	0.0	13.6
Incr Delay (d2), s/veh	7.5	0.7	0.8	7.2	1.8	2.1	7.3	0.0	1.4	7.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.9	1.9	1.1	3.4	3.3	1.1	0.0	1.8	1.1	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	19.5	19.7	33.3	20.4	20.7	33.4	0.0	15.4	33.5	0.0	14.4
LnGrp LOS	C	B	B	C	C	C	C	A	B	C	A	B
Approach Vol, veh/h		371			658			256			209	
Approach Delay, s/veh		20.5			21.9			20.5			21.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	23.5	7.9	17.4	7.9	23.5	6.0	19.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.3	6.4	4.2	7.0	4.3	5.1	2.7	10.6				
Green Ext Time (p_c), s	0.0	0.7	0.0	1.5	0.0	0.5	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay				21.2								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
5: 17th Ave & Soquel Ave

Existing Plus Project AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑↑↑	
Traffic Volume (veh/h)	255	305	68	311	424	50
Future Volume (veh/h)	255	305	68	311	424	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	274	328	73	334	506	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	436	997	118	747	1426	645
Arrive On Green	0.23	0.23	0.07	0.40	0.40	0.00
Sat Flow, veh/h	1870	1554	1781	1870	3563	1610
Grp Volume(v), veh/h	274	328	73	334	506	0
Grp Sat Flow(s),veh/h/ln	1870	1554	1781	1870	1781	1610
Q Serve(g_s), s	5.9	4.4	1.8	5.9	4.5	0.0
Cycle Q Clear(g_c), s	5.9	4.4	1.8	5.9	4.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	436	997	118	747	1426	645
V/C Ratio(X)	0.63	0.33	0.62	0.45	0.35	0.00
Avail Cap(c_a), veh/h	749	1257	218	1165	1426	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.5	3.8	20.4	9.9	9.4	0.0
Incr Delay (d2), s/veh	1.5	0.2	5.1	0.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.8	0.8	2.0	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.0	4.0	25.5	10.3	10.1	0.0
LnGrp LOS	B	A	C	B	B	A
Approach Vol, veh/h	602			407	506	
Approach Delay, s/veh	9.9			13.0	10.1	
Approach LOS	A			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.5	15.0		22.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.5	18.0		28.0
Max Q Clear Time (g_c+I1), s		6.5	3.8	7.9		7.9
Green Ext Time (p_c), s		1.5	0.0	2.1		1.9

Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	4	5	12	560	429	5
Future Vol, veh/h	4	5	12	560	429	5
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	5	13	615	471	5






















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1128	487	489	0	-	0
Stage 1	487	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	226	581	1074	-	-	-
Stage 1	618	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	218	574	1061	-	-	-
Mov Cap-2 Maneuver	349	-	-	-	-	-
Stage 1	603	-	-	-	-	-
Stage 2	519	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1061	-	446	-	-
HCM Lane V/C Ratio	0.012	-	0.022	-	-
HCM Control Delay (s)	8.4	-	13.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Existing Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	114	91	113	190	32	104	480	73	28	316	34
Future Volume (veh/h)	38	114	91	113	190	32	104	480	73	28	316	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.91	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	130	103	128	216	36	118	545	83	32	359	39
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	191	151	161	392	65	150	676	103	58	621	67
Arrive On Green	0.04	0.20	0.20	0.09	0.25	0.25	0.08	0.43	0.43	0.03	0.38	0.38
Sat Flow, veh/h	1767	934	740	1781	1539	257	1781	1577	240	1781	1648	179
Grp Volume(v), veh/h	43	0	233	128	0	252	118	0	628	32	0	398
Grp Sat Flow(s),veh/h/ln	1767	0	1675	1781	0	1796	1781	0	1818	1781	0	1827
Q Serve(g_s), s	1.8	0.0	9.5	5.2	0.0	9.0	4.8	0.0	22.2	1.3	0.0	12.8
Cycle Q Clear(g_c), s	1.8	0.0	9.5	5.2	0.0	9.0	4.8	0.0	22.2	1.3	0.0	12.8
Prop In Lane	1.00		0.44	1.00		0.14	1.00		0.13	1.00		0.10
Lane Grp Cap(c), veh/h	70	0	342	161	0	458	150	0	779	58	0	689
V/C Ratio(X)	0.61	0.00	0.68	0.79	0.00	0.55	0.78	0.00	0.81	0.55	0.00	0.58
Avail Cap(c_a), veh/h	137	0	409	181	0	482	210	0	779	123	0	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	27.1	32.9	0.0	23.8	33.1	0.0	18.4	35.1	0.0	18.3
Incr Delay (d2), s/veh	8.4	0.0	3.6	19.2	0.0	1.2	12.1	0.0	8.7	7.9	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	4.0	3.0	0.0	3.8	2.5	0.0	10.3	0.7	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	0.0	30.7	52.1	0.0	25.0	45.2	0.0	27.1	43.1	0.0	21.8
LnGrp LOS	D	A	C	D	A	C	D	A	C	D	A	C
Approach Vol, veh/h		276			380			746			430	
Approach Delay, s/veh		32.7			34.1			30.0			23.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	36.1	11.2	19.5	10.7	32.3	7.4	23.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	31.4	7.5	18.0	8.7	27.8	5.7	19.8				
Max Q Clear Time (g_c+I1), s	3.3	24.2	7.2	11.5	6.8	14.8	3.8	11.0				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.7	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			29.7									
HCM 6th LOS			C									
























HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Existing Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	147	99	25	349	128	83	59	13	85	69	123
Future Volume (veh/h)	93	147	99	25	349	128	83	59	13	85	69	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	155	0	26	367	0	87	62	14	89	73	129
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	539		52	462		115	461	104	116	188	332
Arrive On Green	0.07	0.29	0.00	0.03	0.25	0.00	0.06	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1471	332	1781	599	1059
Grp Volume(v), veh/h	98	155	0	26	367	0	87	0	76	89	0	202
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1804	1781	0	1658
Q Serve(g_s), s	3.2	3.8	0.0	0.8	10.9	0.0	2.8	0.0	1.8	2.9	0.0	5.6
Cycle Q Clear(g_c), s	3.2	3.8	0.0	0.8	10.9	0.0	2.8	0.0	1.8	2.9	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.64
Lane Grp Cap(c), veh/h	125	539		52	462		115	0	565	116	0	520
V/C Ratio(X)	0.78	0.29		0.50	0.79		0.76	0.00	0.13	0.77	0.00	0.39
Avail Cap(c_a), veh/h	166	586		151	570		151	0	565	151	0	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	16.3	0.0	28.2	20.8	0.0	27.2	0.0	14.6	27.2	0.0	15.8
Incr Delay (d2), s/veh	15.8	0.3	0.0	7.1	6.2	0.0	14.7	0.0	0.5	16.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.5	0.0	0.4	5.1	0.0	1.6	0.0	0.7	1.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	16.6	0.0	35.4	27.1	0.0	41.9	0.0	15.1	43.2	0.0	18.0
LnGrp LOS	D	B		D	C		D	A	B	D	A	B
Approach Vol, veh/h		253	A		393	A		163			291	
Approach Delay, s/veh		26.8			27.6			29.4			25.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	23.0	6.2	21.5	8.3	23.0	8.7	19.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	4.9	3.8	2.8	5.8	4.8	7.6	5.2	12.9				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.6	0.0	0.8	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			27.2									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 9: 7th Ave & Capitola Rd

Existing Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	268	129	53	492	103	184	301	54	65	173	30
Future Volume (veh/h)	7	268	129	53	492	103	184	301	54	65	173	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	7	279	134	55	512	107	192	314	56	68	180	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	16	724	320	91	716	149	174	630	528	157	504	87
Arrive On Green	0.01	0.20	0.20	0.05	0.25	0.25	0.10	0.34	0.34	0.09	0.33	0.33
Sat Flow, veh/h	1781	3554	1573	1781	2913	605	1781	1870	1567	1767	1537	265
Grp Volume(v), veh/h	7	279	134	55	311	308	192	314	56	68	0	211
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1742	1781	1870	1567	1767	0	1801
Q Serve(g_s), s	0.2	3.8	4.2	1.7	9.0	9.1	5.5	7.5	0.9	2.1	0.0	5.0
Cycle Q Clear(g_c), s	0.2	3.8	4.2	1.7	9.0	9.1	5.5	7.5	0.9	2.1	0.0	5.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	16	724	320	91	437	428	174	630	528	157	0	591
V/C Ratio(X)	0.43	0.39	0.42	0.60	0.71	0.72	1.10	0.50	0.11	0.43	0.00	0.36
Avail Cap(c_a), veh/h	158	1135	502	158	567	556	174	630	528	157	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	19.4	19.5	26.2	19.4	19.5	25.4	14.9	6.0	24.3	0.0	14.4
Incr Delay (d2), s/veh	16.6	0.3	0.9	6.3	2.9	3.2	99.1	2.8	0.4	1.9	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.5	0.8	3.7	3.7	6.9	3.3	0.5	0.9	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	19.7	20.4	32.4	22.4	22.6	124.5	17.7	6.4	26.2	0.0	16.1
LnGrp LOS	D	B	C	C	C	C	F	B	A	C	A	B
Approach Vol, veh/h		420			674			562			279	
Approach Delay, s/veh		20.4			23.3			53.0			18.6	
Approach LOS		C			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	7.4	16.0	10.0	23.0	5.0	18.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.1	9.5	3.7	6.2	7.5	7.0	2.2	11.1				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.7	0.0	0.8	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			30.6									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

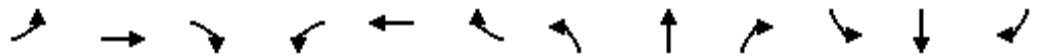
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Vol, veh/h	6	6	9	195	6	153	15	264	109	101	195	9
Future Vol, veh/h	6	6	9	195	6	153	15	264	109	101	195	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	5	5	5	2	2	2	3	3	3	4	4	4
Mvmt Flow	6	6	9	205	6	161	16	278	115	106	205	9
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10.1	13	17.2	15.1
HCM LOS	B	B	C	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	4%	29%	97%	0%	33%
Vol Thru, %	68%	29%	3%	0%	64%
Vol Right, %	28%	43%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	388	21	201	153	305
LT Vol	15	6	195	0	101
Through Vol	264	6	6	0	195
RT Vol	109	9	0	153	9
Lane Flow Rate	408	22	212	161	321
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.622	0.042	0.415	0.262	0.52
Departure Headway (Hd)	5.485	6.847	7.055	5.847	5.829
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	653	526	510	612	616
Service Time	3.544	4.847	4.816	3.607	3.89
HCM Lane V/C Ratio	0.625	0.042	0.416	0.263	0.521
HCM Control Delay	17.2	10.1	14.8	10.7	15.1
HCM Lane LOS	C	B	B	B	C
HCM 95th-tile Q	4.3	0.1	2	1	3

HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Existing Plus Project AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	541	303	64	527	73	572	19	85	21	9	24
Future Volume (veh/h)	20	541	303	64	527	73	572	19	85	21	9	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	23	629	0	74	613	85	681	0	0	24	10	28
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	2	2	2
Cap, veh/h	45	768		95	763	106	934	0		297	124	370
Arrive On Green	0.03	0.22	0.00	0.05	0.24	0.24	0.26	0.00	0.00	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	3122	432	3534	0	1572	1275	531	1585
Grp Volume(v), veh/h	23	629	0	74	348	350	681	0	0	34	0	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1778	1767	0	1572	1807	0	1585
Q Serve(g_s), s	1.0	13.0	0.0	3.2	14.2	14.3	13.6	0.0	0.0	1.1	0.0	1.1
Cycle Q Clear(g_c), s	1.0	13.0	0.0	3.2	14.2	14.3	13.6	0.0	0.0	1.1	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	45	768		95	434	434	934	0		421	0	370
V/C Ratio(X)	0.51	0.82		0.78	0.80	0.81	0.73	0.00		0.08	0.00	0.08
Avail Cap(c_a), veh/h	118	833		127	434	434	934	0		421	0	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.2	28.8	0.0	36.1	27.4	27.4	25.9	0.0	0.0	23.1	0.0	23.1
Incr Delay (d2), s/veh	8.7	6.1	0.0	19.4	10.4	10.6	5.0	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.0	0.0	1.9	7.0	7.1	6.1	0.0	0.0	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	34.9	0.0	55.5	37.8	38.1	30.9	0.0	0.0	23.5	0.0	23.5
LnGrp LOS	D	C		E	D	D	C	A		C	A	C
Approach Vol, veh/h		652	A		772			681	A		62	
Approach Delay, s/veh		35.3			39.6			30.9			23.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.9	8.6	21.2		22.5	6.4	23.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.4	5.5	18.1		18.0	5.1	18.5				
Max Q Clear Time (g_c+I1), s		15.6	5.2	15.0		3.1	3.0	16.3				
Green Ext Time (p_c), s		1.3	0.0	1.2		0.1	0.0	1.0				

Intersection Summary



















HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 12: 7th Ave & Soquel Ave

Existing Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	502	71	220	598	0	142	0	457	0	0	0
Future Volume (veh/h)	0	502	71	220	598	0	142	0	457	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1856	1856	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	552	78	242	657	0	156	0	502	0	0	0
Peak Hour Factor	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	3	3	0	2	2	2	2	2	2
Cap, veh/h	0	774	109	294	1770	0	586	0	507	0	621	0
Arrive On Green	0.00	0.25	0.25	0.17	0.50	0.00	0.33	0.00	0.33	0.00	0.00	0.00
Sat Flow, veh/h	0	3157	431	1767	3618	0	1366	0	1528	0	1870	0
Grp Volume(v), veh/h	0	314	316	242	657	0	156	0	502	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1749	1747	1767	1763	0	1366	0	1528	0	1870	0
Q Serve(g_s), s	0.0	8.9	8.9	7.2	6.2	0.0	4.7	0.0	17.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.9	8.9	7.2	6.2	0.0	4.7	0.0	17.7	0.0	0.0	0.0
Prop In Lane	0.00		0.25	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	442	441	294	1770	0	586	0	507	0	621	0
V/C Ratio(X)	0.00	0.71	0.72	0.82	0.37	0.00	0.27	0.00	0.99	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	580	580	342	2145	0	586	0	507	0	621	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.5	18.5	21.8	8.3	0.0	13.7	0.0	18.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.8	2.9	13.2	0.1	0.0	1.1	0.0	37.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	3.6	3.8	1.9	0.0	1.4	0.0	10.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.2	21.4	35.0	8.4	0.0	14.8	0.0	55.6	0.0	0.0	0.0
LnGrp LOS	A	C	C	C	A	A	B	A	E	A	A	A
Approach Vol, veh/h		630			899			658				0
Approach Delay, s/veh		21.3			15.6			45.9				0.0
Approach LOS		C			B			D				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	13.5	18.2		22.5		31.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		19.7	9.2	10.9		0.0		8.2				
Green Ext Time (p_c), s		0.0	0.1	2.2		0.0		4.8				
Intersection Summary												
HCM 6th Ctrl Delay				26.3								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Existing Plus Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	614	373	309	631	1	233	5	927	1	1	1
Future Volume (veh/h)	3	614	373	309	631	1	233	5	927	1	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	653	0	329	671	1	248	5	986	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	800		397	1622	2	347	5	857	83	79	39
Arrive On Green	0.00	0.23	0.00	0.22	0.45	0.45	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1767	3526	1572	1781	3641	5	707	14	1585	0	248	124
Grp Volume(v), veh/h	3	653	0	329	327	345	253	0	986	3	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1869	721	0	1585	371	0	0
Q Serve(g_s), s	0.1	10.2	0.0	10.2	7.3	7.3	0.0	0.0	18.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	10.2	0.0	10.2	7.3	7.3	18.5	0.0	18.5	18.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.98		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	7	800		397	792	833	352	0	857	201	0	0
V/C Ratio(X)	0.42	0.82		0.83	0.41	0.41	0.72	0.00	1.15	0.01	0.00	0.00
Avail Cap(c_a), veh/h	152	879		720	1008	1061	352	0	857	201	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.9	21.3	0.0	21.5	11.0	11.0	20.7	0.0	13.4	15.4	0.0	0.0
Incr Delay (d2), s/veh	34.3	5.6	0.0	4.5	0.3	0.3	12.0	0.0	81.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.5	0.0	4.4	2.5	2.6	4.3	0.0	27.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	26.9	0.0	26.0	11.3	11.3	32.6	0.0	94.3	15.5	0.0	0.0
LnGrp LOS	E	C		C	B	B	C	A	F	B	A	A
Approach Vol, veh/h		656	A		1001			1239				3
Approach Delay, s/veh		27.1			16.1			81.7				15.5
Approach LOS		C			B			F				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	17.5	17.7		23.0	4.7	30.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	23.5	14.5		18.5	5.0	33.0				
Max Q Clear Time (g_c+I1), s		20.5	12.2	12.2		20.5	2.1	9.3				
Green Ext Time (p_c), s		0.0	0.8	1.0		0.0	0.0	4.3				
Intersection Summary												
HCM 6th Ctrl Delay			46.6									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	909	8	28	510	18	0	0	23	12	0	22
Future Vol, veh/h	20	909	8	28	510	18	0	0	23	12	0	22
Conflicting Peds, #/hr	20	0	21	21	0	20	8	0	0	0	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	25	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	967	9	30	543	19	0	0	24	13	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	582	0	0	997	0	0	-	-	509	1149	1662	571
Stage 1	-	-	-	-	-	-	-	-	-	623	623	-
Stage 2	-	-	-	-	-	-	-	-	-	526	1039	-
Critical Hdwy	4.13	-	-	4.13	-	-	-	-	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	-	-	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	990	-	-	692	-	-	0	0	510	164	97	519
Stage 1	-	-	-	-	-	-	0	0	-	473	477	-
Stage 2	-	-	-	-	-	-	0	0	-	504	307	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	971	-	-	678	-	-	-	-	500	145	87	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	145	87	-
Stage 1	-	-	-	-	-	-	-	-	-	454	447	-
Stage 2	-	-	-	-	-	-	-	-	-	469	294	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.5			12.6			20.5		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	500	971	-	-	678	-	-	269
HCM Lane V/C Ratio	0.049	0.022	-	-	0.044	-	-	0.134
HCM Control Delay (s)	12.6	8.8	-	-	10.6	-	-	20.5
HCM Lane LOS	B	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.1	-	-	0.5

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	937	7	0	549	14	0	0	41	14	0	8
Future Vol, veh/h	0	937	7	0	549	14	0	0	41	14	0	8
Conflicting Peds, #/hr	25	0	21	21	0	25	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	25	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	0	997	7	0	584	15	0	0	44	15	0	9





















Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	624	0	0	-	-	0	-	-	525	1110	1634	609
Stage 1	-	-	-	-	-	-	-	-	-	609	609	-
Stage 2	-	-	-	-	-	-	-	-	-	501	1025	-
Critical Hdwy	4.13	-	-	-	-	-	-	-	6.93	7.375	6.575	6.275
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.175	5.575	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.575	5.575	-
Follow-up Hdwy	2.219	-	-	-	-	-	-	-	3.319	3.5475	4.0475	3.3475
Pot Cap-1 Maneuver	955	-	-	0	-	0	0	0	498	172	98	487
Stage 1	-	-	-	0	-	0	0	0	-	475	478	-
Stage 2	-	-	-	0	-	0	0	0	-	515	306	-
Platoon blocked, %		-	-	-	-	-	-	-				
Mov Cap-1 Maneuver	932	-	-	-	-	-	-	-	487	153	94	475
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	283	207	-
Stage 1	-	-	-	-	-	-	-	-	-	464	467	-
Stage 2	-	-	-	-	-	-	-	-	-	468	300	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.1	16.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	487	932	-	-	-	-	332
HCM Lane V/C Ratio	0.09	-	-	-	-	-	0.07
HCM Control Delay (s)	13.1	0	-	-	-	-	16.7
HCM Lane LOS	B	A	-	-	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	-	-	0.2





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Existing Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	731	120	103	406	43	87	215	77	200	367	45
Future Volume (veh/h)	53	731	120	103	406	43	87	215	77	200	367	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	769	126	108	427	45	92	226	81	211	386	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	859	141	137	1018	107	118	347	124	251	555	68
Arrive On Green	0.05	0.28	0.28	0.08	0.31	0.31	0.07	0.27	0.27	0.14	0.34	0.34
Sat Flow, veh/h	1781	3044	499	1781	3241	340	1781	1309	469	1781	1634	199
Grp Volume(v), veh/h	56	449	446	108	233	239	92	0	307	211	0	433
Grp Sat Flow(s),veh/h/ln	1781	1777	1766	1781	1777	1804	1781	0	1778	1781	0	1833
Q Serve(g_s), s	2.4	18.6	18.6	4.6	8.0	8.0	3.9	0.0	11.8	8.9	0.0	15.7
Cycle Q Clear(g_c), s	2.4	18.6	18.6	4.6	8.0	8.0	3.9	0.0	11.8	8.9	0.0	15.7
Prop In Lane	1.00		0.28	1.00		0.19	1.00		0.26	1.00		0.11
Lane Grp Cap(c), veh/h	81	502	498	137	558	567	118	0	471	251	0	623
V/C Ratio(X)	0.69	0.89	0.90	0.79	0.42	0.42	0.78	0.00	0.65	0.84	0.00	0.70
Avail Cap(c_a), veh/h	128	521	517	155	558	567	155	0	471	290	0	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.1	26.5	26.5	34.8	20.8	20.8	35.3	0.0	25.1	32.1	0.0	21.9
Incr Delay (d2), s/veh	10.1	17.5	17.6	20.7	0.5	0.5	16.6	0.0	6.8	17.3	0.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.9	9.9	2.7	3.2	3.3	2.2	0.0	5.6	4.9	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	43.9	44.1	55.5	21.3	21.3	51.9	0.0	31.9	49.4	0.0	28.2
LnGrp LOS	D	D	D	E	C	C	D	A	C	D	A	C
Approach Vol, veh/h		951			580			399			644	
Approach Delay, s/veh		44.1			27.7			36.5			35.1	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	24.8	10.4	26.2	9.6	30.6	8.0	28.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	20.3	6.7	22.5	6.7	26.1	5.5	23.7				
Max Q Clear Time (g_c+I1), s	10.9	13.8	6.6	20.6	5.9	17.7	4.4	10.0				
Green Ext Time (p_c), s	0.1	1.0	0.0	1.0	0.0	1.7	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay				37.0								
HCM 6th LOS				D								

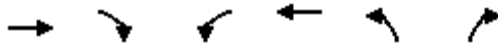
HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

Existing Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	997	53	48	463	63	27	44	55	236	150	33
Future Volume (veh/h)	43	997	53	48	463	63	27	44	55	236	150	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	1028	55	49	477	65	28	45	57	243	155	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	1097	59	75	1015	138	52	184	233	281	559	123
Arrive On Green	0.04	0.32	0.32	0.04	0.32	0.32	0.03	0.25	0.25	0.16	0.38	0.38
Sat Flow, veh/h	1781	3418	183	1781	3137	425	1781	743	941	1781	1484	325
Grp Volume(v), veh/h	44	534	549	49	269	273	28	0	102	243	0	189
Grp Sat Flow(s),veh/h/ln	1781	1777	1824	1781	1777	1786	1781	0	1685	1781	0	1809
Q Serve(g_s), s	1.9	22.7	22.7	2.1	9.4	9.5	1.2	0.0	3.8	10.4	0.0	5.7
Cycle Q Clear(g_c), s	1.9	22.7	22.7	2.1	9.4	9.5	1.2	0.0	3.8	10.4	0.0	5.7
Prop In Lane	1.00		0.10	1.00		0.24	1.00		0.56	1.00		0.18
Lane Grp Cap(c), veh/h	70	570	585	75	575	578	52	0	418	281	0	681
V/C Ratio(X)	0.63	0.94	0.94	0.66	0.47	0.47	0.54	0.00	0.24	0.86	0.00	0.28
Avail Cap(c_a), veh/h	114	573	588	117	575	578	126	0	418	286	0	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	25.7	25.7	36.7	21.0	21.0	37.3	0.0	23.4	32.0	0.0	16.9
Incr Delay (d2), s/veh	8.8	23.1	22.8	9.3	0.6	0.6	8.4	0.0	1.4	22.6	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	12.7	13.0	1.1	3.8	3.9	0.6	0.0	1.6	6.1	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	48.8	48.4	46.1	21.6	21.6	45.7	0.0	24.8	54.5	0.0	17.9
LnGrp LOS	D	D	D	D	C	C	D	A	C	D	A	B
Approach Vol, veh/h		1127			591			130				432
Approach Delay, s/veh		48.5			23.6			29.3				38.5
Approach LOS		D			C			C				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	23.8	7.8	29.5	6.8	33.8	7.6	29.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	19.3	5.1	25.1	5.5	26.3	5.0	25.2				
Max Q Clear Time (g_c+I1), s	12.4	5.8	4.1	24.7	3.2	7.7	3.9	11.5				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.2	0.0	0.9	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay												39.1
HCM 6th LOS												D

HCM 6th Signalized Intersection Summary
5: 17th Ave & Soquel Ave

Existing Plus Project PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖↗	↗
Traffic Volume (veh/h)	602	527	55	218	284	44
Future Volume (veh/h)	602	527	55	218	284	44
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	614	538	56	222	332	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	717	1113	93	965	1149	519
Arrive On Green	0.38	0.38	0.05	0.52	0.32	0.00
Sat Flow, veh/h	1870	1569	1781	1870	3563	1610
Grp Volume(v), veh/h	614	538	56	222	332	0
Grp Sat Flow(s),veh/h/ln	1870	1569	1781	1870	1781	1610
Q Serve(g_s), s	16.8	8.6	1.7	3.6	3.9	0.0
Cycle Q Clear(g_c), s	16.8	8.6	1.7	3.6	3.9	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	717	1113	93	965	1149	519
V/C Ratio(X)	0.86	0.48	0.60	0.23	0.29	0.00
Avail Cap(c_a), veh/h	788	1172	160	1106	1149	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	3.7	25.9	7.4	14.1	0.0
Incr Delay (d2), s/veh	8.6	0.3	6.2	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	5.6	0.8	1.2	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.4	4.0	32.1	7.5	14.8	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	1152			278	332	
Approach Delay, s/veh	14.9			12.5	14.8	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.4	25.9		33.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.0	23.5		33.0
Max Q Clear Time (g_c+I1), s		5.9	3.7	18.8		5.6
Green Ext Time (p_c), s		0.9	0.0	2.6		1.3

Intersection Summary

HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	7	30	12	391	560	16
Future Vol, veh/h	7	30	12	391	560	16
Conflicting Peds, #/hr	0	0	8	0	0	8
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	32	13	420	602	17

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1065	619	627	0	-	0
Stage 1	619	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	246	489	955	-	-	-
Stage 1	537	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	239	485	948	-	-	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	948	-	458	-	-
HCM Lane V/C Ratio	0.014	-	0.087	-	-
HCM Control Delay (s)	8.8	-	13.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Existing Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	289	122	109	162	31	59	329	109	59	431	51
Future Volume (veh/h)	43	289	122	109	162	31	59	329	109	59	431	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	298	126	112	167	32	61	339	112	61	444	53
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	328	139	142	468	90	85	488	161	85	600	72
Arrive On Green	0.04	0.27	0.27	0.08	0.31	0.31	0.05	0.37	0.37	0.05	0.37	0.37
Sat Flow, veh/h	1781	1222	517	1781	1517	291	1781	1328	439	1781	1634	195
Grp Volume(v), veh/h	44	0	424	112	0	199	61	0	451	61	0	497
Grp Sat Flow(s),veh/h/ln	1781	0	1739	1781	0	1808	1781	0	1767	1781	0	1829
Q Serve(g_s), s	1.8	0.0	17.9	4.7	0.0	6.5	2.6	0.0	16.5	2.6	0.0	17.9
Cycle Q Clear(g_c), s	1.8	0.0	17.9	4.7	0.0	6.5	2.6	0.0	16.5	2.6	0.0	17.9
Prop In Lane	1.00		0.30	1.00		0.16	1.00		0.25	1.00		0.11
Lane Grp Cap(c), veh/h	71	0	466	142	0	557	85	0	649	85	0	672
V/C Ratio(X)	0.62	0.00	0.91	0.79	0.00	0.36	0.72	0.00	0.69	0.72	0.00	0.74
Avail Cap(c_a), veh/h	143	0	492	176	0	557	120	0	649	120	0	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	26.9	34.3	0.0	20.4	35.7	0.0	20.4	35.7	0.0	20.9
Incr Delay (d2), s/veh	8.5	0.0	20.3	17.0	0.0	0.4	11.5	0.0	6.1	11.5	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	9.7	2.6	0.0	2.7	1.4	0.0	7.4	1.4	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	0.0	47.2	51.3	0.0	20.8	47.2	0.0	26.5	47.2	0.0	28.0
LnGrp LOS	D	A	D	D	A	C	D	A	C	D	A	C
Approach Vol, veh/h		468			311			512			558	
Approach Delay, s/veh		46.9			31.8			28.9			30.1	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	32.4	10.6	24.9	8.1	32.4	7.5	27.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	27.9	7.5	21.5	5.1	27.9	6.1	22.9				
Max Q Clear Time (g_c+I1), s	4.6	18.5	6.7	19.9	4.6	19.9	3.8	8.5				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.4	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			34.3									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Existing Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	512	220	23	264	95	89	60	12	144	90	84
Future Volume (veh/h)	81	512	220	23	264	95	89	60	12	144	90	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	539	0	24	278	0	94	63	13	152	95	88
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	603		48	383		121	418	86	190	274	254
Arrive On Green	0.14	0.32	0.00	0.03	0.20	0.00	0.07	0.28	0.28	0.11	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1495	309	1781	860	797
Grp Volume(v), veh/h	85	539	0	24	278	0	94	0	76	152	0	183
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1804	1781	0	1657
Q Serve(g_s), s	2.9	18.7	0.0	0.9	9.4	0.0	3.5	0.0	2.2	5.7	0.0	5.8
Cycle Q Clear(g_c), s	2.9	18.7	0.0	0.9	9.4	0.0	3.5	0.0	2.2	5.7	0.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.48
Lane Grp Cap(c), veh/h	257	603		48	383		121	0	504	190	0	528
V/C Ratio(X)	0.33	0.89		0.50	0.73		0.78	0.00	0.15	0.80	0.00	0.35
Avail Cap(c_a), veh/h	257	674		131	559		176	0	504	223	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	21.9	0.0	32.6	25.2	0.0	31.2	0.0	18.4	29.6	0.0	17.7
Incr Delay (d2), s/veh	0.7	13.5	0.0	8.0	2.6	0.0	12.6	0.0	0.6	16.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.8	0.0	0.5	4.2	0.0	1.9	0.0	0.9	3.2	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	35.5	0.0	40.6	27.9	0.0	43.8	0.0	19.1	45.7	0.0	19.5
LnGrp LOS	C	D		D	C		D	A	B	D	A	B
Approach Vol, veh/h		624	A		302	A		170			335	
Approach Delay, s/veh		34.3			28.9			32.7			31.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	23.5	6.3	26.4	9.1	26.2	14.3	18.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	19.0	5.0	24.5	6.7	20.8	9.2	20.3				
Max Q Clear Time (g_c+I1), s	7.7	4.2	2.9	20.7	5.5	7.8	4.9	11.4				
Green Ext Time (p_c), s	0.0	0.2	0.0	1.2	0.0	0.8	0.1	1.0				

Intersection Summary

HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: 7th Ave & Capitola Rd

Existing Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	846	249	86	431	57	119	135	58	101	209	13
Future Volume (veh/h)	13	846	249	86	431	57	119	135	58	101	209	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	881	259	90	449	59	124	141	60	105	218	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	1030	445	115	1065	139	157	542	451	157	503	32
Arrive On Green	0.02	0.29	0.29	0.06	0.34	0.34	0.09	0.29	0.29	0.09	0.29	0.29
Sat Flow, veh/h	1781	3554	1536	1781	3155	412	1781	1870	1556	1781	1737	112
Grp Volume(v), veh/h	14	881	259	90	252	256	124	141	60	105	0	232
Grp Sat Flow(s),veh/h/ln	1781	1777	1536	1781	1777	1791	1781	1870	1556	1781	0	1848
Q Serve(g_s), s	0.5	15.8	9.7	3.3	7.4	7.4	4.6	3.9	1.4	3.8	0.0	6.9
Cycle Q Clear(g_c), s	0.5	15.8	9.7	3.3	7.4	7.4	4.6	3.9	1.4	3.8	0.0	6.9
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	30	1030	445	115	599	604	157	542	451	157	0	536
V/C Ratio(X)	0.46	0.86	0.58	0.78	0.42	0.42	0.79	0.26	0.13	0.67	0.00	0.43
Avail Cap(c_a), veh/h	132	1082	468	146	599	604	172	542	451	172	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.8	22.6	20.4	31.0	17.2	17.2	30.1	18.4	9.2	29.7	0.0	19.4
Incr Delay (d2), s/veh	10.4	6.7	1.7	18.7	0.5	0.5	19.8	1.2	0.6	8.5	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.0	3.4	2.0	2.9	2.9	2.8	1.8	0.7	1.9	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	29.2	22.1	49.7	17.7	17.7	49.9	19.5	9.8	38.2	0.0	22.0
LnGrp LOS	D	C	C	D	B	B	D	B	A	D	A	C
Approach Vol, veh/h		1154			598			325				337
Approach Delay, s/veh		27.8			22.5			29.3				27.0
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	24.0	8.9	24.0	10.4	24.0	5.7	27.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	19.5	5.5	20.5	6.5	19.5	5.0	21.0				
Max Q Clear Time (g_c+I1), s	5.8	5.9	5.3	17.8	6.6	8.9	2.5	9.4				
Green Ext Time (p_c), s	0.0	0.7	0.0	1.7	0.0	0.9	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay			26.6									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	23.8
Intersection LOS	C























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	14	8	19	162	3	99	14	183	271	202	260	14
Future Vol, veh/h	14	8	19	162	3	99	14	183	271	202	260	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	8	20	169	3	103	15	191	282	210	271	15
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	11.3	13.6	24	30.3
HCM LOS	B	B	C	D

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	34%	98%	0%	42%
Vol Thru, %	39%	20%	2%	0%	55%
Vol Right, %	58%	46%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	468	41	165	99	476
LT Vol	14	14	162	0	202
Through Vol	183	8	3	0	260
RT Vol	271	19	0	99	14
Lane Flow Rate	488	43	172	103	496
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.758	0.089	0.374	0.189	0.819
Departure Headway (Hd)	5.6	7.473	7.828	6.605	5.947
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	478	459	542	610
Service Time	3.617	5.546	5.577	4.353	3.964
HCM Lane V/C Ratio	0.753	0.09	0.375	0.19	0.813
HCM Control Delay	24	11.3	15.2	10.9	30.3
HCM Lane LOS	C	B	C	B	D
HCM 95th-tile Q	6.9	0.3	1.7	0.7	8.4













HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Existing Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	858	992	68	432	35	482	15	43	33	35	30
Future Volume (veh/h)	8	858	992	68	432	35	482	15	43	33	35	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	894	0	71	450	36	513	0	0	34	36	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1140		91	1204	96	773	0		182	193	324
Arrive On Green	0.01	0.32	0.00	0.05	0.36	0.36	0.22	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1585	1781	3328	265	3563	0	1585	887	939	1578
Grp Volume(v), veh/h	8	894	0	71	239	247	513	0	0	70	0	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1816	1781	0	1585	1826	0	1578
Q Serve(g_s), s	0.4	20.0	0.0	3.4	8.7	8.8	11.5	0.0	0.0	2.8	0.0	1.4
Cycle Q Clear(g_c), s	0.4	20.0	0.0	3.4	8.7	8.8	11.5	0.0	0.0	2.8	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	0.49		1.00
Lane Grp Cap(c), veh/h	18	1140		91	643	657	773	0		375	0	324
V/C Ratio(X)	0.44	0.78		0.78	0.37	0.38	0.66	0.00		0.19	0.00	0.10
Avail Cap(c_a), veh/h	102	1619		104	812	829	773	0		375	0	324
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.1	27.0	0.0	41.1	20.6	20.6	31.4	0.0	0.0	28.7	0.0	28.2
Incr Delay (d2), s/veh	16.3	1.7	0.0	27.5	0.4	0.4	4.5	0.0	0.0	1.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.4	0.0	2.2	3.6	3.7	5.3	0.0	0.0	1.3	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	28.7	0.0	68.6	21.0	21.0	35.8	0.0	0.0	29.8	0.0	28.8
LnGrp LOS	E	C		E	C	C	D	A		C	A	C
Approach Vol, veh/h		902	A		557			513	A		101	
Approach Delay, s/veh		28.9			27.0			35.8			29.5	
Approach LOS		C			C			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	9.0	32.6		22.5	5.4	36.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	5.1	39.9		18.0	5.0	40.0				
Max Q Clear Time (g_c+I1), s		13.5	5.4	22.0		4.8	2.4	10.8				
Green Ext Time (p_c), s		1.0	0.0	6.1		0.3	0.0	3.1				
Intersection Summary												
HCM 6th Ctrl Delay			30.2									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 12: 7th Ave & Soquel Ave

Existing Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑			↖	↗		↕	
Traffic Volume (veh/h)	0	824	81	283	470	0	88	0	229	0	0	0
Future Volume (veh/h)	0	824	81	283	470	0	88	0	229	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	841	83	289	480	0	90	0	234	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	958	95	315	1940	0	550	0	475	0	566	0
Arrive On Green	0.00	0.29	0.29	0.18	0.55	0.00	0.30	0.00	0.30	0.00	0.00	0.00
Sat Flow, veh/h	0	3354	322	1781	3647	0	1418	0	1569	0	1870	0
Grp Volume(v), veh/h	0	458	466	289	480	0	90	0	234	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1777	1806	1781	1777	0	1418	0	1569	0	1870	0
Q Serve(g_s), s	0.0	14.6	14.6	9.5	4.2	0.0	2.8	0.0	7.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.6	14.6	9.5	4.2	0.0	2.8	0.0	7.3	0.0	0.0	0.0
Prop In Lane	0.00		0.18	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	522	530	315	1940	0	550	0	475	0	566	0
V/C Ratio(X)	0.00	0.88	0.88	0.92	0.25	0.00	0.16	0.00	0.49	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	538	547	315	1972	0	550	0	475	0	566	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.0	20.0	24.1	7.1	0.0	15.4	0.0	17.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	15.0	14.8	30.7	0.1	0.0	0.6	0.0	3.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	7.7	6.4	1.3	0.0	0.9	0.0	2.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	35.0	34.8	54.8	7.2	0.0	16.1	0.0	20.6	0.0	0.0	0.0
LnGrp LOS	A	C	C	D	A	A	B	A	C	A	A	A
Approach Vol, veh/h		924			769			324				0
Approach Delay, s/veh		34.9			25.0			19.4				0.0
Approach LOS		C			C			B				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	15.0	22.0		22.5		37.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		9.3	11.5	16.6		0.0		6.2				
Green Ext Time (p_c), s		0.9	0.0	0.8		0.0		3.4				
Intersection Summary												
HCM 6th Ctrl Delay				28.6								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Existing Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	720	396	384	585	5	204	5	694	6	2	8
Future Volume (veh/h)	6	720	396	384	585	5	204	5	694	6	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	750	0	400	609	5	212	5	723	6	2	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	846		444	1732	14	373	6	875	96	50	69
Arrive On Green	0.01	0.24	0.00	0.25	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3611	30	867	20	1585	62	165	227
Grp Volume(v), veh/h	6	750	0	400	300	314	217	0	723	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1864	888	0	1585	453	0	0
Q Serve(g_s), s	0.2	13.1	0.0	14.0	6.8	6.8	0.0	0.0	19.5	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	13.1	0.0	14.0	6.8	6.8	16.7	0.0	19.5	16.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.98		1.00	0.37		0.50
Lane Grp Cap(c), veh/h	14	846		444	852	894	379	0	875	214	0	0
V/C Ratio(X)	0.43	0.89		0.90	0.35	0.35	0.57	0.00	0.83	0.07	0.00	0.00
Avail Cap(c_a), veh/h	138	855		456	852	894	379	0	875	214	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.8	23.7	0.0	23.4	10.5	10.5	21.5	0.0	11.9	17.2	0.0	0.0
Incr Delay (d2), s/veh	19.1	11.0	0.0	20.3	0.2	0.2	6.1	0.0	8.8	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.4	0.0	7.9	2.4	2.5	3.5	0.0	8.9	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	34.7	0.0	43.7	10.7	10.7	27.6	0.0	20.6	17.9	0.0	0.0
LnGrp LOS	D	C		D	B	B	C	A	C	B	A	A
Approach Vol, veh/h		756	A		1014			940			16	
Approach Delay, s/veh		34.9			23.7			22.2			17.9	
Approach LOS		C			C			C			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	20.6	19.8		24.0	5.0	35.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	16.5	15.5		19.5	5.0	27.0				
Max Q Clear Time (g_c+I1), s		21.5	16.0	15.1		18.8	2.2	8.8				
Green Ext Time (p_c), s		0.0	0.1	0.2		0.0	0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay			26.3									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Appendix G

Intersection
Level of Service
Calculations

Background
Conditions

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↑	↘	↘
Traffic Vol, veh/h	13	367	568	28	23	30
Future Vol, veh/h	13	367	568	28	23	30
Conflicting Peds, #/hr	15	0	0	15	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	25	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	386	598	29	24	32

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	642	0	-	0	1027 623
Stage 1	-	-	-	-	613 -
Stage 2	-	-	-	-	414 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	943	-	-	-	260 486
Stage 1	-	-	-	-	541 -
Stage 2	-	-	-	-	667 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	930	-	-	-	249 474
Mov Cap-2 Maneuver	-	-	-	-	376 -
Stage 1	-	-	-	-	525 -
Stage 2	-	-	-	-	658 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	930	-	-	-	426
HCM Lane V/C Ratio	0.015	-	-	-	0.131
HCM Control Delay (s)	8.9	-	-	-	14.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	
Traffic Vol, veh/h	0	390	589	19	9	7
Future Vol, veh/h	0	390	589	19	9	7
Conflicting Peds, #/hr	18	0	0	18	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	25	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	411	620	20	9	7
























Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	658	0	-	0	1051 638
Stage 1	-	-	-	-	638 -
Stage 2	-	-	-	-	413 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	930	-	-	-	251 477
Stage 1	-	-	-	-	526 -
Stage 2	-	-	-	-	668 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	914	-	-	-	242 469
Mov Cap-2 Maneuver	-	-	-	-	242 -
Stage 1	-	-	-	-	517 -
Stage 2	-	-	-	-	657 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	914	-	-	-	307
HCM Lane V/C Ratio	-	-	-	-	0.055
HCM Control Delay (s)	0	-	-	-	17.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Background AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	36	248	100	64	400	66	139	363	54	60	268	65
Future Volume (veh/h)	36	248	100	64	400	66	139	363	54	60	268	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	251	101	65	404	67	140	367	55	61	271	66
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	488	190	101	656	108	178	584	88	98	469	114
Arrive On Green	0.04	0.20	0.20	0.06	0.22	0.22	0.10	0.37	0.37	0.05	0.32	0.32
Sat Flow, veh/h	1781	2475	963	1781	3038	499	1781	1584	237	1781	1449	353
Grp Volume(v), veh/h	36	178	174	65	235	236	140	0	422	61	0	337
Grp Sat Flow(s),veh/h/ln	1781	1777	1661	1781	1777	1761	1781	0	1821	1781	0	1801
Q Serve(g_s), s	1.1	5.0	5.3	2.0	6.7	6.8	4.3	0.0	10.6	1.9	0.0	8.7
Cycle Q Clear(g_c), s	1.1	5.0	5.3	2.0	6.7	6.8	4.3	0.0	10.6	1.9	0.0	8.7
Prop In Lane	1.00		0.58	1.00		0.28	1.00		0.13	1.00		0.20
Lane Grp Cap(c), veh/h	68	351	328	101	384	380	178	0	672	98	0	584
V/C Ratio(X)	0.53	0.51	0.53	0.64	0.61	0.62	0.79	0.00	0.63	0.63	0.00	0.58
Avail Cap(c_a), veh/h	159	572	535	159	572	567	188	0	672	159	0	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	20.0	20.1	25.8	19.8	19.8	24.6	0.0	14.5	25.8	0.0	15.7
Incr Delay (d2), s/veh	6.2	1.1	1.3	6.6	1.6	1.7	18.8	0.0	4.4	6.4	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.0	2.0	1.0	2.7	2.7	2.6	0.0	4.6	0.9	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	21.1	21.4	32.4	21.4	21.5	43.4	0.0	18.9	32.3	0.0	19.8
LnGrp LOS	C	C	C	C	C	C	D	A	B	C	A	B
Approach Vol, veh/h		388			536			562			398	
Approach Delay, s/veh		22.3			22.8			25.0			21.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	25.1	7.7	15.5	10.1	22.6	6.6	16.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.9	18.1	5.0	18.0				
Max Q Clear Time (g_c+I1), s	3.9	12.6	4.0	7.3	6.3	10.7	3.1	8.8				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.5	0.0	1.2	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

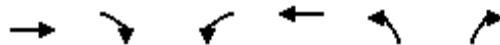
Background AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	280	58	68	424	135	73	119	58	71	95	34
Future Volume (veh/h)	18	280	58	68	424	135	73	119	58	71	95	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	19	292	60	71	442	141	76	124	60	74	99	35
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	648	130	106	687	217	110	400	194	108	442	156
Arrive On Green	0.02	0.22	0.22	0.06	0.26	0.26	0.06	0.34	0.34	0.06	0.34	0.34
Sat Flow, veh/h	1781	2889	579	1781	2633	831	1781	1187	575	1781	1313	464
Grp Volume(v), veh/h	19	177	175	71	297	286	76	0	184	74	0	134
Grp Sat Flow(s),veh/h/ln	1781	1777	1692	1781	1777	1688	1781	0	1762	1781	0	1778
Q Serve(g_s), s	0.6	4.8	5.1	2.2	8.4	8.5	2.4	0.0	4.4	2.3	0.0	3.1
Cycle Q Clear(g_c), s	0.6	4.8	5.1	2.2	8.4	8.5	2.4	0.0	4.4	2.3	0.0	3.1
Prop In Lane	1.00		0.34	1.00		0.49	1.00		0.33	1.00		0.26
Lane Grp Cap(c), veh/h	41	398	379	106	463	440	110	0	594	108	0	598
V/C Ratio(X)	0.47	0.44	0.46	0.67	0.64	0.65	0.69	0.00	0.31	0.68	0.00	0.22
Avail Cap(c_a), veh/h	158	566	539	158	566	538	158	0	594	173	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.3	18.9	19.0	26.0	18.5	18.6	26.0	0.0	13.9	26.0	0.0	13.5
Incr Delay (d2), s/veh	8.1	0.8	0.9	7.1	1.7	2.0	7.6	0.0	1.4	7.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.9	1.9	1.1	3.3	3.3	1.2	0.0	1.8	1.1	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	19.7	19.8	33.2	20.3	20.6	33.5	0.0	15.2	33.4	0.0	14.3
LnGrp LOS	D	B	B	C	C	C	C	A	B	C	A	B
Approach Vol, veh/h		371			654			260			208	
Approach Delay, s/veh		20.6			21.8			20.6			21.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	23.5	7.9	17.2	8.0	23.5	5.8	19.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.3	6.4	4.2	7.1	4.4	5.1	2.6	10.5				
Green Ext Time (p_c), s	0.0	0.7	0.0	1.5	0.0	0.5	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay				21.2								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

5: 17th Ave & Soquel Ave

Background AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑↑↑	
Traffic Volume (veh/h)	255	282	64	311	413	49
Future Volume (veh/h)	255	282	64	311	413	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	274	303	69	334	493	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	434	998	115	742	1433	648
Arrive On Green	0.23	0.23	0.06	0.40	0.40	0.00
Sat Flow, veh/h	1870	1554	1781	1870	3563	1610
Grp Volume(v), veh/h	274	303	69	334	493	0
Grp Sat Flow(s),veh/h/ln	1870	1554	1781	1870	1781	1610
Q Serve(g_s), s	5.9	4.0	1.7	5.9	4.3	0.0
Cycle Q Clear(g_c), s	5.9	4.0	1.7	5.9	4.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	434	998	115	742	1433	648
V/C Ratio(X)	0.63	0.30	0.60	0.45	0.34	0.00
Avail Cap(c_a), veh/h	752	1263	219	1170	1433	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.5	3.7	20.4	9.9	9.3	0.0
Incr Delay (d2), s/veh	1.5	0.2	5.0	0.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.6	0.8	2.0	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.0	3.9	25.4	10.3	9.9	0.0
LnGrp LOS	B	A	C	B	A	A
Approach Vol, veh/h	577			403	493	
Approach Delay, s/veh	10.1			12.9	9.9	
Approach LOS	B			B	A	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.4	14.9		22.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.5	18.0		28.0
Max Q Clear Time (g_c+I1), s		6.3	3.7	7.9		7.9
Green Ext Time (p_c), s		1.5	0.0	2.0		1.9

Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	4	5	12	552	425	5
Future Vol, veh/h	4	5	12	552	425	5
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	5	13	607	467	5






















Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1116	483	485	0	0
Stage 1	483	-	-	-	-
Stage 2	633	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	230	584	1078	-	-
Stage 1	620	-	-	-	-
Stage 2	529	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	222	577	1065	-	-
Mov Cap-2 Maneuver	353	-	-	-	-
Stage 1	605	-	-	-	-
Stage 2	523	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1065	-	450	-	-
HCM Lane V/C Ratio	0.012	-	0.022	-	-
HCM Control Delay (s)	8.4	-	13.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Background AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	117	91	114	192	31	104	476	73	27	315	32
Future Volume (veh/h)	35	117	91	114	192	31	104	476	73	27	315	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.91	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	133	103	130	218	35	118	541	83	31	358	36
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	193	150	164	400	64	150	675	104	57	625	63
Arrive On Green	0.04	0.20	0.20	0.09	0.26	0.26	0.08	0.43	0.43	0.03	0.38	0.38
Sat Flow, veh/h	1767	945	732	1781	1549	249	1781	1576	242	1781	1663	167
Grp Volume(v), veh/h	40	0	236	130	0	253	118	0	624	31	0	394
Grp Sat Flow(s),veh/h/ln	1767	0	1677	1781	0	1798	1781	0	1817	1781	0	1830
Q Serve(g_s), s	1.6	0.0	9.6	5.3	0.0	9.0	4.8	0.0	22.1	1.3	0.0	12.7
Cycle Q Clear(g_c), s	1.6	0.0	9.6	5.3	0.0	9.0	4.8	0.0	22.1	1.3	0.0	12.7
Prop In Lane	1.00		0.44	1.00		0.14	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	67	0	343	164	0	465	150	0	779	57	0	688
V/C Ratio(X)	0.60	0.00	0.69	0.79	0.00	0.54	0.78	0.00	0.80	0.55	0.00	0.57
Avail Cap(c_a), veh/h	136	0	408	181	0	481	210	0	779	123	0	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	27.2	32.9	0.0	23.7	33.2	0.0	18.4	35.3	0.0	18.4
Incr Delay (d2), s/veh	8.2	0.0	3.8	19.7	0.0	1.2	12.2	0.0	8.5	8.0	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	4.1	3.1	0.0	3.8	2.5	0.0	10.2	0.7	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	0.0	31.0	52.6	0.0	24.8	45.4	0.0	26.9	43.2	0.0	21.8
LnGrp LOS	D	A	C	D	A	C	D	A	C	D	A	C
Approach Vol, veh/h		276			383			742				425
Approach Delay, s/veh		32.8			34.3			29.9				23.4
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	36.2	11.3	19.6	10.7	32.3	7.3	23.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	31.4	7.5	18.0	8.7	27.8	5.7	19.8				
Max Q Clear Time (g_c+I1), s	3.3	24.1	7.3	11.6	6.8	14.7	3.6	11.0				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.7	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay				29.7								
HCM 6th LOS				C								
























HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Background AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	152	99	25	355	126	83	58	13	84	69	124
Future Volume (veh/h)	92	152	99	25	355	126	83	58	13	84	69	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	160	0	26	374	0	87	61	14	88	73	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	542		52	467		114	458	105	115	185	333
Arrive On Green	0.07	0.29	0.00	0.03	0.25	0.00	0.06	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1466	336	1781	593	1064
Grp Volume(v), veh/h	97	160	0	26	374	0	87	0	75	88	0	204
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1803	1781	0	1656
Q Serve(g_s), s	3.2	3.9	0.0	0.9	11.1	0.0	2.8	0.0	1.8	2.9	0.0	5.7
Cycle Q Clear(g_c), s	3.2	3.9	0.0	0.9	11.1	0.0	2.8	0.0	1.8	2.9	0.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.64
Lane Grp Cap(c), veh/h	124	542		52	467		114	0	563	115	0	518
V/C Ratio(X)	0.78	0.30		0.50	0.80		0.76	0.00	0.13	0.77	0.00	0.39
Avail Cap(c_a), veh/h	165	584		150	568		150	0	563	150	0	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.1	16.3	0.0	28.3	20.8	0.0	27.3	0.0	14.6	27.3	0.0	16.0
Incr Delay (d2), s/veh	15.7	0.3	0.0	7.1	6.7	0.0	14.9	0.0	0.5	15.6	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.6	0.0	0.4	5.3	0.0	1.6	0.0	0.7	1.7	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	16.6	0.0	35.4	27.6	0.0	42.2	0.0	15.1	42.8	0.0	18.2
LnGrp LOS	D	B		D	C		D	A	B	D	A	B
Approach Vol, veh/h		257	A		400	A		162			292	
Approach Delay, s/veh		26.5			28.1			29.6			25.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	23.0	6.2	21.7	8.3	23.0	8.6	19.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	4.9	3.8	2.9	5.9	4.8	7.7	5.2	13.1				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.6	0.0	0.8	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			27.3									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
9: 7th Ave & Capitola Rd

Background AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	262	129	49	490	102	184	301	46	64	173	30
Future Volume (veh/h)	7	262	129	49	490	102	184	301	46	64	173	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	7	273	134	51	510	106	192	314	48	67	180	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	16	730	323	87	715	148	174	631	529	157	505	87
Arrive On Green	0.01	0.21	0.21	0.05	0.25	0.25	0.10	0.34	0.34	0.09	0.33	0.33
Sat Flow, veh/h	1781	3554	1573	1781	2917	603	1781	1870	1567	1767	1537	265
Grp Volume(v), veh/h	7	273	134	51	310	306	192	314	48	67	0	211
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1742	1781	1870	1567	1767	0	1801
Q Serve(g_s), s	0.2	3.7	4.2	1.6	9.0	9.1	5.5	7.5	0.8	2.0	0.0	5.0
Cycle Q Clear(g_c), s	0.2	3.7	4.2	1.6	9.0	9.1	5.5	7.5	0.8	2.0	0.0	5.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	16	730	323	87	435	427	174	631	529	157	0	592
V/C Ratio(X)	0.43	0.37	0.41	0.59	0.71	0.72	1.10	0.50	0.09	0.43	0.00	0.36
Avail Cap(c_a), veh/h	158	1136	503	158	568	557	174	631	529	157	0	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	19.3	19.4	26.2	19.4	19.5	25.4	14.9	6.0	24.3	0.0	14.4
Incr Delay (d2), s/veh	16.6	0.3	0.8	6.1	2.9	3.1	98.7	2.8	0.3	1.8	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	1.5	0.8	3.7	3.7	6.9	3.3	0.4	0.9	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.3	19.6	20.3	32.4	22.3	22.6	124.1	17.7	6.3	26.1	0.0	16.1
LnGrp LOS	D	B	C	C	C	C	F	B	A	C	A	B
Approach Vol, veh/h		414			667			554			278	
Approach Delay, s/veh		20.2			23.2			53.6			18.5	
Approach LOS		C			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	7.2	16.1	10.0	23.0	5.0	18.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.0	9.5	3.6	6.2	7.5	7.0	2.2	11.1				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.7	0.0	0.8	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			30.7									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Vol, veh/h	6	6	9	196	6	153	15	256	110	101	191	9
Future Vol, veh/h	6	6	9	196	6	153	15	256	110	101	191	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	5	5	5	2	2	2	3	3	3	4	4	4
Mvmt Flow	6	6	9	206	6	161	16	269	116	106	201	9
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10.1	12.9	16.7	14.9
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	4%	29%	97%	0%	34%
Vol Thru, %	67%	29%	3%	0%	63%
Vol Right, %	29%	43%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	381	21	202	153	301
LT Vol	15	6	196	0	101
Through Vol	256	6	6	0	191
RT Vol	110	9	0	153	9
Lane Flow Rate	401	22	213	161	317
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.609	0.041	0.415	0.26	0.512
Departure Headway (Hd)	5.471	6.703	7.022	5.814	5.813
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	658	530	512	615	618
Service Time	3.526	4.8	4.78	3.572	3.871
HCM Lane V/C Ratio	0.609	0.042	0.416	0.262	0.513
HCM Control Delay	16.7	10.1	14.7	10.6	14.9
HCM Lane LOS	C	B	B	B	B
HCM 95th-tile Q	4.1	0.1	2	1	2.9



















HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Background AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	551	297	64	530	73	570	19	85	21	9	24
Future Volume (veh/h)	20	551	297	64	530	73	570	19	85	21	9	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	23	641	0	74	616	85	679	0	0	24	10	28
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	2	2	2
Cap, veh/h	45	774		95	769	106	932	0		297	124	369
Arrive On Green	0.03	0.22	0.00	0.05	0.25	0.25	0.26	0.00	0.00	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	3125	430	3534	0	1572	1275	531	1585
Grp Volume(v), veh/h	23	641	0	74	350	351	679	0	0	34	0	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1778	1767	0	1572	1807	0	1585
Q Serve(g_s), s	1.0	13.3	0.0	3.2	14.3	14.4	13.6	0.0	0.0	1.1	0.0	1.1
Cycle Q Clear(g_c), s	1.0	13.3	0.0	3.2	14.3	14.4	13.6	0.0	0.0	1.1	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	45	774		95	437	437	932	0		420	0	369
V/C Ratio(X)	0.51	0.83		0.78	0.80	0.80	0.73	0.00		0.08	0.00	0.08
Avail Cap(c_a), veh/h	117	831		127	437	437	932	0		420	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.2	28.9	0.0	36.2	27.4	27.4	26.0	0.0	0.0	23.2	0.0	23.2
Incr Delay (d2), s/veh	8.8	6.6	0.0	19.5	10.2	10.4	5.0	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.2	0.0	1.9	7.0	7.1	6.1	0.0	0.0	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	35.5	0.0	55.7	37.6	37.8	31.0	0.0	0.0	23.6	0.0	23.6
LnGrp LOS	D	D		E	D	D	C	A		C	A	C
Approach Vol, veh/h		664	A		775			679	A		62	
Approach Delay, s/veh		35.8			39.4			31.0			23.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.9	8.6	21.4		22.5	6.5	23.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.4	5.5	18.1		18.0	5.1	18.5				
Max Q Clear Time (g_c+I1), s		15.6	5.2	15.3		3.1	3.0	16.4				
Green Ext Time (p_c), s		1.3	0.0	1.1		0.1	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			35.2									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 12: 7th Ave & Soquel Ave

Background AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	512	71	220	601	0	142	0	457	0	0	0
Future Volume (veh/h)	0	512	71	220	601	0	142	0	457	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1856	1856	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	563	78	242	660	0	156	0	502	0	0	0
Peak Hour Factor	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	3	3	0	2	2	2	2	2	2
Cap, veh/h	0	783	108	294	1777	0	584	0	505	0	619	0
Arrive On Green	0.00	0.25	0.25	0.17	0.50	0.00	0.33	0.00	0.33	0.00	0.00	0.00
Sat Flow, veh/h	0	3165	424	1767	3618	0	1366	0	1528	0	1870	0
Grp Volume(v), veh/h	0	320	321	242	660	0	156	0	502	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1749	1749	1767	1763	0	1366	0	1528	0	1870	0
Q Serve(g_s), s	0.0	9.1	9.1	7.2	6.2	0.0	4.7	0.0	17.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.1	9.1	7.2	6.2	0.0	4.7	0.0	17.8	0.0	0.0	0.0
Prop In Lane	0.00		0.24	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	446	446	294	1777	0	584	0	505	0	619	0
V/C Ratio(X)	0.00	0.72	0.72	0.82	0.37	0.00	0.27	0.00	0.99	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	578	578	341	2138	0	584	0	505	0	619	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.5	18.5	21.9	8.2	0.0	13.8	0.0	18.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.0	3.1	13.3	0.1	0.0	1.1	0.0	38.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.6	3.7	3.8	1.9	0.0	1.5	0.0	10.8	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.5	21.6	35.2	8.4	0.0	14.9	0.0	56.7	0.0	0.0	0.0
LnGrp LOS	A	C	C	D	A	A	B	A	E	A	A	A
Approach Vol, veh/h		641			902			658				0
Approach Delay, s/veh		21.5			15.6			46.8				0.0
Approach LOS		C			B			D				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	13.6	18.4		22.5		31.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		19.8	9.2	11.1		0.0		8.2				
Green Ext Time (p_c), s		0.0	0.1	2.2		0.0		4.8				
Intersection Summary												
HCM 6th Ctrl Delay				26.6								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Background AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑			↘	↗		↕	
Traffic Volume (veh/h)	3	624	373	297	635	1	232	5	927	1	1	1
Future Volume (veh/h)	3	624	373	297	635	1	232	5	927	1	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	664	0	316	676	1	247	5	986	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	811		384	1607	2	350	5	850	83	79	40
Arrive On Green	0.00	0.23	0.00	0.22	0.44	0.44	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1767	3526	1572	1781	3641	5	707	14	1585	0	248	124
Grp Volume(v), veh/h	3	664	0	316	330	347	252	0	986	3	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1869	721	0	1585	371	0	0
Q Serve(g_s), s	0.1	10.3	0.0	9.8	7.3	7.4	0.0	0.0	18.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	10.3	0.0	9.8	7.3	7.4	18.5	0.0	18.5	18.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.98		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	7	811		384	784	825	355	0	850	202	0	0
V/C Ratio(X)	0.42	0.82		0.82	0.42	0.42	0.71	0.00	1.16	0.01	0.00	0.00
Avail Cap(c_a), veh/h	153	886		725	1016	1069	355	0	850	202	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.7	21.1	0.0	21.6	11.1	11.1	20.4	0.0	13.4	15.2	0.0	0.0
Incr Delay (d2), s/veh	34.3	5.7	0.0	4.5	0.4	0.3	11.5	0.0	85.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.5	0.0	4.2	2.5	2.7	4.2	0.0	28.4	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	26.8	0.0	26.1	11.4	11.4	31.8	0.0	98.6	15.3	0.0	0.0
LnGrp LOS	E	C		C	B	B	C	A	F	B	A	A
Approach Vol, veh/h		667	A		993			1238				3
Approach Delay, s/veh		26.9			16.1			85.0				15.3
Approach LOS		C			B			F				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	16.9	17.8		23.0	4.7	30.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	23.5	14.5		18.5	5.0	33.0				
Max Q Clear Time (g_c+I1), s		20.5	11.8	12.3		20.5	2.1	9.4				
Green Ext Time (p_c), s		0.0	0.8	1.0		0.0	0.0	4.3				
Intersection Summary												
HCM 6th Ctrl Delay			48.0									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↑	↘	↘
Traffic Vol, veh/h	20	906	493	18	12	22
Future Vol, veh/h	20	906	493	18	12	22
Conflicting Peds, #/hr	20	0	0	20	0	8
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	25	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	964	524	19	13	23

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	563	0	-	0	1550 552
Stage 1	-	-	-	-	544 -
Stage 2	-	-	-	-	1006 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1008	-	-	-	125 533
Stage 1	-	-	-	-	582 -
Stage 2	-	-	-	-	353 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	989	-	-	-	118 519
Mov Cap-2 Maneuver	-	-	-	-	236 -
Stage 1	-	-	-	-	559 -
Stage 2	-	-	-	-	346 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	989	-	-	-	365
HCM Lane V/C Ratio	0.022	-	-	-	0.099
HCM Control Delay (s)	8.7	-	-	-	15.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	0	918	503	14	14	8
Future Vol, veh/h	0	918	503	14	14	8
Conflicting Peds, #/hr	25	0	0	25	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	25	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	5	5
Mvmt Flow	0	977	535	15	15	9





















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	575	0	-	0	1539 560
Stage 1	-	-	-	-	560 -
Stage 2	-	-	-	-	979 -
Critical Hdwy	4.12	-	-	-	6.45 6.25
Critical Hdwy Stg 1	-	-	-	-	5.45 -
Critical Hdwy Stg 2	-	-	-	-	5.45 -
Follow-up Hdwy	2.218	-	-	-	3.545 3.345
Pot Cap-1 Maneuver	998	-	-	-	125 522
Stage 1	-	-	-	-	566 -
Stage 2	-	-	-	-	359 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	974	-	-	-	119 510
Mov Cap-2 Maneuver	-	-	-	-	119 -
Stage 1	-	-	-	-	552 -
Stage 2	-	-	-	-	350 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	30.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	974	-	-	-	165
HCM Lane V/C Ratio	-	-	-	-	0.142
HCM Control Delay (s)	0	-	-	-	30.4
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.5





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Background PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	706	112	103	386	44	81	215	77	202	367	26
Future Volume (veh/h)	26	706	112	103	386	44	81	215	77	202	367	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	743	118	108	406	46	85	226	81	213	386	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	849	135	137	1048	118	109	349	125	254	600	42
Arrive On Green	0.03	0.28	0.28	0.08	0.33	0.33	0.06	0.27	0.27	0.14	0.35	0.35
Sat Flow, veh/h	1781	3059	486	1781	3215	362	1781	1309	469	1781	1727	121
Grp Volume(v), veh/h	27	431	430	108	223	229	85	0	307	213	0	413
Grp Sat Flow(s),veh/h/ln	1781	1777	1768	1781	1777	1800	1781	0	1778	1781	0	1848
Q Serve(g_s), s	1.1	17.6	17.7	4.5	7.4	7.5	3.6	0.0	11.7	8.9	0.0	14.3
Cycle Q Clear(g_c), s	1.1	17.6	17.7	4.5	7.4	7.5	3.6	0.0	11.7	8.9	0.0	14.3
Prop In Lane	1.00		0.27	1.00		0.20	1.00		0.26	1.00		0.07
Lane Grp Cap(c), veh/h	51	493	491	137	579	587	109	0	474	254	0	642
V/C Ratio(X)	0.53	0.87	0.88	0.79	0.39	0.39	0.78	0.00	0.65	0.84	0.00	0.64
Avail Cap(c_a), veh/h	129	525	522	157	579	587	157	0	474	292	0	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	26.2	26.3	34.5	19.8	19.8	35.2	0.0	24.8	31.8	0.0	20.9
Incr Delay (d2), s/veh	8.3	14.6	14.7	20.4	0.4	0.4	14.3	0.0	6.7	17.2	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	9.1	9.0	2.7	3.0	3.0	1.9	0.0	5.6	4.9	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	40.9	41.0	54.9	20.2	20.2	49.5	0.0	31.5	49.0	0.0	25.8
LnGrp LOS	D	D	D	D	C	C	D	A	C	D	A	C
Approach Vol, veh/h		888			560			392			626	
Approach Delay, s/veh		41.0			26.9			35.4			33.7	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	24.8	10.4	25.6	9.2	31.0	6.7	29.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	20.3	6.7	22.5	6.7	26.1	5.5	23.7				
Max Q Clear Time (g_c+I1), s	10.9	13.7	6.5	19.7	5.6	16.3	3.1	9.5				
Green Ext Time (p_c), s	0.1	1.0	0.0	1.5	0.0	1.8	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay				35.1								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

Background PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	994	56	50	464	63	29	44	56	236	150	33
Future Volume (veh/h)	20	994	56	50	464	63	29	44	56	236	150	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	1025	58	52	478	65	30	45	58	243	155	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	1092	62	77	1069	145	55	182	234	281	556	122
Arrive On Green	0.02	0.32	0.32	0.04	0.34	0.34	0.03	0.25	0.25	0.16	0.37	0.37
Sat Flow, veh/h	1781	3406	193	1781	3139	425	1781	735	948	1781	1484	325
Grp Volume(v), veh/h	21	535	548	52	270	273	30	0	103	243	0	189
Grp Sat Flow(s),veh/h/ln	1781	1777	1821	1781	1777	1786	1781	0	1683	1781	0	1809
Q Serve(g_s), s	0.9	22.8	22.8	2.2	9.2	9.3	1.3	0.0	3.8	10.4	0.0	5.7
Cycle Q Clear(g_c), s	0.9	22.8	22.8	2.2	9.2	9.3	1.3	0.0	3.8	10.4	0.0	5.7
Prop In Lane	1.00		0.11	1.00		0.24	1.00		0.56	1.00		0.18
Lane Grp Cap(c), veh/h	42	570	584	77	605	608	55	0	416	281	0	678
V/C Ratio(X)	0.50	0.94	0.94	0.67	0.45	0.45	0.55	0.00	0.25	0.86	0.00	0.28
Avail Cap(c_a), veh/h	114	572	586	116	605	608	126	0	416	285	0	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	25.8	25.8	36.8	20.0	20.0	37.3	0.0	23.5	32.0	0.0	17.0
Incr Delay (d2), s/veh	9.1	23.5	23.1	9.8	0.5	0.5	8.4	0.0	1.4	22.7	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	12.8	13.0	1.2	3.7	3.8	0.7	0.0	1.6	6.1	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	49.2	48.9	46.5	20.5	20.6	45.6	0.0	25.0	54.7	0.0	18.1
LnGrp LOS	D	D	D	D	C	C	D	A	C	D	A	B
Approach Vol, veh/h		1104			595			133				432
Approach Delay, s/veh		49.0			22.8			29.6				38.7
Approach LOS		D			C			C				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	23.8	7.9	29.5	6.9	33.7	6.3	31.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	19.3	5.1	25.1	5.5	26.3	5.0	25.2				
Max Q Clear Time (g_c+I1), s	12.4	5.8	4.2	24.8	3.3	7.7	2.9	11.3				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.2	0.0	0.9	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay												39.0
HCM 6th LOS												D

HCM 6th Signalized Intersection Summary

5: 17th Ave & Soquel Ave

Background PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑↑↑	
Traffic Volume (veh/h)	602	512	53	218	260	42
Future Volume (veh/h)	602	512	53	218	260	42
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	614	522	54	222	305	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	717	1114	91	964	1151	520
Arrive On Green	0.38	0.38	0.05	0.52	0.32	0.00
Sat Flow, veh/h	1870	1569	1781	1870	3563	1610
Grp Volume(v), veh/h	614	522	54	222	305	0
Grp Sat Flow(s),veh/h/ln	1870	1569	1781	1870	1781	1610
Q Serve(g_s), s	16.8	8.1	1.7	3.6	3.5	0.0
Cycle Q Clear(g_c), s	16.8	8.1	1.7	3.6	3.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	717	1114	91	964	1151	520
V/C Ratio(X)	0.86	0.47	0.60	0.23	0.26	0.00
Avail Cap(c_a), veh/h	789	1174	160	1108	1151	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	3.6	25.9	7.4	13.9	0.0
Incr Delay (d2), s/veh	8.6	0.3	6.1	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	5.3	0.8	1.2	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.3	3.9	32.0	7.5	14.5	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	1136			276	305	
Approach Delay, s/veh	14.9			12.3	14.5	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.3	25.9		33.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.0	23.5		33.0
Max Q Clear Time (g_c+I1), s		5.5	3.7	18.8		5.6
Green Ext Time (p_c), s		0.8	0.0	2.6		1.3

Intersection Summary

HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	30	12	385	552	16
Future Vol, veh/h	7	30	12	385	552	16
Conflicting Peds, #/hr	0	0	8	0	0	8
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	32	13	414	594	17






















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1051	611	619	0	-	0
Stage 1	611	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	251	494	961	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	243	490	954	-	-	-
Mov Cap-2 Maneuver	373	-	-	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	644	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	954	-	463	-	-
HCM Lane V/C Ratio	0.014	-	0.086	-	-
HCM Control Delay (s)	8.8	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Background PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	292	122	110	166	30	59	327	110	58	427	48
Future Volume (veh/h)	40	292	122	110	166	30	59	327	110	58	427	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	301	126	113	171	31	61	337	113	60	440	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	330	138	144	478	87	85	485	163	84	604	67
Arrive On Green	0.04	0.27	0.27	0.08	0.31	0.31	0.05	0.37	0.37	0.05	0.37	0.37
Sat Flow, veh/h	1781	1226	513	1781	1533	278	1781	1322	443	1781	1648	184
Grp Volume(v), veh/h	41	0	427	113	0	202	61	0	450	60	0	489
Grp Sat Flow(s),veh/h/ln	1781	0	1740	1781	0	1811	1781	0	1766	1781	0	1832
Q Serve(g_s), s	1.7	0.0	18.1	4.7	0.0	6.6	2.6	0.0	16.5	2.5	0.0	17.6
Cycle Q Clear(g_c), s	1.7	0.0	18.1	4.7	0.0	6.6	2.6	0.0	16.5	2.5	0.0	17.6
Prop In Lane	1.00		0.30	1.00		0.15	1.00		0.25	1.00		0.10
Lane Grp Cap(c), veh/h	68	0	468	144	0	564	85	0	648	84	0	671
V/C Ratio(X)	0.60	0.00	0.91	0.79	0.00	0.36	0.72	0.00	0.69	0.71	0.00	0.73
Avail Cap(c_a), veh/h	143	0	491	175	0	564	119	0	648	119	0	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.1	0.0	27.0	34.4	0.0	20.3	35.8	0.0	20.5	35.8	0.0	20.9
Incr Delay (d2), s/veh	8.4	0.0	20.8	17.3	0.0	0.4	11.7	0.0	6.1	10.9	0.0	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	9.8	2.7	0.0	2.7	1.4	0.0	7.4	1.3	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	0.0	47.7	51.7	0.0	20.7	47.4	0.0	26.6	46.6	0.0	27.7
LnGrp LOS	D	A	D	D	A	C	D	A	C	D	A	C
Approach Vol, veh/h		468			315			511			549	
Approach Delay, s/veh		47.4			31.8			29.1			29.8	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	32.4	10.6	25.0	8.1	32.4	7.4	28.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	27.9	7.5	21.5	5.1	27.9	6.1	22.9				
Max Q Clear Time (g_c+I1), s	4.5	18.5	6.7	20.1	4.6	19.6	3.7	8.6				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.4	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			34.4									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Background PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	522	220	23	268	93	89	60	12	142	89	84
Future Volume (veh/h)	82	522	220	23	268	93	89	60	12	142	89	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	549	0	24	282	0	94	63	13	149	94	88
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	610		48	385		121	416	86	187	270	253
Arrive On Green	0.15	0.33	0.00	0.03	0.21	0.00	0.07	0.28	0.28	0.10	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1495	309	1781	855	800
Grp Volume(v), veh/h	86	549	0	24	282	0	94	0	76	149	0	182
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1804	1781	0	1655
Q Serve(g_s), s	3.0	19.1	0.0	0.9	9.6	0.0	3.5	0.0	2.2	5.6	0.0	5.8
Cycle Q Clear(g_c), s	3.0	19.1	0.0	0.9	9.6	0.0	3.5	0.0	2.2	5.6	0.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.48
Lane Grp Cap(c), veh/h	262	610		48	385		121	0	502	187	0	522
V/C Ratio(X)	0.33	0.90		0.50	0.73		0.78	0.00	0.15	0.80	0.00	0.35
Avail Cap(c_a), veh/h	262	672		131	556		175	0	502	222	0	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	21.9	0.0	32.8	25.3	0.0	31.3	0.0	18.5	29.8	0.0	18.0
Incr Delay (d2), s/veh	0.7	14.4	0.0	8.0	2.8	0.0	12.7	0.0	0.6	15.7	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.1	0.0	0.5	4.3	0.0	1.9	0.0	0.9	3.1	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	36.3	0.0	40.7	28.1	0.0	44.0	0.0	19.2	45.5	0.0	19.8
LnGrp LOS	C	D		D	C		D	A	B	D	A	B
Approach Vol, veh/h		635	A		306	A		170			331	
Approach Delay, s/veh		35.0			29.1			32.9			31.4	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	23.5	6.3	26.8	9.1	26.0	14.5	18.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	19.0	5.0	24.5	6.7	20.8	9.2	20.3				
Max Q Clear Time (g_c+I1), s	7.6	4.2	2.9	21.1	5.5	7.8	5.0	11.6				
Green Ext Time (p_c), s	0.0	0.2	0.0	1.1	0.0	0.8	0.1	1.0				

Intersection Summary

HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: 7th Ave & Capitola Rd

Background PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	843	249	77	426	56	119	135	52	100	209	13
Future Volume (veh/h)	13	843	249	77	426	56	119	135	52	100	209	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	878	259	80	444	58	124	141	54	104	218	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	1034	447	103	1048	136	157	547	455	157	508	33
Arrive On Green	0.02	0.29	0.29	0.06	0.33	0.33	0.09	0.29	0.29	0.09	0.29	0.29
Sat Flow, veh/h	1781	3554	1536	1781	3158	410	1781	1870	1556	1781	1737	112
Grp Volume(v), veh/h	14	878	259	80	249	253	124	141	54	104	0	232
Grp Sat Flow(s),veh/h/ln	1781	1777	1536	1781	1777	1791	1781	1870	1556	1781	0	1848
Q Serve(g_s), s	0.5	15.5	9.6	3.0	7.2	7.3	4.5	3.8	1.2	3.8	0.0	6.8
Cycle Q Clear(g_c), s	0.5	15.5	9.6	3.0	7.2	7.3	4.5	3.8	1.2	3.8	0.0	6.8
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	31	1034	447	103	590	594	157	547	455	157	0	541
V/C Ratio(X)	0.46	0.85	0.58	0.77	0.42	0.43	0.79	0.26	0.12	0.66	0.00	0.43
Avail Cap(c_a), veh/h	134	1093	473	147	590	594	174	547	455	174	0	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.4	22.2	20.1	31.0	17.3	17.3	29.8	18.0	9.1	29.4	0.0	19.1
Incr Delay (d2), s/veh	10.4	6.2	1.6	14.9	0.5	0.5	19.5	1.1	0.5	7.9	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.9	3.4	1.6	2.8	2.9	2.7	1.7	0.6	1.9	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	28.5	21.8	45.9	17.8	17.8	49.2	19.2	9.7	37.3	0.0	21.5
LnGrp LOS	D	C	C	D	B	B	D	B	A	D	A	C
Approach Vol, veh/h		1151			582			319			336	
Approach Delay, s/veh		27.1			21.7			29.2			26.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	24.0	8.4	23.9	10.4	24.0	5.6	26.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	19.5	5.5	20.5	6.5	19.5	5.0	21.0				
Max Q Clear Time (g_c+I1), s	5.8	5.8	5.0	17.5	6.5	8.8	2.5	9.3				
Green Ext Time (p_c), s	0.0	0.7	0.0	1.9	0.0	0.9	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			26.0									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	22.8
Intersection LOS	C























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	14	8	19	164	3	99	14	177	272	202	251	14
Future Vol, veh/h	14	8	19	164	3	99	14	177	272	202	251	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	8	20	171	3	103	15	184	283	210	261	15
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	11.2	13.6	23.2	28.7
HCM LOS	B	B	C	D

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	34%	98%	0%	43%
Vol Thru, %	38%	20%	2%	0%	54%
Vol Right, %	59%	46%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	463	41	167	99	467
LT Vol	14	14	164	0	202
Through Vol	177	8	3	0	251
RT Vol	272	19	0	99	14
Lane Flow Rate	482	43	174	103	486
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.747	0.088	0.376	0.188	0.802
Departure Headway (Hd)	5.577	7.422	7.787	6.564	5.937
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	651	481	463	547	613
Service Time	3.592	5.491	5.533	4.31	3.953
HCM Lane V/C Ratio	0.74	0.089	0.376	0.188	0.793
HCM Control Delay	23.2	11.2	15.2	10.8	28.7
HCM Lane LOS	C	B	C	B	D
HCM 95th-tile Q	6.7	0.3	1.7	0.7	7.9



















HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Background PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	866	989	68	444	35	477	15	43	33	35	30
Future Volume (veh/h)	8	866	989	68	444	35	477	15	43	33	35	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	902	0	71	462	36	508	0	0	34	36	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1147		91	1214	94	770	0		182	192	323
Arrive On Green	0.01	0.32	0.00	0.05	0.36	0.36	0.22	0.00	0.00	0.20	0.20	0.20
Sat Flow, veh/h	1781	3554	1585	1781	3335	259	3563	0	1585	887	939	1578
Grp Volume(v), veh/h	8	902	0	71	245	253	508	0	0	70	0	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1817	1781	0	1585	1826	0	1578
Q Serve(g_s), s	0.4	20.2	0.0	3.5	9.0	9.0	11.5	0.0	0.0	2.8	0.0	1.4
Cycle Q Clear(g_c), s	0.4	20.2	0.0	3.5	9.0	9.0	11.5	0.0	0.0	2.8	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	0.49		1.00
Lane Grp Cap(c), veh/h	18	1147		91	647	661	770	0		374	0	323
V/C Ratio(X)	0.44	0.79		0.78	0.38	0.38	0.66	0.00		0.19	0.00	0.10
Avail Cap(c_a), veh/h	101	1614		103	809	827	770	0		374	0	323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	27.0	0.0	41.2	20.6	20.6	31.5	0.0	0.0	28.9	0.0	28.3
Incr Delay (d2), s/veh	16.3	1.7	0.0	27.7	0.4	0.4	4.4	0.0	0.0	1.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.5	0.0	2.2	3.7	3.8	5.3	0.0	0.0	1.3	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	28.7	0.0	68.9	21.0	21.0	35.9	0.0	0.0	30.0	0.0	28.9
LnGrp LOS	E	C		E	C	C	D	A		C	A	C
Approach Vol, veh/h		910	A		569			508	A		101	
Approach Delay, s/veh		29.0			27.0			35.9			29.7	
Approach LOS		C			C			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	9.0	32.9		22.5	5.4	36.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	5.1	39.9		18.0	5.0	40.0				
Max Q Clear Time (g_c+I1), s		13.5	5.5	22.2		4.8	2.4	11.0				
Green Ext Time (p_c), s		1.0	0.0	6.1		0.3	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay			30.2									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
12: 7th Ave & Soquel Ave

Background PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	832	81	283	482	0	88	0	229	0	0	0
Future Volume (veh/h)	0	832	81	283	482	0	88	0	229	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	849	83	289	492	0	90	0	234	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	961	94	314	1942	0	549	0	474	0	565	0
Arrive On Green	0.00	0.29	0.29	0.18	0.55	0.00	0.30	0.00	0.30	0.00	0.00	0.00
Sat Flow, veh/h	0	3358	319	1781	3647	0	1418	0	1569	0	1870	0
Grp Volume(v), veh/h	0	462	470	289	492	0	90	0	234	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1777	1806	1781	1777	0	1418	0	1569	0	1870	0
Q Serve(g_s), s	0.0	14.8	14.8	9.5	4.3	0.0	2.8	0.0	7.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.8	14.8	9.5	4.3	0.0	2.8	0.0	7.3	0.0	0.0	0.0
Prop In Lane	0.00		0.18	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	523	532	314	1942	0	549	0	474	0	565	0
V/C Ratio(X)	0.00	0.88	0.88	0.92	0.25	0.00	0.16	0.00	0.49	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	537	546	314	1970	0	549	0	474	0	565	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.0	20.0	24.1	7.1	0.0	15.5	0.0	17.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	15.6	15.4	31.0	0.1	0.0	0.6	0.0	3.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.8	7.9	6.4	1.3	0.0	0.9	0.0	2.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	35.7	35.4	55.1	7.2	0.0	16.1	0.0	20.7	0.0	0.0	0.0
LnGrp LOS	A	D	D	E	A	A	B	A	C	A	A	A
Approach Vol, veh/h		932			781			324				0
Approach Delay, s/veh		35.5			24.9			19.4				0.0
Approach LOS		D			C			B				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	15.0	22.0		22.5		37.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		9.3	11.5	16.8		0.0		6.3				
Green Ext Time (p_c), s		0.9	0.0	0.7		0.0		3.5				
Intersection Summary												
HCM 6th Ctrl Delay				28.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Background PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑			↘	↗		↕	
Traffic Volume (veh/h)	6	725	399	375	594	5	202	5	685	6	2	8
Future Volume (veh/h)	6	725	399	375	594	5	202	5	685	6	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	755	0	391	619	5	210	5	714	6	2	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	851		437	1722	14	382	7	872	100	51	74
Arrive On Green	0.01	0.24	0.00	0.25	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3612	29	890	23	1585	75	169	244
Grp Volume(v), veh/h	6	755	0	391	304	320	215	0	714	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1864	913	0	1585	487	0	0
Q Serve(g_s), s	0.2	13.1	0.0	13.6	6.9	6.9	0.0	0.0	19.5	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	13.1	0.0	13.6	6.9	6.9	16.1	0.0	19.5	16.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.98		1.00	0.37		0.50
Lane Grp Cap(c), veh/h	14	851		437	847	889	389	0	872	226	0	0
V/C Ratio(X)	0.43	0.89		0.89	0.36	0.36	0.55	0.00	0.82	0.07	0.00	0.00
Avail Cap(c_a), veh/h	139	860		459	847	889	389	0	872	226	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.6	23.5	0.0	23.4	10.6	10.6	21.1	0.0	11.8	16.9	0.0	0.0
Incr Delay (d2), s/veh	19.1	11.1	0.0	19.1	0.3	0.2	5.6	0.0	8.5	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.4	0.0	7.6	2.4	2.5	3.4	0.0	8.7	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	34.6	0.0	42.5	10.8	10.8	26.7	0.0	20.3	17.5	0.0	0.0
LnGrp LOS	D	C		D	B	B	C	A	C	B	A	A
Approach Vol, veh/h		761	A		1015			929			16	
Approach Delay, s/veh		34.7			23.0			21.8			17.5	
Approach LOS		C			C			C			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	20.2	19.8		24.0	5.0	35.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	16.5	15.5		19.5	5.0	27.0				
Max Q Clear Time (g_c+I1), s		21.5	15.6	15.1		18.2	2.2	8.9				
Green Ext Time (p_c), s		0.0	0.1	0.2		0.0	0.0	3.6				

Intersection Summary

HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Appendix H

Intersection

Level of Service

Calculations

Background Plus Project

Conditions

HCM 6th TWSC
1: Project Dwy (West)/15th Ave & Capitola Road

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖	↖		↔			↔	
Traffic Vol, veh/h	13	377	11	41	571	28	6	0	6	23	0	30
Future Vol, veh/h	13	377	11	41	571	28	6	0	6	23	0	30
Conflicting Peds, #/hr	15	0	6	6	0	15	10	0	0	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	25	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	397	12	43	601	29	6	0	6	24	0	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	645	0	0	415	0	0	1165	1168	211	929	1145	626
Stage 1	-	-	-	-	-	-	437	437	-	702	702	-
Stage 2	-	-	-	-	-	-	728	731	-	227	443	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	938	-	-	1142	-	-	160	193	795	235	199	483
Stage 1	-	-	-	-	-	-	569	578	-	428	440	-
Stage 2	-	-	-	-	-	-	414	426	-	756	575	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	925	-	-	1135	-	-	141	179	790	221	185	472
Mov Cap-2 Maneuver	-	-	-	-	-	-	141	179	-	221	185	-
Stage 1	-	-	-	-	-	-	557	566	-	416	418	-
Stage 2	-	-	-	-	-	-	368	404	-	739	563	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.5			20.9			18.8		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	239	925	-	-	1135	-	-	316
HCM Lane V/C Ratio	0.053	0.015	-	-	0.038	-	-	0.177
HCM Control Delay (s)	20.9	9	-	-	8.3	-	-	18.8
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.6

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖	↖			↖		↔	
Traffic Vol, veh/h	0	396	10	0	633	19	0	0	17	9	0	7
Future Vol, veh/h	0	396	10	0	633	19	0	0	17	9	0	7
Conflicting Peds, #/hr	18	0	7	7	0	18	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	25	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	417	11	0	666	20	0	0	18	9	0	7





















Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	704	0	0	-	-	0	-	-	223	895	1119	684
Stage 1	-	-	-	-	-	-	-	-	-	684	684	-
Stage 2	-	-	-	-	-	-	-	-	-	211	435	-
Critical Hdwy	4.13	-	-	-	-	-	-	-	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	-	-	-	-	-	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	892	-	-	0	-	-	0	0	781	248	206	448
Stage 1	-	-	-	0	-	-	0	0	-	438	448	-
Stage 2	-	-	-	0	-	-	0	0	-	772	580	-
Platoon blocked, %		-	-	-	-	-	-	-				
Mov Cap-1 Maneuver	877	-	-	-	-	-	-	-	774	238	201	440
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	346	317	-
Stage 1	-	-	-	-	-	-	-	-	-	431	440	-
Stage 2	-	-	-	-	-	-	-	-	-	753	576	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	0		0			9.8			14.9		
HCM LOS						A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	774	877	-	-	-	-	382
HCM Lane V/C Ratio	0.023	-	-	-	-	-	0.044
HCM Control Delay (s)	9.8	0	-	-	-	-	14.9
HCM Lane LOS	A	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	-	-	0.1






















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Background Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	253	104	64	410	66	147	363	54	60	268	91
Future Volume (veh/h)	50	253	104	64	410	66	147	363	54	60	268	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	256	105	65	414	67	148	367	55	61	271	92
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	513	204	100	659	106	184	579	87	97	422	143
Arrive On Green	0.05	0.21	0.21	0.06	0.22	0.22	0.10	0.37	0.37	0.05	0.32	0.32
Sat Flow, veh/h	1781	2460	977	1781	3050	489	1781	1584	237	1781	1330	452
Grp Volume(v), veh/h	51	183	178	65	240	241	148	0	422	61	0	363
Grp Sat Flow(s),veh/h/ln	1781	1777	1660	1781	1777	1763	1781	0	1821	1781	0	1782
Q Serve(g_s), s	1.6	5.2	5.4	2.0	7.0	7.1	4.6	0.0	10.9	1.9	0.0	10.0
Cycle Q Clear(g_c), s	1.6	5.2	5.4	2.0	7.0	7.1	4.6	0.0	10.9	1.9	0.0	10.0
Prop In Lane	1.00		0.59	1.00		0.28	1.00		0.13	1.00		0.25
Lane Grp Cap(c), veh/h	87	370	346	100	384	381	184	0	666	97	0	565
V/C Ratio(X)	0.59	0.49	0.52	0.65	0.62	0.63	0.80	0.00	0.63	0.63	0.00	0.64
Avail Cap(c_a), veh/h	156	560	523	156	560	556	184	0	666	156	0	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	19.9	20.1	26.4	20.3	20.3	25.0	0.0	14.9	26.4	0.0	16.7
Incr Delay (d2), s/veh	6.2	1.0	1.2	6.8	1.7	1.7	22.3	0.0	4.5	6.6	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.1	2.1	1.0	2.8	2.9	3.0	0.0	4.8	0.9	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	21.0	21.2	33.2	21.9	22.1	47.3	0.0	19.5	33.1	0.0	22.3
LnGrp LOS	C	C	C	C	C	C	D	A	B	C	A	C
Approach Vol, veh/h		412			546			570			424	
Approach Delay, s/veh		22.6			23.3			26.7			23.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	25.4	7.7	16.4	10.4	22.6	7.3	16.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.9	18.1	5.0	18.0				
Max Q Clear Time (g_c+I1), s	3.9	12.9	4.0	7.4	6.6	12.0	3.6	9.1				
Green Ext Time (p_c), s	0.0	1.3	0.0	1.5	0.0	1.1	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									

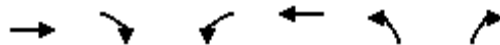
HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

Background Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	282	28	68	429	135	74	119	58	71	95	35
Future Volume (veh/h)	21	282	28	68	429	135	74	119	58	71	95	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	294	29	71	447	141	77	124	60	74	99	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	736	72	106	689	215	110	399	193	108	436	158
Arrive On Green	0.03	0.23	0.23	0.06	0.26	0.26	0.06	0.34	0.34	0.06	0.33	0.33
Sat Flow, veh/h	1781	3236	315	1781	2641	825	1781	1187	575	1781	1302	474
Grp Volume(v), veh/h	22	160	163	71	299	289	77	0	184	74	0	135
Grp Sat Flow(s),veh/h/ln	1781	1777	1774	1781	1777	1689	1781	0	1762	1781	0	1776
Q Serve(g_s), s	0.7	4.3	4.4	2.2	8.5	8.7	2.4	0.0	4.4	2.3	0.0	3.1
Cycle Q Clear(g_c), s	0.7	4.3	4.4	2.2	8.5	8.7	2.4	0.0	4.4	2.3	0.0	3.1
Prop In Lane	1.00		0.18	1.00		0.49	1.00		0.33	1.00		0.27
Lane Grp Cap(c), veh/h	46	404	403	106	464	441	110	0	592	108	0	594
V/C Ratio(X)	0.48	0.40	0.40	0.67	0.65	0.66	0.70	0.00	0.31	0.69	0.00	0.23
Avail Cap(c_a), veh/h	157	563	562	157	563	535	157	0	592	172	0	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.3	18.6	18.7	26.2	18.7	18.7	26.1	0.0	14.0	26.1	0.0	13.6
Incr Delay (d2), s/veh	7.5	0.6	0.7	7.2	1.9	2.1	7.7	0.0	1.4	7.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.7	1.7	1.1	3.4	3.3	1.2	0.0	1.8	1.1	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	19.3	19.3	33.4	20.5	20.8	33.8	0.0	15.4	33.6	0.0	14.5
LnGrp LOS	C	B	B	C	C	C	C	A	B	C	A	B
Approach Vol, veh/h		345			659			261			209	
Approach Delay, s/veh		20.3			22.0			20.8			21.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	23.6	7.9	17.4	8.0	23.5	6.0	19.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.3	6.4	4.2	6.4	4.4	5.1	2.7	10.7				
Green Ext Time (p_c), s	0.0	0.7	0.0	1.4	0.0	0.5	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay				21.3								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
5: 17th Ave & Soquel Ave

Background Plus Project AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Volume (veh/h)	255	306	66	311	426	50
Future Volume (veh/h)	255	306	66	311	426	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	274	329	71	334	508	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	436	998	117	746	1428	645
Arrive On Green	0.23	0.23	0.07	0.40	0.40	0.00
Sat Flow, veh/h	1870	1554	1781	1870	3563	1610
Grp Volume(v), veh/h	274	329	71	334	508	0
Grp Sat Flow(s),veh/h/ln	1870	1554	1781	1870	1781	1610
Q Serve(g_s), s	5.9	4.4	1.7	5.9	4.5	0.0
Cycle Q Clear(g_c), s	5.9	4.4	1.7	5.9	4.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	436	998	117	746	1428	645
V/C Ratio(X)	0.63	0.33	0.61	0.45	0.36	0.00
Avail Cap(c_a), veh/h	750	1258	218	1166	1428	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.5	3.8	20.4	9.9	9.4	0.0
Incr Delay (d2), s/veh	1.5	0.2	5.1	0.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.8	0.8	2.0	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.0	4.0	25.5	10.3	10.1	0.0
LnGrp LOS	B	A	C	B	B	A
Approach Vol, veh/h	603			405	508	
Approach Delay, s/veh	9.9			13.0	10.1	
Approach LOS	A			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.4	15.0		22.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.5	18.0		28.0
Max Q Clear Time (g_c+I1), s		6.5	3.7	7.9		7.9
Green Ext Time (p_c), s		1.5	0.0	2.1		1.9

Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	4	5	12	560	429	5
Future Vol, veh/h	4	5	12	560	429	5
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	5	13	615	471	5






















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1128	487	489	0	-	0
Stage 1	487	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	226	581	1074	-	-	-
Stage 1	618	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	218	574	1061	-	-	-
Mov Cap-2 Maneuver	349	-	-	-	-	-
Stage 1	603	-	-	-	-	-
Stage 2	519	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1061	-	446	-	-
HCM Lane V/C Ratio	0.012	-	0.022	-	-
HCM Control Delay (s)	8.4	-	13.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Background Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	117	91	114	192	32	104	480	73	28	316	34
Future Volume (veh/h)	38	117	91	114	192	32	104	480	73	28	316	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.91	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	133	103	130	218	36	118	545	83	32	359	39
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	193	150	164	396	65	150	675	103	58	619	67
Arrive On Green	0.04	0.20	0.20	0.09	0.26	0.26	0.08	0.43	0.43	0.03	0.38	0.38
Sat Flow, veh/h	1767	945	732	1781	1542	255	1781	1577	240	1781	1648	179
Grp Volume(v), veh/h	43	0	236	130	0	254	118	0	628	32	0	398
Grp Sat Flow(s),veh/h/ln	1767	0	1677	1781	0	1796	1781	0	1818	1781	0	1827
Q Serve(g_s), s	1.8	0.0	9.6	5.3	0.0	9.1	4.8	0.0	22.3	1.3	0.0	12.9
Cycle Q Clear(g_c), s	1.8	0.0	9.6	5.3	0.0	9.1	4.8	0.0	22.3	1.3	0.0	12.9
Prop In Lane	1.00		0.44	1.00		0.14	1.00		0.13	1.00		0.10
Lane Grp Cap(c), veh/h	70	0	343	164	0	461	150	0	777	58	0	687
V/C Ratio(X)	0.61	0.00	0.69	0.79	0.00	0.55	0.78	0.00	0.81	0.55	0.00	0.58
Avail Cap(c_a), veh/h	136	0	408	181	0	481	210	0	777	123	0	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	27.2	32.9	0.0	23.8	33.2	0.0	18.5	35.2	0.0	18.4
Incr Delay (d2), s/veh	8.4	0.0	3.8	19.7	0.0	1.2	12.2	0.0	8.8	7.9	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	4.1	3.1	0.0	3.8	2.5	0.0	10.4	0.7	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	0.0	31.0	52.6	0.0	25.0	45.4	0.0	27.3	43.2	0.0	22.0
LnGrp LOS	D	A	C	D	A	C	D	A	C	D	A	C
Approach Vol, veh/h		279			384			746			430	
Approach Delay, s/veh		32.9			34.4			30.2			23.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	36.1	11.3	19.6	10.7	32.3	7.4	23.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	31.4	7.5	18.0	8.7	27.8	5.7	19.8				
Max Q Clear Time (g_c+I1), s	3.3	24.3	7.3	11.6	6.8	14.9	3.8	11.1				
Green Ext Time (p_c), s	0.0	2.4	0.0	0.7	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay				29.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Background Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	152	99	25	355	128	83	59	13	85	69	124
Future Volume (veh/h)	93	152	99	25	355	128	83	59	13	85	69	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	160	0	26	374	0	87	62	14	89	73	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	543		52	467		114	459	104	115	185	332
Arrive On Green	0.07	0.29	0.00	0.03	0.25	0.00	0.06	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1471	332	1781	593	1064
Grp Volume(v), veh/h	98	160	0	26	374	0	87	0	76	89	0	204
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1804	1781	0	1656
Q Serve(g_s), s	3.2	3.9	0.0	0.9	11.1	0.0	2.9	0.0	1.8	2.9	0.0	5.7
Cycle Q Clear(g_c), s	3.2	3.9	0.0	0.9	11.1	0.0	2.9	0.0	1.8	2.9	0.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.64
Lane Grp Cap(c), veh/h	125	543		52	467		114	0	562	115	0	518
V/C Ratio(X)	0.78	0.29		0.50	0.80		0.76	0.00	0.14	0.77	0.00	0.39
Avail Cap(c_a), veh/h	165	583		150	567		150	0	562	150	0	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.1	16.3	0.0	28.4	20.9	0.0	27.3	0.0	14.7	27.3	0.0	16.0
Incr Delay (d2), s/veh	16.0	0.3	0.0	7.1	6.7	0.0	15.0	0.0	0.5	16.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.6	0.0	0.4	5.3	0.0	1.6	0.0	0.7	1.7	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	16.6	0.0	35.5	27.6	0.0	42.3	0.0	15.2	43.6	0.0	18.2
LnGrp LOS	D	B		D	C		D	A	B	D	A	B
Approach Vol, veh/h		258	A		400	A		163			293	
Approach Delay, s/veh		26.7			28.1			29.6			26.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	23.0	6.2	21.7	8.3	23.0	8.7	19.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	4.9	3.8	2.9	5.9	4.9	7.7	5.2	13.1				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.6	0.0	0.8	0.0	1.0				

Intersection Summary
























HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
9: 7th Ave & Capitola Rd

Background Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	272	129	53	495	103	184	301	54	65	173	30
Future Volume (veh/h)	7	272	129	53	495	103	184	301	54	65	173	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	7	283	134	55	516	107	192	314	56	68	180	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	16	727	322	91	719	148	174	630	528	157	504	87
Arrive On Green	0.01	0.20	0.20	0.05	0.25	0.25	0.10	0.34	0.34	0.09	0.33	0.33
Sat Flow, veh/h	1781	3554	1573	1781	2918	602	1781	1870	1567	1767	1537	265
Grp Volume(v), veh/h	7	283	134	55	313	310	192	314	56	68	0	211
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1743	1781	1870	1567	1767	0	1801
Q Serve(g_s), s	0.2	3.9	4.2	1.7	9.1	9.2	5.5	7.6	0.9	2.1	0.0	5.0
Cycle Q Clear(g_c), s	0.2	3.9	4.2	1.7	9.1	9.2	5.5	7.6	0.9	2.1	0.0	5.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	16	727	322	91	438	430	174	630	528	157	0	591
V/C Ratio(X)	0.43	0.39	0.42	0.60	0.71	0.72	1.11	0.50	0.11	0.43	0.00	0.36
Avail Cap(c_a), veh/h	158	1134	502	158	567	556	174	630	528	157	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	19.4	19.5	26.2	19.4	19.5	25.5	14.9	6.0	24.4	0.0	14.4
Incr Delay (d2), s/veh	16.6	0.3	0.9	6.3	3.0	3.2	99.5	2.8	0.4	1.9	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.5	0.8	3.8	3.8	7.0	3.3	0.5	0.9	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	19.7	20.4	32.5	22.5	22.7	125.0	17.7	6.4	26.3	0.0	16.1
LnGrp LOS	D	B	C	C	C	C	F	B	A	C	A	B
Approach Vol, veh/h		424			678			562			279	
Approach Delay, s/veh		20.3			23.4			53.2			18.6	
Approach LOS		C			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	7.4	16.0	10.0	23.0	5.0	18.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.1	9.6	3.7	6.2	7.5	7.0	2.2	11.2				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.8	0.0	0.8	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			30.7									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Vol, veh/h	6	6	9	197	6	153	15	264	112	101	195	9
Future Vol, veh/h	6	6	9	197	6	153	15	264	112	101	195	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	5	5	5	2	2	2	3	3	3	4	4	4
Mvmt Flow	6	6	9	207	6	161	16	278	118	106	205	9
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10.2	13.1	17.4	15.1
HCM LOS	B	B	C	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	4%	29%	97%	0%	33%
Vol Thru, %	68%	29%	3%	0%	64%
Vol Right, %	29%	43%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	391	21	203	153	305
LT Vol	15	6	197	0	101
Through Vol	264	6	6	0	195
RT Vol	112	9	0	153	9
Lane Flow Rate	412	22	214	161	321
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.628	0.042	0.419	0.262	0.521
Departure Headway (Hd)	5.489	6.867	7.065	5.857	5.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	654	525	509	610	613
Service Time	3.548	4.867	4.827	3.619	3.903
HCM Lane V/C Ratio	0.63	0.042	0.42	0.264	0.524
HCM Control Delay	17.4	10.2	14.9	10.7	15.1
HCM Lane LOS	C	B	B	B	C
HCM 95th-tile Q	4.4	0.1	2	1	3

HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Background Plus Project AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	553	307	64	531	73	575	19	85	21	9	24
Future Volume (veh/h)	20	553	307	64	531	73	575	19	85	21	9	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	23	643	0	74	617	85	685	0	0	24	10	28
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	2	2	2
Cap, veh/h	45	775		95	770	106	931	0		297	124	369
Arrive On Green	0.03	0.22	0.00	0.05	0.25	0.25	0.26	0.00	0.00	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	3125	430	3534	0	1572	1275	531	1585
Grp Volume(v), veh/h	23	643	0	74	350	352	685	0	0	34	0	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1778	1767	0	1572	1807	0	1585
Q Serve(g_s), s	1.0	13.4	0.0	3.2	14.3	14.4	13.7	0.0	0.0	1.1	0.0	1.1
Cycle Q Clear(g_c), s	1.0	13.4	0.0	3.2	14.3	14.4	13.7	0.0	0.0	1.1	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	45	775		95	438	438	931	0		420	0	369
V/C Ratio(X)	0.51	0.83		0.78	0.80	0.80	0.74	0.00		0.08	0.00	0.08
Avail Cap(c_a), veh/h	117	831		127	438	438	931	0		420	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.3	28.9	0.0	36.2	27.4	27.4	26.0	0.0	0.0	23.2	0.0	23.2
Incr Delay (d2), s/veh	8.8	6.7	0.0	19.5	10.2	10.4	5.2	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.2	0.0	1.9	7.0	7.1	6.2	0.0	0.0	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	35.6	0.0	55.7	37.6	37.8	31.2	0.0	0.0	23.6	0.0	23.6
LnGrp LOS	D	D		E	D	D	C	A		C	A	C
Approach Vol, veh/h		666	A		776			685	A		62	
Approach Delay, s/veh		35.9			39.4			31.2			23.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.9	8.6	21.4		22.5	6.5	23.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.4	5.5	18.1		18.0	5.1	18.5				
Max Q Clear Time (g_c+I1), s		15.7	5.2	15.4		3.1	3.0	16.4				
Green Ext Time (p_c), s		1.3	0.0	1.1		0.1	0.0	0.9				

Intersection Summary



















HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
12: 7th Ave & Soquel Ave

Background Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	514	71	220	602	0	142	0	457	0	0	0
Future Volume (veh/h)	0	514	71	220	602	0	142	0	457	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1856	1856	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	565	78	242	662	0	156	0	502	0	0	0
Peak Hour Factor	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	3	3	0	2	2	2	2	2	2
Cap, veh/h	0	785	108	294	1778	0	584	0	505	0	618	0
Arrive On Green	0.00	0.26	0.26	0.17	0.50	0.00	0.33	0.00	0.33	0.00	0.00	0.00
Sat Flow, veh/h	0	3167	423	1767	3618	0	1366	0	1528	0	1870	0
Grp Volume(v), veh/h	0	321	322	242	662	0	156	0	502	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1749	1749	1767	1763	0	1366	0	1528	0	1870	0
Q Serve(g_s), s	0.0	9.1	9.2	7.2	6.2	0.0	4.7	0.0	17.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.1	9.2	7.2	6.2	0.0	4.7	0.0	17.8	0.0	0.0	0.0
Prop In Lane	0.00		0.24	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	446	447	294	1778	0	584	0	505	0	618	0
V/C Ratio(X)	0.00	0.72	0.72	0.82	0.37	0.00	0.27	0.00	0.99	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	578	578	341	2136	0	584	0	505	0	618	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.5	18.5	21.9	8.2	0.0	13.8	0.0	18.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.0	3.1	13.3	0.1	0.0	1.1	0.0	38.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.7	3.7	3.8	1.9	0.0	1.5	0.0	10.8	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.5	21.7	35.2	8.4	0.0	14.9	0.0	56.9	0.0	0.0	0.0
LnGrp LOS	A	C	C	D	A	A	B	A	E	A	A	A
Approach Vol, veh/h		643			904			658				0
Approach Delay, s/veh		21.6			15.6			46.9				0.0
Approach LOS		C			B			D				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	13.6	18.4		22.5		32.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		19.8	9.2	11.2		0.0		8.2				
Green Ext Time (p_c), s		0.0	0.1	2.2		0.0		4.8				
Intersection Summary												
HCM 6th Ctrl Delay				26.7								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Background Plus Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	624	375	309	635	1	233	5	932	1	1	1
Future Volume (veh/h)	3	624	375	309	635	1	233	5	932	1	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	664	0	329	676	1	248	5	991	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	807		397	1629	2	346	5	856	82	78	39
Arrive On Green	0.00	0.23	0.00	0.22	0.45	0.45	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1767	3526	1572	1781	3641	5	707	14	1585	0	248	124
Grp Volume(v), veh/h	3	664	0	329	330	347	253	0	991	3	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1869	721	0	1585	371	0	0
Q Serve(g_s), s	0.1	10.4	0.0	10.3	7.4	7.4	0.0	0.0	18.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	10.4	0.0	10.3	7.4	7.4	18.5	0.0	18.5	18.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.98		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	7	807		397	795	836	351	0	856	200	0	0
V/C Ratio(X)	0.42	0.82		0.83	0.42	0.42	0.72	0.00	1.16	0.01	0.00	0.00
Avail Cap(c_a), veh/h	151	876		718	1005	1057	351	0	856	200	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.0	21.4	0.0	21.6	10.9	10.9	20.8	0.0	13.4	15.5	0.0	0.0
Incr Delay (d2), s/veh	34.3	6.0	0.0	4.5	0.3	0.3	12.1	0.0	84.3	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.6	0.0	4.4	2.5	2.7	4.4	0.0	28.5	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	27.4	0.0	26.1	11.3	11.3	32.9	0.0	97.7	15.6	0.0	0.0
LnGrp LOS	E	C		C	B	B	C	A	F	B	A	A
Approach Vol, veh/h		667	A		1006			1244				3
Approach Delay, s/veh		27.5			16.1			84.5				15.6
Approach LOS		C			B			F				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	17.5	17.8		23.0	4.7	30.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	23.5	14.5		18.5	5.0	33.0				
Max Q Clear Time (g_c+I1), s		20.5	12.3	12.4		20.5	2.1	9.4				
Green Ext Time (p_c), s		0.0	0.8	0.9		0.0	0.0	4.3				
Intersection Summary												
HCM 6th Ctrl Delay			47.9									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	913	8	48	515	18	0	0	23	12	0	22
Future Vol, veh/h	20	913	8	48	515	18	0	0	23	12	0	22
Conflicting Peds, #/hr	20	0	21	21	0	20	8	0	0	0	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	25	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	971	9	51	548	19	0	0	24	13	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	587	0	0	1001	0	0	-	-	511	1198	1713	576
Stage 1	-	-	-	-	-	-	-	-	-	670	670	-
Stage 2	-	-	-	-	-	-	-	-	-	528	1043	-
Critical Hdwy	4.13	-	-	4.13	-	-	-	-	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	-	-	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	986	-	-	689	-	-	0	0	509	151	90	516
Stage 1	-	-	-	-	-	-	0	0	-	446	455	-
Stage 2	-	-	-	-	-	-	0	0	-	503	305	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	967	-	-	675	-	-	-	-	499	131	78	502
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	131	78	-
Stage 1	-	-	-	-	-	-	-	-	-	428	412	-
Stage 2	-	-	-	-	-	-	-	-	-	468	292	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.9			12.6			21.7		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	499	967	-	-	675	-	-	251
HCM Lane V/C Ratio	0.049	0.022	-	-	0.076	-	-	0.144
HCM Control Delay (s)	12.6	8.8	-	-	10.8	-	-	21.7
HCM Lane LOS	B	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.2	-	-	0.5

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↗			↕	↖			↖		↕↗	
Traffic Vol, veh/h	0	941	7	0	554	14	0	0	41	14	0	8
Future Vol, veh/h	0	941	7	0	554	14	0	0	41	14	0	8
Conflicting Peds, #/hr	25	0	21	21	0	25	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	25	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	0	1001	7	0	589	15	0	0	44	15	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	629	0	0	-	-	0	-	-	527	1117	1643	614
Stage 1	-	-	-	-	-	-	-	-	-	614	614	-
Stage 2	-	-	-	-	-	-	-	-	-	503	1029	-
Critical Hdwy	4.13	-	-	-	-	-	-	-	6.93	7.375	6.575	6.275
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.175	5.575	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.575	5.575	-
Follow-up Hdwy	2.219	-	-	-	-	-	-	-	3.319	3.5475	4.0475	3.3475
Pot Cap-1 Maneuver	951	-	-	0	-	0	0	0	497	170	97	484
Stage 1	-	-	-	0	-	0	0	0	-	472	476	-
Stage 2	-	-	-	0	-	0	0	0	-	514	305	-
Platoon blocked, %		-	-	-	-	-	-	-				
Mov Cap-1 Maneuver	928	-	-	-	-	-	-	-	486	151	93	472
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	281	206	-
Stage 1	-	-	-	-	-	-	-	-	-	461	465	-
Stage 2	-	-	-	-	-	-	-	-	-	467	299	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			13.1			16.8		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	486	928	-	-	-	-	329
HCM Lane V/C Ratio	0.09	-	-	-	-	-	0.071
HCM Control Delay (s)	13.1	0	-	-	-	-	16.8
HCM Lane LOS	B	A	-	-	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	-	-	0.2





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Background Plus Project PM

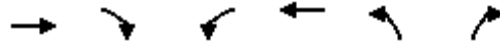
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	735	120	103	411	44	87	215	77	202	367	45
Future Volume (veh/h)	53	735	120	103	411	44	87	215	77	202	367	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	774	126	108	433	46	92	226	81	213	386	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	862	140	137	1019	108	118	345	124	253	555	68
Arrive On Green	0.05	0.28	0.28	0.08	0.31	0.31	0.07	0.26	0.26	0.14	0.34	0.34
Sat Flow, veh/h	1781	3047	496	1781	3238	342	1781	1309	469	1781	1634	199
Grp Volume(v), veh/h	56	451	449	108	237	242	92	0	307	213	0	433
Grp Sat Flow(s),veh/h/ln	1781	1777	1766	1781	1777	1804	1781	0	1778	1781	0	1833
Q Serve(g_s), s	2.4	18.8	18.8	4.6	8.1	8.2	3.9	0.0	11.8	9.0	0.0	15.7
Cycle Q Clear(g_c), s	2.4	18.8	18.8	4.6	8.1	8.2	3.9	0.0	11.8	9.0	0.0	15.7
Prop In Lane	1.00		0.28	1.00		0.19	1.00		0.26	1.00		0.11
Lane Grp Cap(c), veh/h	81	503	500	137	559	567	118	0	469	253	0	623
V/C Ratio(X)	0.69	0.90	0.90	0.79	0.42	0.43	0.78	0.00	0.65	0.84	0.00	0.70
Avail Cap(c_a), veh/h	127	520	517	155	559	567	155	0	469	289	0	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.2	26.5	26.5	34.9	20.8	20.9	35.4	0.0	25.2	32.1	0.0	21.9
Incr Delay (d2), s/veh	10.1	18.0	18.1	20.8	0.5	0.5	16.7	0.0	6.9	17.6	0.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	10.0	10.0	2.7	3.3	3.4	2.2	0.0	5.7	5.0	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	44.5	44.6	55.7	21.4	21.4	52.1	0.0	32.1	49.8	0.0	28.2
LnGrp LOS	D	D	D	E	C	C	D	A	C	D	A	C
Approach Vol, veh/h		956			587			399			646	
Approach Delay, s/veh		44.7			27.7			36.7			35.4	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	24.8	10.4	26.3	9.6	30.6	8.0	28.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	20.3	6.7	22.5	6.7	26.1	5.5	23.7				
Max Q Clear Time (g_c+I1), s	11.0	13.8	6.6	20.8	5.9	17.7	4.4	10.2				
Green Ext Time (p_c), s	0.1	1.0	0.0	1.0	0.0	1.7	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay				37.3								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

Background Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	999	57	50	467	63	29	44	56	236	150	33
Future Volume (veh/h)	43	999	57	50	467	63	29	44	56	236	150	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	1030	59	52	481	65	30	45	58	243	155	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	1093	63	77	1021	137	55	182	234	281	556	122
Arrive On Green	0.04	0.32	0.32	0.04	0.33	0.33	0.03	0.25	0.25	0.16	0.37	0.37
Sat Flow, veh/h	1781	3403	195	1781	3141	422	1781	735	948	1781	1484	325
Grp Volume(v), veh/h	44	538	551	52	271	275	30	0	103	243	0	189
Grp Sat Flow(s),veh/h/ln	1781	1777	1821	1781	1777	1787	1781	0	1683	1781	0	1809
Q Serve(g_s), s	1.9	23.0	23.0	2.2	9.5	9.6	1.3	0.0	3.8	10.4	0.0	5.7
Cycle Q Clear(g_c), s	1.9	23.0	23.0	2.2	9.5	9.6	1.3	0.0	3.8	10.4	0.0	5.7
Prop In Lane	1.00		0.11	1.00		0.24	1.00		0.56	1.00		0.18
Lane Grp Cap(c), veh/h	70	571	585	77	578	581	55	0	416	281	0	677
V/C Ratio(X)	0.63	0.94	0.94	0.67	0.47	0.47	0.55	0.00	0.25	0.86	0.00	0.28
Avail Cap(c_a), veh/h	114	571	585	116	578	581	125	0	416	285	0	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	25.8	25.8	36.8	21.0	21.0	37.3	0.0	23.6	32.1	0.0	17.1
Incr Delay (d2), s/veh	8.9	24.2	23.9	9.8	0.6	0.6	8.4	0.0	1.4	22.7	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	13.0	13.3	1.2	3.9	3.9	0.7	0.0	1.6	6.1	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	50.0	49.7	46.6	21.6	21.6	45.7	0.0	25.0	54.8	0.0	18.1
LnGrp LOS	D	D	D	D	C	C	D	A	C	D	A	B
Approach Vol, veh/h		1133			598			133				432
Approach Delay, s/veh		49.7			23.8			29.7				38.7
Approach LOS		D			C			C				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	23.8	7.9	29.6	6.9	33.7	7.6	29.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	19.3	5.1	25.1	5.5	26.3	5.0	25.2				
Max Q Clear Time (g_c+I1), s	12.4	5.8	4.2	25.0	3.3	7.7	3.9	11.6				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.1	0.0	0.9	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay												39.7
HCM 6th LOS												D

HCM 6th Signalized Intersection Summary
5: 17th Ave & Soquel Ave



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	602	529	55	218	285	44
Future Volume (veh/h)	602	529	55	218	285	44
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	614	540	56	222	333	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	717	1113	93	965	1149	519
Arrive On Green	0.38	0.38	0.05	0.52	0.32	0.00
Sat Flow, veh/h	1870	1569	1781	1870	3563	1610
Grp Volume(v), veh/h	614	540	56	222	333	0
Grp Sat Flow(s),veh/h/ln	1870	1569	1781	1870	1781	1610
Q Serve(g_s), s	16.8	8.6	1.7	3.6	3.9	0.0
Cycle Q Clear(g_c), s	16.8	8.6	1.7	3.6	3.9	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	717	1113	93	965	1149	519
V/C Ratio(X)	0.86	0.49	0.60	0.23	0.29	0.00
Avail Cap(c_a), veh/h	788	1172	160	1106	1149	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	3.7	25.9	7.4	14.1	0.0
Incr Delay (d2), s/veh	8.6	0.3	6.2	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	5.6	0.8	1.2	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.4	4.0	32.1	7.5	14.8	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	1154			278	333	
Approach Delay, s/veh	14.9			12.5	14.8	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.4	25.9		33.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.0	23.5		33.0
Max Q Clear Time (g_c+I1), s		5.9	3.7	18.8		5.6
Green Ext Time (p_c), s		0.9	0.0	2.6		1.3

Intersection Summary

HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	7	30	12	391	560	16
Future Vol, veh/h	7	30	12	391	560	16
Conflicting Peds, #/hr	0	0	8	0	0	8
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	32	13	420	602	17

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1065	619	627	0	-	0
Stage 1	619	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	246	489	955	-	-	-
Stage 1	537	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	239	485	948	-	-	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	948	-	458	-	-
HCM Lane V/C Ratio	0.014	-	0.087	-	-
HCM Control Delay (s)	8.8	-	13.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Background Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	292	122	110	166	31	59	329	110	59	431	51
Future Volume (veh/h)	43	292	122	110	166	31	59	329	110	59	431	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	301	126	113	171	32	61	339	113	61	444	53
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	330	138	144	472	88	85	485	162	85	599	71
Arrive On Green	0.04	0.27	0.27	0.08	0.31	0.31	0.05	0.37	0.37	0.05	0.37	0.37
Sat Flow, veh/h	1781	1226	513	1781	1524	285	1781	1325	442	1781	1634	195
Grp Volume(v), veh/h	44	0	427	113	0	203	61	0	452	61	0	497
Grp Sat Flow(s),veh/h/ln	1781	0	1740	1781	0	1809	1781	0	1766	1781	0	1829
Q Serve(g_s), s	1.9	0.0	18.1	4.7	0.0	6.6	2.6	0.0	16.6	2.6	0.0	18.0
Cycle Q Clear(g_c), s	1.9	0.0	18.1	4.7	0.0	6.6	2.6	0.0	16.6	2.6	0.0	18.0
Prop In Lane	1.00		0.30	1.00		0.16	1.00		0.25	1.00		0.11
Lane Grp Cap(c), veh/h	71	0	468	144	0	561	85	0	647	85	0	670
V/C Ratio(X)	0.62	0.00	0.91	0.79	0.00	0.36	0.72	0.00	0.70	0.72	0.00	0.74
Avail Cap(c_a), veh/h	143	0	491	175	0	561	119	0	647	119	0	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	27.0	34.4	0.0	20.4	35.8	0.0	20.6	35.8	0.0	21.0
Incr Delay (d2), s/veh	8.6	0.0	20.8	17.3	0.0	0.4	11.7	0.0	6.2	11.7	0.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	9.8	2.7	0.0	2.7	1.4	0.0	7.5	1.4	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	47.7	51.7	0.0	20.8	47.4	0.0	26.7	47.4	0.0	28.3
LnGrp LOS	D	A	D	D	A	C	D	A	C	D	A	C
Approach Vol, veh/h		471			316			513			558	
Approach Delay, s/veh		47.4			31.9			29.2			30.4	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	32.4	10.6	25.0	8.1	32.4	7.5	28.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	27.9	7.5	21.5	5.1	27.9	6.1	22.9				
Max Q Clear Time (g_c+I1), s	4.6	18.6	6.7	20.1	4.6	20.0	3.9	8.6				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.4	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			34.6									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Background Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	522	220	23	268	95	89	60	12	144	90	85
Future Volume (veh/h)	82	522	220	23	268	95	89	60	12	144	90	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	549	0	24	282	0	94	63	13	152	95	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	609		48	385		121	415	86	190	271	254
Arrive On Green	0.15	0.33	0.00	0.03	0.21	0.00	0.07	0.28	0.28	0.11	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1495	309	1781	855	801
Grp Volume(v), veh/h	86	549	0	24	282	0	94	0	76	152	0	184
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1804	1781	0	1656
Q Serve(g_s), s	3.0	19.2	0.0	0.9	9.6	0.0	3.6	0.0	2.2	5.7	0.0	5.8
Cycle Q Clear(g_c), s	3.0	19.2	0.0	0.9	9.6	0.0	3.6	0.0	2.2	5.7	0.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.48
Lane Grp Cap(c), veh/h	261	609		48	385		121	0	501	190	0	524
V/C Ratio(X)	0.33	0.90		0.50	0.73		0.78	0.00	0.15	0.80	0.00	0.35
Avail Cap(c_a), veh/h	261	670		130	555		174	0	501	221	0	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	22.0	0.0	32.8	25.4	0.0	31.4	0.0	18.6	29.8	0.0	18.0
Incr Delay (d2), s/veh	0.7	14.5	0.0	8.0	2.9	0.0	12.8	0.0	0.6	16.3	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.2	0.0	0.5	4.4	0.0	1.9	0.0	1.0	3.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	36.5	0.0	40.8	28.3	0.0	44.2	0.0	19.3	46.1	0.0	19.8
LnGrp LOS	C	D		D	C		D	A	B	D	A	B
Approach Vol, veh/h		635	A		306	A		170				336
Approach Delay, s/veh		35.2			29.3			33.1				31.7
Approach LOS		D			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	23.5	6.3	26.8	9.1	26.2	14.5	18.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	19.0	5.0	24.5	6.7	20.8	9.2	20.3				
Max Q Clear Time (g_c+I1), s	7.7	4.2	2.9	21.2	5.6	7.8	5.0	11.6				
Green Ext Time (p_c), s	0.0	0.2	0.0	1.1	0.0	0.8	0.1	1.0				

Intersection Summary

HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: 7th Ave & Capitola Rd

Background Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	850	249	86	436	57	119	135	58	101	209	13
Future Volume (veh/h)	13	850	249	86	436	57	119	135	58	101	209	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	885	259	90	454	59	124	141	60	105	218	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	1031	446	115	1068	138	157	541	450	157	503	32
Arrive On Green	0.02	0.29	0.29	0.06	0.34	0.34	0.09	0.29	0.29	0.09	0.29	0.29
Sat Flow, veh/h	1781	3554	1536	1781	3160	409	1781	1870	1555	1781	1737	112
Grp Volume(v), veh/h	14	885	259	90	254	259	124	141	60	105	0	232
Grp Sat Flow(s),veh/h/ln	1781	1777	1536	1781	1777	1792	1781	1870	1555	1781	0	1848
Q Serve(g_s), s	0.5	15.9	9.7	3.4	7.4	7.5	4.6	3.9	1.4	3.8	0.0	6.9
Cycle Q Clear(g_c), s	0.5	15.9	9.7	3.4	7.4	7.5	4.6	3.9	1.4	3.8	0.0	6.9
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	30	1031	446	115	600	605	157	541	450	157	0	535
V/C Ratio(X)	0.46	0.86	0.58	0.78	0.42	0.43	0.79	0.26	0.13	0.67	0.00	0.43
Avail Cap(c_a), veh/h	132	1082	467	145	600	605	172	541	450	172	0	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.8	22.6	20.4	31.0	17.2	17.3	30.1	18.4	9.2	29.7	0.0	19.4
Incr Delay (d2), s/veh	10.4	6.8	1.7	18.8	0.5	0.5	19.9	1.2	0.6	8.5	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.1	3.4	2.0	2.9	2.9	2.8	1.8	0.7	2.0	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	29.4	22.1	49.8	17.7	17.7	50.0	19.6	9.8	38.2	0.0	22.0
LnGrp LOS	D	C	C	D	B	B	D	B	A	D	A	C
Approach Vol, veh/h		1158			603			325				337
Approach Delay, s/veh		27.9			22.5			29.4				27.0
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	24.0	8.9	24.0	10.4	24.0	5.7	27.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	19.5	5.5	20.5	6.5	19.5	5.0	21.0				
Max Q Clear Time (g_c+I1), s	5.8	5.9	5.4	17.9	6.6	8.9	2.5	9.5				
Green Ext Time (p_c), s	0.0	0.7	0.0	1.7	0.0	0.9	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	24.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	14	8	19	166	3	99	14	183	274	202	260	14
Future Vol, veh/h	14	8	19	166	3	99	14	183	274	202	260	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	8	20	173	3	103	15	191	285	210	271	15
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	11.3	13.7	24.7	30.9
HCM LOS	B	B	C	D

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	34%	98%	0%	42%
Vol Thru, %	39%	20%	2%	0%	55%
Vol Right, %	58%	46%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	471	41	169	99	476
LT Vol	14	14	166	0	202
Through Vol	183	8	3	0	260
RT Vol	274	19	0	99	14
Lane Flow Rate	491	43	176	103	496
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.766	0.089	0.384	0.19	0.823
Departure Headway (Hd)	5.623	7.514	7.847	6.623	5.976
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	475	459	541	610
Service Time	3.64	5.588	5.595	4.371	3.993
HCM Lane V/C Ratio	0.758	0.091	0.383	0.19	0.813
HCM Control Delay	24.7	11.3	15.4	10.9	30.9
HCM Lane LOS	C	B	C	B	D
HCM 95th-tile Q	7.1	0.3	1.8	0.7	8.5

HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Background Plus Project PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	867	996	68	446	35	487	15	43	33	35	30
Future Volume (veh/h)	8	867	996	68	446	35	487	15	43	33	35	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	903	0	71	465	36	518	0	0	34	36	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1148		91	1215	94	770	0		182	192	323
Arrive On Green	0.01	0.32	0.00	0.05	0.36	0.36	0.22	0.00	0.00	0.20	0.20	0.20
Sat Flow, veh/h	1781	3554	1585	1781	3337	257	3563	0	1585	887	939	1578
Grp Volume(v), veh/h	8	903	0	71	247	254	518	0	0	70	0	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1818	1781	0	1585	1826	0	1578
Q Serve(g_s), s	0.4	20.3	0.0	3.5	9.0	9.1	11.7	0.0	0.0	2.8	0.0	1.4
Cycle Q Clear(g_c), s	0.4	20.3	0.0	3.5	9.0	9.1	11.7	0.0	0.0	2.8	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	0.49		1.00
Lane Grp Cap(c), veh/h	18	1148		91	647	662	770	0		374	0	323
V/C Ratio(X)	0.44	0.79		0.78	0.38	0.38	0.67	0.00		0.19	0.00	0.10
Avail Cap(c_a), veh/h	101	1613		103	809	827	770	0		374	0	323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.3	27.0	0.0	41.2	20.6	20.7	31.6	0.0	0.0	28.9	0.0	28.3
Incr Delay (d2), s/veh	16.3	1.8	0.0	27.7	0.4	0.4	4.7	0.0	0.0	1.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.5	0.0	2.2	3.7	3.8	5.4	0.0	0.0	1.3	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	28.8	0.0	68.9	21.0	21.0	36.2	0.0	0.0	30.0	0.0	28.9
LnGrp LOS	E	C		E	C	C	D	A		C	A	C
Approach Vol, veh/h		911	A		572			518	A		101	
Approach Delay, s/veh		29.0			27.0			36.2			29.7	
Approach LOS		C			C			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	9.0	32.9		22.5	5.4	36.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	5.1	39.9		18.0	5.0	40.0				
Max Q Clear Time (g_c+I1), s		13.7	5.5	22.3		4.8	2.4	11.1				
Green Ext Time (p_c), s		1.0	0.0	6.1		0.3	0.0	3.2				

Intersection Summary



















HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 12: 7th Ave & Soquel Ave

Background Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	833	81	283	484	0	88	0	229	0	0	0
Future Volume (veh/h)	0	833	81	283	484	0	88	0	229	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	850	83	289	494	0	90	0	234	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	962	94	314	1942	0	549	0	474	0	565	0
Arrive On Green	0.00	0.29	0.29	0.18	0.55	0.00	0.30	0.00	0.30	0.00	0.00	0.00
Sat Flow, veh/h	0	3358	319	1781	3647	0	1418	0	1569	0	1870	0
Grp Volume(v), veh/h	0	463	470	289	494	0	90	0	234	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1777	1806	1781	1777	0	1418	0	1569	0	1870	0
Q Serve(g_s), s	0.0	14.8	14.8	9.5	4.4	0.0	2.8	0.0	7.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.8	14.8	9.5	4.4	0.0	2.8	0.0	7.3	0.0	0.0	0.0
Prop In Lane	0.00		0.18	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	524	532	314	1942	0	549	0	474	0	565	0
V/C Ratio(X)	0.00	0.88	0.88	0.92	0.25	0.00	0.16	0.00	0.49	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	537	546	314	1969	0	549	0	474	0	565	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.0	20.0	24.1	7.1	0.0	15.5	0.0	17.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	15.7	15.5	31.0	0.1	0.0	0.6	0.0	3.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.8	7.9	6.4	1.3	0.0	0.9	0.0	2.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	35.7	35.5	55.1	7.2	0.0	16.1	0.0	20.7	0.0	0.0	0.0
LnGrp LOS	A	D	D	E	A	A	B	A	C	A	A	A
Approach Vol, veh/h		933			783			324				0
Approach Delay, s/veh		35.6			24.9			19.4				0.0
Approach LOS		D			C			B				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	15.0	22.0		22.5		37.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		9.3	11.5	16.8		0.0		6.4				
Green Ext Time (p_c), s		0.9	0.0	0.7		0.0		3.5				
Intersection Summary												
HCM 6th Ctrl Delay				28.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Background Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	725	400	384	595	5	204	5	695	6	2	8
Future Volume (veh/h)	6	725	400	384	595	5	204	5	695	6	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	755	0	400	620	5	212	5	724	6	2	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	848		444	1734	14	372	6	875	95	50	68
Arrive On Green	0.01	0.24	0.00	0.25	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3612	29	865	20	1585	61	164	225
Grp Volume(v), veh/h	6	755	0	400	305	320	217	0	724	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1864	886	0	1585	451	0	0
Q Serve(g_s), s	0.2	13.2	0.0	14.0	6.9	6.9	0.0	0.0	19.5	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	13.2	0.0	14.0	6.9	6.9	16.7	0.0	19.5	16.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.98		1.00	0.37		0.50
Lane Grp Cap(c), veh/h	14	848		444	853	895	378	0	875	213	0	0
V/C Ratio(X)	0.43	0.89		0.90	0.36	0.36	0.57	0.00	0.83	0.08	0.00	0.00
Avail Cap(c_a), veh/h	138	855		456	853	895	378	0	875	213	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.8	23.7	0.0	23.4	10.5	10.5	21.5	0.0	11.9	17.2	0.0	0.0
Incr Delay (d2), s/veh	19.1	11.4	0.0	20.3	0.3	0.2	6.2	0.0	8.9	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.5	0.0	8.0	2.4	2.5	3.5	0.0	9.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	35.2	0.0	43.7	10.8	10.8	27.7	0.0	20.8	17.9	0.0	0.0
LnGrp LOS	D	D		D	B	B	C	A	C	B	A	A
Approach Vol, veh/h		761	A		1025			941			16	
Approach Delay, s/veh		35.3			23.6			22.4			17.9	
Approach LOS		D			C			C			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	20.6	19.9		24.0	5.0	35.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	16.5	15.5		19.5	5.0	27.0				
Max Q Clear Time (g_c+I1), s		21.5	16.0	15.2		18.8	2.2	8.9				
Green Ext Time (p_c), s		0.0	0.1	0.1		0.0	0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Appendix I

Derivation of
Future Traffic
Growth Rates

JMW-027
Future Growth Derivations

Location	Daily Volumes										
	2018	2016	2015	2014	2011	2008	2007	2006	2003	2001	1999
17th Ave, Capitola to Brommer	9,790	11,692	10,385	10,181			12,130		12,722		
7th Ave, S. of Brommer	8,900	11,514						10,903		11,398	
Brommer, W. of 17th	7,200	7,680		7,598		7,290			6,541		7,828
Capitola, W. of 30th	18,540				16,695						
Chanticleer, N. of Capitola	5,460		4,875								
Soquel Ave, W of Capitola	27,820			25,044							

Notes:

1. Volume Sources:
 - a. 2018 Daily Volumes: Segment volumes derived from 2018 traffic counts published by Jeff Waller Consulting.
 - b. 1988-2016 volumes downloaded from SCCRTC web site.
2. Growth rate per year for Portola Drive from *Development at Portola Drive / 38th Avenue Traffic Impact Study*, Kimley-Horn, January 14, 2015.

Location	Change in Volume									
	2018-2015	2018-2014	2018-2011	2016-2014	2016-2008	2016-2007	2016-2006	2016-2003	2016-2001	2007-2003
17th Ave, Capitola to Brommer				1,511		-438		-1,030		-592
7th Ave, S. of Brommer							611		116	
Brommer, W. of 17th				82	390			1,139		
Capitola, W. of 30th			1,845							
Chanticleer, N. of Capitola	585									
Soquel Ave, W of Capitola		2,776								

Location	Percent Volume Change (Total)										
	2018-2015	2018-2014	2018-2011	2016-2014	2016-2008	2016-2007	2016-2006	2016-2003	2016-2001	2007-2003	
17th Ave, Capitola to Brommer				14.84%		-3.61%		-8.10%		-4.65%	
7th Ave, S. of Brommer							5.60%		1.02%		
Brommer, W. of 17th				1.08%	5.35%			17.41%			
Capitola, W. of 30th			11.05%								
Chanticleer, N. of Capitola	12.00%										
Soquel Ave, W of Capitola		11.08%									

Location	Percent Volume Change Per Year										Average
	2018-2015	2018-2014	2018-2011	2016-2014	2016-2008	2016-2007	2016-2006	2016-2003	2016-2001	2007-2003	
17th Ave, Capitola to Brommer				7.42%		-0.40%		-0.62%		-1.16%	1.31%
7th Ave, S. of Brommer							0.56%		0.07%		0.31%
Brommer, W. of 17th				0.54%	0.67%			1.34%			0.85%
Capitola, W. of 30th			1.58%								1.58%
Chanticleer, N. of Capitola	4.00%										4.00%
Soquel Ave, W of Capitola		2.77%									2.77%

Location	Use	Years	Rounded
		17	
17th Ave, Capitola to Brommer	1.31%	22.27%	22%
7th Ave, S. of Brommer	0.31%	5.27%	5.50%
Brommer, W. of 17th	0.85%	14.45%	14.50%
Capitola, W. of 30th	1.50%	25.50%	25.50%
Chanticleer, N. of Capitola	1.50%	25.50%	25.50%
Soquel Ave, W of Capitola	1.50%	25.50%	25.50%

Appendix J

Intersection
Level of Service
Calculations

Cumulative Without Project
Conditions

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	418	667	28	23	30
Future Vol, veh/h	13	418	667	28	23	30
Conflicting Peds, #/hr	15	0	0	15	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	440	702	29	24	32

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	746	0	-	0	980 391
Stage 1	-	-	-	-	732 -
Stage 2	-	-	-	-	248 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	858	-	-	-	247 608
Stage 1	-	-	-	-	437 -
Stage 2	-	-	-	-	770 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	846	-	-	-	236 594
Mov Cap-2 Maneuver	-	-	-	-	340 -
Stage 1	-	-	-	-	423 -
Stage 2	-	-	-	-	759 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	846	-	-	-	449
HCM Lane V/C Ratio	0.016	-	-	-	0.124
HCM Control Delay (s)	9.3	-	-	-	14.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

HCM 6th TWSC
2: Capitola Road & 16th Ave

Cumulative Without Project AM

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	441	688	19	9	7
Future Vol, veh/h	0	441	688	19	9	7
Conflicting Peds, #/hr	18	0	0	18	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	464	724	20	9	7























Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	762	0	-	0	986 390
Stage 1	-	-	-	-	752 -
Stage 2	-	-	-	-	234 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	846	-	-	-	245 609
Stage 1	-	-	-	-	426 -
Stage 2	-	-	-	-	783 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	831	-	-	-	237 599
Mov Cap-2 Maneuver	-	-	-	-	340 -
Stage 1	-	-	-	-	419 -
Stage 2	-	-	-	-	770 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	831	-	-	-	419
HCM Lane V/C Ratio	-	-	-	-	0.04
HCM Control Delay (s)	0	-	-	-	14
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Cumulative Without Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	36	299	100	75	499	77	139	472	69	76	352	65
Future Volume (veh/h)	36	299	100	75	499	77	139	472	69	76	352	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	302	101	76	504	78	140	477	70	77	356	66
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	562	184	109	732	113	177	558	82	109	479	89
Arrive On Green	0.04	0.22	0.22	0.06	0.24	0.24	0.10	0.35	0.35	0.06	0.31	0.31
Sat Flow, veh/h	1781	2611	853	1781	3072	473	1781	1589	233	1781	1531	284
Grp Volume(v), veh/h	36	203	200	76	290	292	140	0	547	77	0	422
Grp Sat Flow(s),veh/h/ln	1781	1777	1688	1781	1777	1768	1781	0	1822	1781	0	1815
Q Serve(g_s), s	1.1	5.9	6.1	2.4	8.6	8.7	4.4	0.0	16.1	2.5	0.0	12.0
Cycle Q Clear(g_c), s	1.1	5.9	6.1	2.4	8.6	8.7	4.4	0.0	16.1	2.5	0.0	12.0
Prop In Lane	1.00		0.51	1.00		0.27	1.00		0.13	1.00		0.16
Lane Grp Cap(c), veh/h	68	383	364	109	424	422	177	0	640	109	0	568
V/C Ratio(X)	0.53	0.53	0.55	0.70	0.69	0.69	0.79	0.00	0.86	0.70	0.00	0.74
Avail Cap(c_a), veh/h	154	553	525	154	553	550	182	0	640	154	0	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.3	20.1	20.2	26.6	20.1	20.1	25.4	0.0	17.4	26.6	0.0	17.8
Incr Delay (d2), s/veh	6.4	1.1	1.3	7.9	2.3	2.5	20.0	0.0	13.7	8.0	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	2.3	1.2	3.5	3.6	2.7	0.0	8.3	1.2	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	21.3	21.5	34.5	22.4	22.6	45.5	0.0	31.1	34.6	0.0	26.3
LnGrp LOS	C	C	C	C	C	C	D	A	C	C	A	C
Approach Vol, veh/h		439			658			687			499	
Approach Delay, s/veh		22.4			23.9			34.1			27.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	24.8	8.0	17.0	10.3	22.6	6.7	18.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.9	18.1	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.5	18.1	4.4	8.1	6.4	14.0	3.1	10.7				
Green Ext Time (p_c), s	0.0	0.3	0.0	1.7	0.0	1.0	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			27.5									
HCM 6th LOS			C									

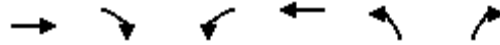
HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

Cumulative Without Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	362	58	68	545	174	73	149	58	92	125	34
Future Volume (veh/h)	18	362	58	68	545	174	73	149	58	92	125	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	19	377	60	71	568	181	76	155	60	96	130	35
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	747	117	104	743	236	108	407	157	123	460	124
Arrive On Green	0.02	0.25	0.25	0.06	0.28	0.28	0.06	0.32	0.32	0.07	0.33	0.33
Sat Flow, veh/h	1781	3031	476	1781	2631	835	1781	1281	496	1781	1414	381
Grp Volume(v), veh/h	19	219	218	71	383	366	76	0	215	96	0	165
Grp Sat Flow(s),veh/h/ln	1781	1777	1730	1781	1777	1689	1781	0	1777	1781	0	1794
Q Serve(g_s), s	0.6	6.2	6.3	2.3	11.5	11.6	2.4	0.0	5.5	3.1	0.0	4.0
Cycle Q Clear(g_c), s	0.6	6.2	6.3	2.3	11.5	11.6	2.4	0.0	5.5	3.1	0.0	4.0
Prop In Lane	1.00		0.28	1.00		0.49	1.00		0.28	1.00		0.21
Lane Grp Cap(c), veh/h	40	438	426	104	502	477	108	0	564	123	0	584
V/C Ratio(X)	0.47	0.50	0.51	0.68	0.76	0.77	0.70	0.00	0.38	0.78	0.00	0.28
Avail Cap(c_a), veh/h	153	548	534	153	548	521	153	0	564	168	0	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	18.9	19.0	26.9	19.1	19.2	26.9	0.0	15.5	26.7	0.0	14.6
Incr Delay (d2), s/veh	8.2	0.9	1.0	7.5	5.8	6.3	8.0	0.0	2.0	14.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.4	2.4	1.1	5.1	4.9	1.2	0.0	2.3	1.7	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	19.8	19.9	34.5	24.9	25.4	34.9	0.0	17.4	41.6	0.0	15.8
LnGrp LOS	D	B	B	C	C	C	C	A	B	D	A	B
Approach Vol, veh/h		456			820			291				261
Approach Delay, s/veh		20.5			26.0			22.0				25.3
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	23.0	7.9	18.9	8.0	23.5	5.8	21.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0				
Max Q Clear Time (g_c+I1), s	5.1	7.5	4.3	8.3	4.4	6.0	2.6	13.6				
Green Ext Time (p_c), s	0.0	0.9	0.0	1.8	0.0	0.7	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				23.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
5: 17th Ave & Soquel Ave

Cumulative Without Project AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑↑↑	
Traffic Volume (veh/h)	265	439	64	316	533	49
Future Volume (veh/h)	265	439	64	316	533	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	285	472	69	340	622	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	483	1017	113	783	1381	624
Arrive On Green	0.26	0.26	0.06	0.42	0.39	0.00
Sat Flow, veh/h	1870	1557	1781	1870	3563	1610
Grp Volume(v), veh/h	285	472	69	340	622	0
Grp Sat Flow(s),veh/h/ln	1870	1557	1781	1870	1781	1610
Q Serve(g_s), s	6.2	7.2	1.8	6.0	6.0	0.0
Cycle Q Clear(g_c), s	6.2	7.2	1.8	6.0	6.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	483	1017	113	783	1381	624
V/C Ratio(X)	0.59	0.46	0.61	0.43	0.45	0.00
Avail Cap(c_a), veh/h	725	1218	211	1128	1381	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.1	4.2	21.2	9.6	10.5	0.0
Incr Delay (d2), s/veh	1.2	0.3	5.2	0.4	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	4.6	0.8	2.0	2.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.2	4.5	26.4	10.0	11.6	0.0
LnGrp LOS	B	A	C	A	B	A
Approach Vol, veh/h	757			409	622	
Approach Delay, s/veh	8.9			12.7	11.6	
Approach LOS	A			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.4	16.5		23.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.5	18.0		28.0
Max Q Clear Time (g_c+I1), s		8.0	3.8	9.2		8.0
Green Ext Time (p_c), s		1.8	0.0	2.5		2.0

Intersection Summary

HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	4	5	12	676	520	5
Future Vol, veh/h	4	5	12	676	520	5
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	5	13	743	571	5






















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1356	587	589	0	-	0
Stage 1	587	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	165	510	986	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	159	504	974	-	-	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	452	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	974	-	382	-	-
HCM Lane V/C Ratio	0.014	-	0.026	-	-
HCM Control Delay (s)	8.7	-	14.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Cumulative Without Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	132	103	118	217	38	118	585	76	34	395	40
Future Volume (veh/h)	43	132	103	118	217	38	118	585	76	34	395	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.92	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	150	117	134	247	43	134	665	86	39	449	45
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	198	155	168	400	70	168	682	88	66	607	61
Arrive On Green	0.04	0.21	0.21	0.09	0.26	0.26	0.09	0.42	0.42	0.04	0.36	0.36
Sat Flow, veh/h	1767	942	735	1781	1528	266	1781	1615	209	1781	1663	167
Grp Volume(v), veh/h	49	0	267	134	0	290	134	0	751	39	0	494
Grp Sat Flow(s),veh/h/ln	1767	0	1678	1781	0	1794	1781	0	1824	1781	0	1830
Q Serve(g_s), s	2.1	0.0	11.4	5.6	0.0	10.8	5.6	0.0	30.8	1.6	0.0	17.9
Cycle Q Clear(g_c), s	2.1	0.0	11.4	5.6	0.0	10.8	5.6	0.0	30.8	1.6	0.0	17.9
Prop In Lane	1.00		0.44	1.00		0.15	1.00		0.11	1.00		0.09
Lane Grp Cap(c), veh/h	75	0	353	168	0	470	168	0	771	66	0	668
V/C Ratio(X)	0.65	0.00	0.76	0.80	0.00	0.62	0.80	0.00	0.97	0.59	0.00	0.74
Avail Cap(c_a), veh/h	132	0	396	175	0	470	203	0	771	119	0	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	28.3	33.8	0.0	24.7	33.8	0.0	21.6	36.1	0.0	21.1
Incr Delay (d2), s/veh	9.3	0.0	7.3	21.8	0.0	2.4	16.5	0.0	26.8	8.3	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	5.1	3.4	0.0	4.7	3.1	0.0	17.7	0.8	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	0.0	35.5	55.6	0.0	27.2	50.3	0.0	48.4	44.4	0.0	28.3
LnGrp LOS	D	A	D	E	A	C	D	A	D	D	A	C
Approach Vol, veh/h		316			424			885				533
Approach Delay, s/veh		37.0			36.1			48.6				29.5
Approach LOS		D			D			D				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	36.7	11.7	20.5	11.7	32.3	7.7	24.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	31.4	7.5	18.0	8.7	27.8	5.7	19.8				
Max Q Clear Time (g_c+I1), s	3.6	32.8	7.6	13.4	7.6	19.9	4.1	12.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	2.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay				39.8								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Cumulative Without Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	169	114	25	395	141	88	101	13	94	100	179
Future Volume (veh/h)	160	169	114	25	395	141	88	101	13	94	100	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	178	0	26	416	0	93	106	14	99	105	188
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	596		52	487		119	475	63	127	177	317
Arrive On Green	0.09	0.32	0.00	0.03	0.26	0.00	0.07	0.29	0.29	0.07	0.30	0.30
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1614	213	1781	593	1062
Grp Volume(v), veh/h	168	178	0	26	416	0	93	0	120	99	0	293
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1827	1781	0	1656
Q Serve(g_s), s	5.5	4.5	0.0	0.9	13.3	0.0	3.2	0.0	3.1	3.4	0.0	9.5
Cycle Q Clear(g_c), s	5.5	4.5	0.0	0.9	13.3	0.0	3.2	0.0	3.1	3.4	0.0	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.64
Lane Grp Cap(c), veh/h	156	596		52	487		119	0	538	127	0	495
V/C Ratio(X)	1.08	0.30		0.50	0.85		0.78	0.00	0.22	0.78	0.00	0.59
Avail Cap(c_a), veh/h	156	596		142	536		142	0	538	142	0	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.7	16.1	0.0	30.1	22.1	0.0	28.9	0.0	16.7	28.7	0.0	18.8
Incr Delay (d2), s/veh	94.2	0.3	0.0	7.4	11.9	0.0	20.6	0.0	1.0	21.9	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	1.8	0.0	0.5	7.0	0.0	2.0	0.0	1.4	2.2	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.8	16.4	0.0	37.4	34.0	0.0	49.5	0.0	17.7	50.6	0.0	23.9
LnGrp LOS	F	B		D	C		D	A	B	D	A	C
Approach Vol, veh/h		346	A		442	A		213			392	
Approach Delay, s/veh		68.1			34.2			31.6			30.6	
Approach LOS		E			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	23.0	6.3	24.5	8.7	23.3	10.0	20.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	5.4	5.1	2.9	6.5	5.2	11.5	7.5	15.3				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.7	0.0	1.0	0.0	0.7				

Intersection Summary

HCM 6th Ctrl Delay	41.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
9: 7th Ave & Capitola Rd

Cumulative Without Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	313	154	49	589	102	222	314	46	64	188	30
Future Volume (veh/h)	7	313	154	49	589	102	222	314	46	64	188	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	7	326	160	51	614	106	231	327	48	67	196	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	16	801	355	86	798	138	169	615	515	153	499	79
Arrive On Green	0.01	0.23	0.23	0.05	0.26	0.26	0.10	0.33	0.33	0.09	0.32	0.32
Sat Flow, veh/h	1781	3554	1575	1781	3018	520	1781	1870	1566	1767	1559	247
Grp Volume(v), veh/h	7	326	160	51	361	359	231	327	48	67	0	227
Grp Sat Flow(s),veh/h/ln	1781	1777	1575	1781	1777	1761	1781	1870	1566	1767	0	1805
Q Serve(g_s), s	0.2	4.5	5.1	1.6	10.8	10.9	5.5	8.2	0.9	2.1	0.0	5.7
Cycle Q Clear(g_c), s	0.2	4.5	5.1	1.6	10.8	10.9	5.5	8.2	0.9	2.1	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	16	801	355	86	470	466	169	615	515	153	0	577
V/C Ratio(X)	0.43	0.41	0.45	0.59	0.77	0.77	1.36	0.53	0.09	0.44	0.00	0.39
Avail Cap(c_a), veh/h	154	1106	490	154	553	548	169	615	515	153	0	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	19.1	19.3	27.0	19.6	19.6	26.2	15.8	6.5	25.1	0.0	15.3
Incr Delay (d2), s/veh	16.6	0.3	0.9	6.3	5.5	5.7	196.7	3.3	0.4	2.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.7	1.8	0.8	4.8	4.8	11.4	3.7	0.4	0.9	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	19.4	20.2	33.3	25.1	25.3	222.9	19.1	6.9	27.1	0.0	17.3
LnGrp LOS	D	B	C	C	C	C	F	B	A	C	A	B
Approach Vol, veh/h		493			771			606			294	
Approach Delay, s/veh		20.1			25.7			95.8			19.5	
Approach LOS		C			C			F			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	7.3	17.5	10.0	23.0	5.0	19.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.1	10.2	3.6	7.1	7.5	7.7	2.2	12.9				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.0	0.0	0.9	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.2									
HCM 6th LOS			D									

Intersection	
Intersection Delay, s/veh	17.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Vol, veh/h	6	6	9	207	6	189	15	271	116	130	202	9
Future Vol, veh/h	6	6	9	207	6	189	15	271	116	130	202	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	5	5	5	2	2	2	3	3	3	4	4	4
Mvmt Flow	6	6	9	218	6	199	16	285	122	137	213	9
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10.6	14	19.8	17.9
HCM LOS	B	B	C	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	4%	29%	97%	0%	38%
Vol Thru, %	67%	29%	3%	0%	59%
Vol Right, %	29%	43%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	402	21	213	189	341
LT Vol	15	6	207	0	130
Through Vol	271	6	6	0	202
RT Vol	116	9	0	189	9
Lane Flow Rate	423	22	224	199	359
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.671	0.044	0.452	0.334	0.602
Departure Headway (Hd)	5.709	7.245	7.25	6.039	6.034
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	631	497	496	591	596
Service Time	3.784	5.245	5.028	3.816	4.112
HCM Lane V/C Ratio	0.67	0.044	0.452	0.337	0.602
HCM Control Delay	19.8	10.6	15.9	11.9	17.9
HCM Lane LOS	C	B	C	B	C
HCM 95th-tile Q	5.1	0.1	2.3	1.5	4






















HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Cumulative Without Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	692	373	64	678	73	707	19	85	21	9	24
Future Volume (veh/h)	20	692	373	64	678	73	707	19	85	21	9	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	23	805	0	74	788	85	838	0	0	24	10	28
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	2	2	2
Cap, veh/h	45	817		95	833	90	916	0		292	122	363
Arrive On Green	0.03	0.23	0.00	0.05	0.26	0.26	0.26	0.00	0.00	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	3225	348	3534	0	1572	1275	531	1585
Grp Volume(v), veh/h	23	805	0	74	434	439	838	0	0	34	0	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1796	1767	0	1572	1807	0	1585
Q Serve(g_s), s	1.0	17.7	0.0	3.2	18.9	18.9	18.1	0.0	0.0	1.2	0.0	1.1
Cycle Q Clear(g_c), s	1.0	17.7	0.0	3.2	18.9	18.9	18.1	0.0	0.0	1.2	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	45	817		95	459	464	916	0		413	0	363
V/C Ratio(X)	0.51	0.98		0.78	0.95	0.95	0.91	0.00		0.08	0.00	0.08
Avail Cap(c_a), veh/h	115	817		124	459	464	916	0		413	0	363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	30.2	0.0	36.8	28.7	28.7	28.3	0.0	0.0	23.9	0.0	23.8
Incr Delay (d2), s/veh	8.8	27.7	0.0	20.3	28.8	28.7	15.1	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	10.4	0.0	1.9	11.3	11.4	9.2	0.0	0.0	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	57.8	0.0	57.0	57.5	57.3	43.4	0.0	0.0	24.2	0.0	24.2
LnGrp LOS	D	E		E	E	E	D	A		C	A	C
Approach Vol, veh/h		828	A		947			838	A		62	
Approach Delay, s/veh		57.5			57.4			43.4			24.2	
Approach LOS		E			E			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.9	8.7	22.6		22.5	6.5	24.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.4	5.5	18.1		18.0	5.1	18.5				
Max Q Clear Time (g_c+I1), s		20.1	5.2	19.7		3.2	3.0	20.9				
Green Ext Time (p_c), s		0.1	0.0	0.0		0.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			52.3									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
12: 7th Ave & Soquel Ave

Cumulative Without Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	0	653	71	235	749	0	142	0	470	0	0	0
Future Volume (veh/h)	0	653	71	235	749	0	142	0	470	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1856	1856	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	718	78	258	823	0	156	0	516	0	0	0
Peak Hour Factor	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	3	3	0	2	2	2	2	2	2
Cap, veh/h	0	889	97	307	1875	0	550	0	476	0	584	0
Arrive On Green	0.00	0.28	0.28	0.17	0.53	0.00	0.31	0.00	0.31	0.00	0.00	0.00
Sat Flow, veh/h	0	3264	344	1767	3618	0	1363	0	1524	0	1870	0
Grp Volume(v), veh/h	0	396	400	258	823	0	156	0	516	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1749	1768	1767	1763	0	1363	0	1524	0	1870	0
Q Serve(g_s), s	0.0	12.1	12.2	8.1	8.2	0.0	5.1	0.0	18.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.1	12.2	8.1	8.2	0.0	5.1	0.0	18.0	0.0	0.0	0.0
Prop In Lane	0.00		0.19	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	490	495	307	1875	0	550	0	476	0	584	0
V/C Ratio(X)	0.00	0.81	0.81	0.84	0.44	0.00	0.28	0.00	1.09	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	546	552	322	2017	0	550	0	476	0	584	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.3	19.3	23.1	8.2	0.0	15.4	0.0	19.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.0	8.0	17.2	0.2	0.0	1.3	0.0	66.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.5	5.6	4.6	2.5	0.0	1.6	0.0	14.4	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	27.3	27.3	40.3	8.4	0.0	16.7	0.0	86.0	0.0	0.0	0.0
LnGrp LOS	A	C	C	D	A	A	B	A	F	A	A	A
Approach Vol, veh/h		796			1081			672				0
Approach Delay, s/veh		27.3			16.0			69.9				0.0
Approach LOS		C			B			E				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	14.5	20.7		22.5		35.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		20.0	10.1	14.2		0.0		10.2				
Green Ext Time (p_c), s		0.0	0.0	1.8		0.0		6.1				
Intersection Summary												
HCM 6th Ctrl Delay				33.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Cumulative Without Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	774	455	328	754	1	276	5	1015	1	1	1
Future Volume (veh/h)	3	774	455	328	754	1	276	5	1015	1	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	823	0	349	802	1	294	5	1080	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	844		414	1704	2	334	4	853	79	76	38
Arrive On Green	0.00	0.24	0.00	0.23	0.47	0.47	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	3526	1572	1781	3642	5	707	12	1585	0	247	124
Grp Volume(v), veh/h	3	823	0	349	391	412	299	0	1080	3	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1869	720	0	1585	371	0	0
Q Serve(g_s), s	0.1	14.0	0.0	11.3	9.1	9.1	0.0	0.0	18.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	14.0	0.0	11.3	9.1	9.1	18.5	0.0	18.5	18.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.98		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	7	844		414	831	874	338	0	853	193	0	0
V/C Ratio(X)	0.42	0.98		0.84	0.47	0.47	0.89	0.00	1.27	0.02	0.00	0.00
Avail Cap(c_a), veh/h	146	844		691	968	1018	338	0	853	193	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.1	22.9	0.0	22.2	11.0	11.0	23.5	0.0	14.0	16.4	0.0	0.0
Incr Delay (d2), s/veh	34.4	25.0	0.0	4.9	0.4	0.4	27.1	0.0	129.4	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.2	0.0	4.9	3.1	3.3	6.7	0.0	39.6	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	47.9	0.0	27.1	11.4	11.4	50.6	0.0	143.4	16.6	0.0	0.0
LnGrp LOS	E	D		C	B	B	D	A	F	B	A	A
Approach Vol, veh/h		826	A		1152			1379				3
Approach Delay, s/veh		47.9			16.2			123.2				16.6
Approach LOS		D			B			F				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	18.6	19.0		23.0	4.7	32.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	23.5	14.5		18.5	5.0	33.0				
Max Q Clear Time (g_c+I1), s		20.5	13.3	16.0		20.5	2.1	11.1				
Green Ext Time (p_c), s		0.0	0.8	0.0		0.0	0.0	5.2				
Intersection Summary												
HCM 6th Ctrl Delay			67.9									
HCM 6th LOS			E									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1100	590	18	12	22
Future Vol, veh/h	20	1100	590	18	12	22
Conflicting Peds, #/hr	20	0	0	20	0	8
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	1170	628	19	13	23

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	667	0	-	0	1285 352
Stage 1	-	-	-	-	658 -
Stage 2	-	-	-	-	627 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	919	-	-	-	156 644
Stage 1	-	-	-	-	477 -
Stage 2	-	-	-	-	495 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	901	-	-	-	147 627
Mov Cap-2 Maneuver	-	-	-	-	278 -
Stage 1	-	-	-	-	457 -
Stage 2	-	-	-	-	486 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	901	-	-	-	434
HCM Lane V/C Ratio	0.024	-	-	-	0.083
HCM Control Delay (s)	9.1	-	-	-	14
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1112	600	14	14	8
Future Vol, veh/h	0	1112	600	14	14	8
Conflicting Peds, #/hr	25	0	0	25	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	5	5
Mvmt Flow	0	1183	638	15	15	9

























Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	678	0	-	0	1265 352
Stage 1	-	-	-	-	671 -
Stage 2	-	-	-	-	594 -
Critical Hdwy	4.14	-	-	-	6.9 7
Critical Hdwy Stg 1	-	-	-	-	5.9 -
Critical Hdwy Stg 2	-	-	-	-	5.9 -
Follow-up Hdwy	2.22	-	-	-	3.55 3.35
Pot Cap-1 Maneuver	910	-	-	-	157 636
Stage 1	-	-	-	-	462 -
Stage 2	-	-	-	-	506 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	888	-	-	-	150 621
Mov Cap-2 Maneuver	-	-	-	-	284 -
Stage 1	-	-	-	-	451 -
Stage 2	-	-	-	-	494 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	888	-	-	-	354
HCM Lane V/C Ratio	-	-	-	-	0.066
HCM Control Delay (s)	0	-	-	-	15.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Cumulative Without Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	26	900	112	125	483	53	81	283	96	253	473	26
Future Volume (veh/h)	26	900	112	125	483	53	81	283	96	253	473	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	947	118	132	508	56	85	298	101	266	498	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	891	111	149	1086	119	109	338	114	278	613	33
Arrive On Green	0.03	0.28	0.28	0.08	0.34	0.34	0.06	0.25	0.25	0.16	0.35	0.35
Sat Flow, veh/h	1781	3169	395	1781	3224	354	1781	1331	451	1781	1757	95
Grp Volume(v), veh/h	27	531	534	132	279	285	85	0	399	266	0	525
Grp Sat Flow(s),veh/h/ln	1781	1777	1787	1781	1777	1802	1781	0	1782	1781	0	1852
Q Serve(g_s), s	1.2	22.5	22.5	5.9	9.9	10.0	3.8	0.0	17.2	11.8	0.0	20.6
Cycle Q Clear(g_c), s	1.2	22.5	22.5	5.9	9.9	10.0	3.8	0.0	17.2	11.8	0.0	20.6
Prop In Lane	1.00		0.22	1.00		0.20	1.00		0.25	1.00		0.05
Lane Grp Cap(c), veh/h	50	500	503	149	598	607	109	0	452	278	0	646
V/C Ratio(X)	0.54	1.06	1.06	0.88	0.47	0.47	0.78	0.00	0.88	0.96	0.00	0.81
Avail Cap(c_a), veh/h	122	500	503	149	598	607	149	0	452	278	0	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	28.8	28.8	36.3	20.9	20.9	37.0	0.0	28.7	33.5	0.0	23.7
Incr Delay (d2), s/veh	8.6	57.8	57.8	42.0	0.6	0.6	16.2	0.0	21.3	41.9	0.0	10.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	17.1	17.2	4.2	4.0	4.1	2.1	0.0	9.7	8.2	0.0	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	86.5	86.5	78.2	21.4	21.5	53.2	0.0	50.0	75.4	0.0	34.4
LnGrp LOS	D	F	F	E	C	C	D	A	D	E	A	C
Approach Vol, veh/h		1092			696			484			791	
Approach Delay, s/veh		85.6			32.2			50.6			48.2	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	24.8	11.2	27.0	9.4	32.4	6.8	31.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	20.3	6.7	22.5	6.7	26.1	5.5	23.7				
Max Q Clear Time (g_c+I1), s	13.8	19.2	7.9	24.5	5.8	22.6	3.2	12.0				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	1.1	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			58.3									
HCM 6th LOS			E									







HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

Cumulative Without Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1258	56	50	592	81	29	58	56	299	194	33
Future Volume (veh/h)	20	1258	56	50	592	81	29	58	56	299	194	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	1297	58	52	610	84	30	60	58	308	200	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	1107	49	77	1066	147	55	214	207	284	584	99
Arrive On Green	0.02	0.32	0.32	0.04	0.34	0.34	0.03	0.25	0.25	0.16	0.38	0.38
Sat Flow, veh/h	1781	3454	154	1781	3132	430	1781	867	838	1781	1556	265
Grp Volume(v), veh/h	21	666	689	52	346	348	30	0	118	308	0	234
Grp Sat Flow(s),veh/h/ln	1781	1777	1831	1781	1777	1785	1781	0	1705	1781	0	1820
Q Serve(g_s), s	0.9	25.1	25.1	2.3	12.5	12.5	1.3	0.0	4.4	12.5	0.0	7.2
Cycle Q Clear(g_c), s	0.9	25.1	25.1	2.3	12.5	12.5	1.3	0.0	4.4	12.5	0.0	7.2
Prop In Lane	1.00		0.08	1.00		0.24	1.00		0.49	1.00		0.15
Lane Grp Cap(c), veh/h	42	570	587	77	605	608	55	0	420	284	0	684
V/C Ratio(X)	0.50	1.17	1.17	0.67	0.57	0.57	0.55	0.00	0.28	1.08	0.00	0.34
Avail Cap(c_a), veh/h	114	570	587	116	605	608	125	0	420	284	0	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.8	26.6	26.6	36.9	21.1	21.2	37.4	0.0	23.9	32.9	0.0	17.5
Incr Delay (d2), s/veh	9.1	93.9	95.0	9.8	1.3	1.3	8.4	0.0	1.7	77.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	24.8	25.7	1.2	5.1	5.2	0.7	0.0	1.9	11.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	120.5	121.6	46.7	22.4	22.5	45.8	0.0	25.5	110.1	0.0	18.9
LnGrp LOS	D	F	F	D	C	C	D	A	C	F	A	B
Approach Vol, veh/h		1376			746			148				542
Approach Delay, s/veh		119.9			24.1			29.6				70.7
Approach LOS		F			C			C				E
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	23.8	7.9	29.6	6.9	33.9	6.3	31.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	19.3	5.1	25.1	5.5	26.3	5.0	25.2				
Max Q Clear Time (g_c+I1), s	14.5	6.4	4.3	27.1	3.3	9.2	2.9	14.5				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	1.2	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay			80.3									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
5: 17th Ave & Soquel Ave

Cumulative Without Project PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑↑	↑	↑	↑↑↑	
Traffic Volume (veh/h)	612	669	53	221	337	42
Future Volume (veh/h)	612	669	53	221	337	42
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	624	683	54	226	384	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	727	1118	90	972	1141	516
Arrive On Green	0.39	0.39	0.05	0.52	0.32	0.00
Sat Flow, veh/h	1870	1569	1781	1870	3563	1610
Grp Volume(v), veh/h	624	683	54	226	384	0
Grp Sat Flow(s),veh/h/ln	1870	1569	1781	1870	1781	1610
Q Serve(g_s), s	17.2	12.6	1.7	3.7	4.6	0.0
Cycle Q Clear(g_c), s	17.2	12.6	1.7	3.7	4.6	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	727	1118	90	972	1141	516
V/C Ratio(X)	0.86	0.61	0.60	0.23	0.34	0.00
Avail Cap(c_a), veh/h	782	1164	158	1098	1141	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	4.2	26.1	7.4	14.6	0.0
Incr Delay (d2), s/veh	9.0	0.9	6.2	0.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	8.3	0.8	1.2	1.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.7	5.1	32.3	7.5	15.3	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	1307			280	384	
Approach Delay, s/veh	14.5			12.3	15.3	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.3	26.4		33.7
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.0	23.5		33.0
Max Q Clear Time (g_c+I1), s		6.6	3.7	19.2		5.7
Green Ext Time (p_c), s		1.1	0.0	2.7		1.3
Intersection Summary						
HCM 6th Ctrl Delay			14.3			
HCM 6th LOS			B			
Notes						
User approved volume balancing among the lanes for turning movement.						

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	30	12	472	680	16
Future Vol, veh/h	7	30	12	472	680	16
Conflicting Peds, #/hr	0	0	8	0	0	8
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	32	13	508	731	17






















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1282	748	756	0	-	0
Stage 1	748	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	182	412	855	-	-	-
Stage 1	468	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	176	409	848	-	-	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	457	-	-	-	-	-
Stage 2	583	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.4	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	848	-	386	-	-
HCM Lane V/C Ratio	0.015	-	0.103	-	-
HCM Control Delay (s)	9.3	-	15.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Cumulative Without Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	331	139	113	187	36	66	399	111	72	530	59
Future Volume (veh/h)	49	331	139	113	187	36	66	399	111	72	530	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	341	143	116	193	37	68	411	114	74	546	61
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	338	142	147	478	92	88	498	138	95	596	67
Arrive On Green	0.04	0.28	0.28	0.08	0.32	0.32	0.05	0.36	0.36	0.05	0.36	0.36
Sat Flow, veh/h	1781	1226	514	1781	1517	291	1781	1393	386	1781	1648	184
Grp Volume(v), veh/h	51	0	484	116	0	230	68	0	525	74	0	607
Grp Sat Flow(s),veh/h/ln	1781	0	1740	1781	0	1808	1781	0	1779	1781	0	1832
Q Serve(g_s), s	2.2	0.0	21.5	5.0	0.0	7.8	2.9	0.0	21.0	3.2	0.0	24.7
Cycle Q Clear(g_c), s	2.2	0.0	21.5	5.0	0.0	7.8	2.9	0.0	21.0	3.2	0.0	24.7
Prop In Lane	1.00		0.30	1.00		0.16	1.00		0.22	1.00		0.10
Lane Grp Cap(c), veh/h	76	0	480	147	0	570	88	0	636	95	0	662
V/C Ratio(X)	0.67	0.00	1.01	0.79	0.00	0.40	0.77	0.00	0.82	0.78	0.00	0.92
Avail Cap(c_a), veh/h	139	0	480	171	0	570	116	0	636	116	0	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	28.2	35.1	0.0	20.9	36.6	0.0	22.8	36.5	0.0	23.8
Incr Delay (d2), s/veh	9.6	0.0	43.3	18.9	0.0	0.5	20.1	0.0	11.6	23.3	0.0	19.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	14.2	2.9	0.0	3.2	1.7	0.0	10.3	2.0	0.0	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	71.5	54.1	0.0	21.4	56.8	0.0	34.4	59.8	0.0	43.4
LnGrp LOS	D	A	F	D	A	C	E	A	C	E	A	D
Approach Vol, veh/h		535			346			593			681	
Approach Delay, s/veh		69.1			32.4			37.0			45.1	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	32.4	10.9	26.0	8.4	32.7	7.8	29.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	27.9	7.5	21.5	5.1	27.9	6.1	22.9				
Max Q Clear Time (g_c+I1), s	5.2	23.0	7.0	23.5	4.9	26.7	4.2	9.8				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	0.5	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			46.8									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Cumulative Without Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	579	260	23	299	104	99	89	12	158	144	136
Future Volume (veh/h)	122	579	260	23	299	104	99	89	12	158	144	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	128	609	0	24	315	0	104	94	13	166	152	143
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	640		47	402		133	425	59	204	260	245
Arrive On Green	0.15	0.34	0.00	0.03	0.21	0.00	0.07	0.27	0.27	0.11	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1601	221	1781	852	801
Grp Volume(v), veh/h	128	609	0	24	315	0	104	0	107	166	0	295
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1822	1781	0	1653
Q Serve(g_s), s	4.7	22.7	0.0	1.0	11.4	0.0	4.1	0.0	3.3	6.5	0.0	10.8
Cycle Q Clear(g_c), s	4.7	22.7	0.0	1.0	11.4	0.0	4.1	0.0	3.3	6.5	0.0	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.48
Lane Grp Cap(c), veh/h	274	640		47	402		133	0	484	204	0	504
V/C Ratio(X)	0.47	0.95		0.51	0.78		0.78	0.00	0.22	0.81	0.00	0.58
Avail Cap(c_a), veh/h	274	640		124	530		167	0	484	211	0	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.6	23.0	0.0	34.4	26.5	0.0	32.6	0.0	20.5	31.0	0.0	21.0
Incr Delay (d2), s/veh	1.2	24.2	0.0	8.2	5.6	0.0	17.0	0.0	1.1	20.5	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.5	0.0	0.5	5.4	0.0	2.3	0.0	1.5	3.9	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	47.2	0.0	42.6	32.1	0.0	49.5	0.0	21.6	51.5	0.0	25.9
LnGrp LOS	C	D		D	C		D	A	C	D	A	C
Approach Vol, veh/h		737	A		339	A		211			461	
Approach Delay, s/veh		44.0			32.9			35.4			35.1	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.7	23.5	6.4	29.0	9.8	26.4	15.5	19.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	19.0	5.0	24.5	6.7	20.8	9.2	20.3				
Max Q Clear Time (g_c+I1), s	8.5	5.3	3.0	24.7	6.1	12.8	6.7	13.4				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	1.1	0.1	1.0				

Intersection Summary

HCM 6th Ctrl Delay	38.4
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
9: 7th Ave & Capitola Rd

Cumulative Without Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1037	307	77	523	56	147	147	52	100	216	13
Future Volume (veh/h)	13	1037	307	77	523	56	147	147	52	100	216	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	1080	320	80	545	58	153	153	54	104	225	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	1064	461	103	1101	117	169	533	443	169	496	31
Arrive On Green	0.02	0.30	0.30	0.06	0.34	0.34	0.09	0.28	0.28	0.09	0.28	0.28
Sat Flow, veh/h	1781	3554	1537	1781	3238	344	1781	1870	1555	1781	1741	108
Grp Volume(v), veh/h	14	1080	320	80	298	305	153	153	54	104	0	239
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1781	1777	1804	1781	1870	1555	1781	0	1849
Q Serve(g_s), s	0.5	20.5	12.6	3.0	9.1	9.2	5.8	4.4	1.3	3.8	0.0	7.3
Cycle Q Clear(g_c), s	0.5	20.5	12.6	3.0	9.1	9.2	5.8	4.4	1.3	3.8	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	30	1064	461	103	604	613	169	533	443	169	0	527
V/C Ratio(X)	0.46	1.01	0.69	0.78	0.49	0.50	0.90	0.29	0.12	0.61	0.00	0.45
Avail Cap(c_a), veh/h	130	1064	461	143	604	613	169	533	443	169	0	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	24.0	21.2	31.8	17.9	17.9	30.7	19.1	9.8	29.8	0.0	20.1
Incr Delay (d2), s/veh	10.5	31.3	4.5	16.5	0.6	0.6	42.9	1.4	0.6	6.5	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.5	4.8	1.7	3.6	3.6	4.4	2.0	0.7	1.9	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	55.2	25.7	48.3	18.5	18.6	73.5	20.4	10.4	36.2	0.0	22.9
LnGrp LOS	D	F	C	D	B	B	E	C	B	D	A	C
Approach Vol, veh/h		1414			683			360			343	
Approach Delay, s/veh		48.4			22.0			41.5			26.9	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	24.0	8.4	25.0	11.0	24.0	5.7	27.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	19.5	5.5	20.5	6.5	19.5	5.0	21.0				
Max Q Clear Time (g_c+I1), s	5.8	6.4	5.0	22.5	7.8	9.3	2.5	11.2				
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	0.9	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay			38.5									
HCM 6th LOS			D									

Intersection	
Intersection Delay, s/veh	30.9
Intersection LOS	D























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	14	8	19	173	3	129	14	187	287	231	262	14
Future Vol, veh/h	14	8	19	173	3	129	14	187	287	231	262	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	8	20	180	3	134	15	195	299	241	273	15
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	11.8	14.5	30.5	42.7
HCM LOS	B	B	D	E

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	34%	98%	0%	46%
Vol Thru, %	38%	20%	2%	0%	52%
Vol Right, %	59%	46%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	488	41	176	129	507
LT Vol	14	14	173	0	231
Through Vol	187	8	3	0	262
RT Vol	287	19	0	129	14
Lane Flow Rate	508	43	183	134	528
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.824	0.094	0.411	0.255	0.906
Departure Headway (Hd)	5.838	7.925	8.061	6.834	6.174
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	620	450	445	524	586
Service Time	3.885	6.012	5.815	4.588	4.219
HCM Lane V/C Ratio	0.819	0.096	0.411	0.256	0.901
HCM Control Delay	30.5	11.8	16.4	11.9	42.7
HCM Lane LOS	D	B	C	B	E
HCM 95th-tile Q	8.6	0.3	2	1	11



















HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Cumulative Without Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1086	1241	68	557	35	602	15	43	33	35	30
Future Volume (veh/h)	8	1086	1241	68	557	35	602	15	43	33	35	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	1131	0	71	580	36	638	0	0	34	36	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1321		91	1402	87	710	0		167	177	298
Arrive On Green	0.01	0.37	0.00	0.05	0.41	0.41	0.20	0.00	0.00	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3394	210	3563	0	1585	887	939	1577
Grp Volume(v), veh/h	8	1131	0	71	303	313	638	0	0	70	0	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1828	1781	0	1585	1826	0	1577
Q Serve(g_s), s	0.4	28.0	0.0	3.8	11.5	11.6	16.6	0.0	0.0	3.1	0.0	1.5
Cycle Q Clear(g_c), s	0.4	28.0	0.0	3.8	11.5	11.6	16.6	0.0	0.0	3.1	0.0	1.5
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	0.49		1.00
Lane Grp Cap(c), veh/h	18	1321		91	734	755	710	0		345	0	298
V/C Ratio(X)	0.45	0.86		0.78	0.41	0.41	0.90	0.00		0.20	0.00	0.10
Avail Cap(c_a), veh/h	93	1488		95	746	767	710	0		345	0	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.9	27.6	0.0	44.7	19.8	19.8	37.2	0.0	0.0	32.6	0.0	32.0
Incr Delay (d2), s/veh	16.6	4.7	0.0	31.7	0.4	0.4	16.5	0.0	0.0	1.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.3	0.0	2.4	4.7	4.9	8.7	0.0	0.0	1.5	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.5	32.3	0.0	76.4	20.2	20.2	53.7	0.0	0.0	33.9	0.0	32.7
LnGrp LOS	E	C		E	C	C	D	A		C	A	C
Approach Vol, veh/h		1139	A		687			638	A		101	
Approach Delay, s/veh		32.5			26.0			53.7			33.5	
Approach LOS		C			C			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	9.4	39.9		22.5	5.5	43.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	5.1	39.9		18.0	5.0	40.0				
Max Q Clear Time (g_c+I1), s		18.6	5.8	30.0		5.1	2.4	13.6				
Green Ext Time (p_c), s		0.1	0.0	5.5		0.3	0.0	4.0				
Intersection Summary												
HCM 6th Ctrl Delay			36.1									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 12: 7th Ave & Soquel Ave

Cumulative Without Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1052	81	290	595	0	88	0	241	0	0	0
Future Volume (veh/h)	0	1052	81	290	595	0	88	0	241	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1073	83	296	607	0	90	0	246	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1001	77	312	1955	0	545	0	471	0	561	0
Arrive On Green	0.00	0.30	0.30	0.17	0.55	0.00	0.30	0.00	0.30	0.00	0.00	0.00
Sat Flow, veh/h	0	3431	258	1781	3647	0	1418	0	1569	0	1870	0
Grp Volume(v), veh/h	0	571	585	296	607	0	90	0	246	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1777	1819	1781	1777	0	1418	0	1569	0	1870	0
Q Serve(g_s), s	0.0	18.0	18.0	9.9	5.6	0.0	2.8	0.0	7.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	18.0	18.0	9.9	5.6	0.0	2.8	0.0	7.8	0.0	0.0	0.0
Prop In Lane	0.00		0.14	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	533	546	312	1955	0	545	0	471	0	561	0
V/C Ratio(X)	0.00	1.07	1.07	0.95	0.31	0.00	0.17	0.00	0.52	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	533	546	312	1955	0	545	0	471	0	561	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	21.0	21.0	24.5	7.3	0.0	15.7	0.0	17.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	59.4	59.3	37.6	0.1	0.0	0.7	0.0	4.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.5	15.8	7.1	1.7	0.0	0.9	0.0	3.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	80.4	80.3	62.1	7.4	0.0	16.3	0.0	21.5	0.0	0.0	0.0
LnGrp LOS	A	F	F	E	A	A	B	A	C	A	A	A
Approach Vol, veh/h		1156			903			336				0
Approach Delay, s/veh		80.4			25.4			20.1				0.0
Approach LOS		F			C			C				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	15.0	22.5		22.5		37.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		9.8	11.9	20.0		0.0		7.6				
Green Ext Time (p_c), s		0.9	0.0	0.0		0.0		4.4				
Intersection Summary												
HCM 6th Ctrl Delay				51.2								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Cumulative Without Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	875	481	425	683	5	233	5	741	6	2	8
Future Volume (veh/h)	6	875	481	425	683	5	233	5	741	6	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	911	0	443	711	5	243	5	772	6	2	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	847		452	1752	12	336	5	878	76	43	43
Arrive On Green	0.01	0.24	0.00	0.25	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3616	25	755	16	1585	0	144	144
Grp Volume(v), veh/h	6	911	0	443	349	367	248	0	772	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1865	770	0	1585	288	0	0
Q Serve(g_s), s	0.2	15.5	0.0	16.1	8.2	8.2	0.0	0.0	19.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	15.5	0.0	16.1	8.2	8.2	19.5	0.0	19.5	19.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.98		1.00	0.37		0.50
Lane Grp Cap(c), veh/h	14	847		452	861	903	341	0	878	163	0	0
V/C Ratio(X)	0.43	1.08		0.98	0.41	0.41	0.73	0.00	0.88	0.10	0.00	0.00
Avail Cap(c_a), veh/h	137	847		452	861	903	341	0	878	163	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.1	24.8	0.0	24.1	10.8	10.8	23.4	0.0	12.6	18.1	0.0	0.0
Incr Delay (d2), s/veh	19.1	53.1	0.0	36.9	0.3	0.3	12.8	0.0	12.2	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	12.3	0.0	10.9	2.9	3.0	4.8	0.0	10.7	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	77.9	0.0	61.0	11.1	11.0	36.2	0.0	24.8	19.3	0.0	0.0
LnGrp LOS	D	F		E	B	B	D	A	C	B	A	A
Approach Vol, veh/h		917	A		1159			1020			16	
Approach Delay, s/veh		77.7			30.1			27.6			19.3	
Approach LOS		E			C			C			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	21.0	20.0		24.0	5.0	36.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	16.5	15.5		19.5	5.0	27.0				
Max Q Clear Time (g_c+I1), s		21.5	18.1	17.5		21.5	2.2	10.2				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	4.1				

Intersection Summary

HCM 6th Ctrl Delay	43.3
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Appendix K

Intersection
Level of Service
Calculations

Cumulative Plus Project
Conditions

HCM 6th TWSC
1: Project Dwy (West)/15th Ave & Capitola Road

Cumulative Plus Project AM

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	13	428	11	41	670	28	6	0	6	23	0	30
Future Vol, veh/h	13	428	11	41	670	28	6	0	6	23	0	30
Conflicting Peds, #/hr	15	0	6	6	0	15	10	0	0	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	451	12	43	705	29	6	0	6	24	0	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	749	0	0	469	0	0	940	1326	238	1075	1318	392
Stage 1	-	-	-	-	-	-	491	491	-	821	821	-
Stage 2	-	-	-	-	-	-	449	835	-	254	497	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	856	-	-	1089	-	-	218	154	763	174	156	607
Stage 1	-	-	-	-	-	-	528	546	-	335	387	-
Stage 2	-	-	-	-	-	-	559	381	-	728	543	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	844	-	-	1083	-	-	195	142	759	163	144	593
Mov Cap-2 Maneuver	-	-	-	-	-	-	195	142	-	163	144	-
Stage 1	-	-	-	-	-	-	516	533	-	325	366	-
Stage 2	-	-	-	-	-	-	503	361	-	710	531	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.5			17.1			21.3		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	310	844	-	-	1083	-	-	276
HCM Lane V/C Ratio	0.041	0.016	-	-	0.04	-	-	0.202
HCM Control Delay (s)	17.1	9.3	-	-	8.5	-	-	21.3
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.7

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕			↕				↖		↕	
Traffic Vol, veh/h	0	447	10	0	732	19	0	0	17	9	0	7
Future Vol, veh/h	0	447	10	0	732	19	0	0	17	9	0	7
Conflicting Peds, #/hr	18	0	7	7	0	18	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	471	11	0	771	20	0	0	18	9	0	7





















Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	809	0	0	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	-
Pot Cap-1 Maneuver	812	-	0	-
Stage 1	-	-	0	0
Stage 2	-	-	0	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	798	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10	15.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	744	798	-	-	-	-	358
HCM Lane V/C Ratio	0.024	-	-	-	-	-	0.047
HCM Control Delay (s)	10	0	-	-	-	-	15.6
HCM Lane LOS	B	A	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	-	-	0.1





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Cumulative Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	304	104	75	509	77	147	472	69	76	352	91
Future Volume (veh/h)	50	304	104	75	509	77	147	472	69	76	352	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	307	105	76	514	78	148	477	70	77	356	92
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	587	196	108	735	111	179	551	81	108	439	114
Arrive On Green	0.05	0.23	0.23	0.06	0.24	0.24	0.10	0.35	0.35	0.06	0.31	0.31
Sat Flow, veh/h	1781	2595	868	1781	3081	465	1781	1588	233	1781	1429	369
Grp Volume(v), veh/h	51	208	204	76	295	297	148	0	547	77	0	448
Grp Sat Flow(s),veh/h/ln	1781	1777	1686	1781	1777	1770	1781	0	1822	1781	0	1798
Q Serve(g_s), s	1.7	6.0	6.3	2.5	8.9	9.0	4.8	0.0	16.5	2.5	0.0	13.5
Cycle Q Clear(g_c), s	1.7	6.0	6.3	2.5	8.9	9.0	4.8	0.0	16.5	2.5	0.0	13.5
Prop In Lane	1.00		0.51	1.00		0.26	1.00		0.13	1.00		0.21
Lane Grp Cap(c), veh/h	86	402	381	108	424	422	179	0	632	108	0	553
V/C Ratio(X)	0.60	0.52	0.53	0.71	0.70	0.70	0.83	0.00	0.87	0.71	0.00	0.81
Avail Cap(c_a), veh/h	151	543	516	151	543	541	179	0	632	151	0	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.5	20.0	20.1	27.1	20.5	20.5	26.0	0.0	17.9	27.1	0.0	18.8
Incr Delay (d2), s/veh	6.5	1.0	1.2	8.3	2.7	2.9	26.6	0.0	14.8	8.8	0.0	12.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.4	2.4	1.2	3.7	3.7	3.2	0.0	8.7	1.3	0.0	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	21.0	21.2	35.5	23.2	23.4	52.6	0.0	32.7	35.9	0.0	31.0
LnGrp LOS	C	C	C	D	C	C	D	A	C	D	A	C
Approach Vol, veh/h		463			668			695			525	
Approach Delay, s/veh		22.5			24.7			37.0			31.7	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	24.9	8.1	17.8	10.4	22.6	7.3	18.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.9	18.1	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.5	18.5	4.5	8.3	6.8	15.5	3.7	11.0				
Green Ext Time (p_c), s	0.0	0.2	0.0	1.7	0.0	0.7	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay				29.5								
HCM 6th LOS				C								

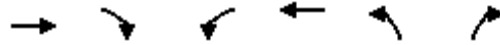
HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

Cumulative Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	364	58	68	550	174	74	149	58	92	125	35
Future Volume (veh/h)	21	364	58	68	550	174	74	149	58	92	125	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	379	60	71	573	181	77	155	60	96	130	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	757	118	104	744	234	109	405	157	123	455	126
Arrive On Green	0.03	0.25	0.25	0.06	0.28	0.28	0.06	0.32	0.32	0.07	0.32	0.32
Sat Flow, veh/h	1781	3034	474	1781	2637	830	1781	1281	496	1781	1404	389
Grp Volume(v), veh/h	22	220	219	71	385	369	77	0	215	96	0	166
Grp Sat Flow(s),veh/h/ln	1781	1777	1731	1781	1777	1690	1781	0	1777	1781	0	1793
Q Serve(g_s), s	0.7	6.2	6.4	2.3	11.7	11.7	2.5	0.0	5.5	3.1	0.0	4.0
Cycle Q Clear(g_c), s	0.7	6.2	6.4	2.3	11.7	11.7	2.5	0.0	5.5	3.1	0.0	4.0
Prop In Lane	1.00		0.27	1.00		0.49	1.00		0.28	1.00		0.22
Lane Grp Cap(c), veh/h	46	443	432	104	501	477	109	0	562	123	0	581
V/C Ratio(X)	0.48	0.50	0.51	0.68	0.77	0.77	0.71	0.00	0.38	0.78	0.00	0.29
Avail Cap(c_a), veh/h	152	546	531	152	546	519	152	0	562	167	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	18.8	18.9	27.1	19.3	19.3	27.0	0.0	15.6	26.9	0.0	14.8
Incr Delay (d2), s/veh	7.6	0.9	0.9	7.6	6.1	6.6	8.6	0.0	2.0	15.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.4	2.4	1.1	5.2	5.0	1.3	0.0	2.3	1.8	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	19.7	19.8	34.7	25.4	25.9	35.6	0.0	17.6	41.9	0.0	16.0
LnGrp LOS	D	B	B	C	C	C	D	A	B	D	A	B
Approach Vol, veh/h		461			825			292			262	
Approach Delay, s/veh		20.5			26.4			22.3			25.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	23.0	7.9	19.1	8.1	23.5	6.0	21.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0				
Max Q Clear Time (g_c+I1), s	5.1	7.5	4.3	8.4	4.5	6.0	2.7	13.7				
Green Ext Time (p_c), s	0.0	0.9	0.0	1.8	0.0	0.7	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			24.2									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
5: 17th Ave & Soquel Ave

Cumulative Plus Project AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑↑↑	
Traffic Volume (veh/h)	265	463	66	316	546	50
Future Volume (veh/h)	265	463	66	316	546	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	285	498	71	340	637	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	499	1022	114	798	1362	616
Arrive On Green	0.27	0.27	0.06	0.43	0.38	0.00
Sat Flow, veh/h	1870	1558	1781	1870	3563	1610
Grp Volume(v), veh/h	285	498	71	340	637	0
Grp Sat Flow(s),veh/h/ln	1870	1558	1781	1870	1781	1610
Q Serve(g_s), s	6.2	7.8	1.8	6.0	6.3	0.0
Cycle Q Clear(g_c), s	6.2	7.8	1.8	6.0	6.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	499	1022	114	798	1362	616
V/C Ratio(X)	0.57	0.49	0.62	0.43	0.47	0.00
Avail Cap(c_a), veh/h	715	1202	208	1113	1362	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.9	4.3	21.5	9.5	10.9	0.0
Incr Delay (d2), s/veh	1.0	0.4	5.4	0.4	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.0	0.9	2.0	2.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.0	4.6	26.9	9.8	12.1	0.0
LnGrp LOS	B	A	C	A	B	A
Approach Vol, veh/h	783			411	637	
Approach Delay, s/veh	8.8			12.8	12.1	
Approach LOS	A			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.5	17.0		24.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.5	18.0		28.0
Max Q Clear Time (g_c+I1), s		8.3	3.8	9.8		8.0
Green Ext Time (p_c), s		1.8	0.0	2.5		2.0

Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	4	5	12	684	524	5
Future Vol, veh/h	4	5	12	684	524	5
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	5	13	752	576	5






















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1370	592	594	0	-	0
Stage 1	592	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	161	506	982	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	500	970	-	-	-
Mov Cap-2 Maneuver	289	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	970	-	378	-	-
HCM Lane V/C Ratio	0.014	-	0.026	-	-
HCM Control Delay (s)	8.8	-	14.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Cumulative Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	132	103	118	217	39	118	589	76	35	396	42
Future Volume (veh/h)	46	132	103	118	217	39	118	589	76	35	396	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.92	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	150	117	134	247	44	134	669	86	40	450	48
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	198	155	168	396	71	168	682	88	67	602	64
Arrive On Green	0.04	0.21	0.21	0.09	0.26	0.26	0.09	0.42	0.42	0.04	0.36	0.36
Sat Flow, veh/h	1767	942	735	1781	1521	271	1781	1617	208	1781	1651	176
Grp Volume(v), veh/h	52	0	267	134	0	291	134	0	755	40	0	498
Grp Sat Flow(s),veh/h/ln	1767	0	1678	1781	0	1792	1781	0	1825	1781	0	1827
Q Serve(g_s), s	2.2	0.0	11.4	5.6	0.0	10.9	5.6	0.0	31.1	1.7	0.0	18.1
Cycle Q Clear(g_c), s	2.2	0.0	11.4	5.6	0.0	10.9	5.6	0.0	31.1	1.7	0.0	18.1
Prop In Lane	1.00		0.44	1.00		0.15	1.00		0.11	1.00		0.10
Lane Grp Cap(c), veh/h	77	0	353	168	0	467	168	0	770	67	0	667
V/C Ratio(X)	0.67	0.00	0.76	0.80	0.00	0.62	0.80	0.00	0.98	0.60	0.00	0.75
Avail Cap(c_a), veh/h	132	0	396	175	0	467	203	0	770	119	0	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	28.3	33.8	0.0	24.9	33.8	0.0	21.7	36.1	0.0	21.1
Incr Delay (d2), s/veh	9.7	0.0	7.3	21.8	0.0	2.6	16.5	0.0	28.1	8.3	0.0	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	5.1	3.4	0.0	4.8	3.1	0.0	18.0	0.9	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	0.0	35.5	55.6	0.0	27.4	50.3	0.0	49.8	44.4	0.0	28.6
LnGrp LOS	D	A	D	E	A	C	D	A	D	D	A	C
Approach Vol, veh/h		319			425			889				538
Approach Delay, s/veh		37.2			36.3			49.9				29.8
Approach LOS		D			D			D				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	36.6	11.7	20.5	11.7	32.3	7.8	24.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	31.4	7.5	18.0	8.7	27.8	5.7	19.8				
Max Q Clear Time (g_c+I1), s	3.7	33.1	7.6	13.4	7.6	20.1	4.2	12.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	1.9	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			40.4									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Cumulative Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	169	114	25	395	143	88	102	13	95	100	179
Future Volume (veh/h)	161	169	114	25	395	143	88	102	13	95	100	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	169	178	0	26	416	0	93	107	14	100	105	188
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	596		52	487		119	475	62	128	178	318
Arrive On Green	0.09	0.32	0.00	0.03	0.26	0.00	0.07	0.29	0.29	0.07	0.30	0.30
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1616	211	1781	593	1062
Grp Volume(v), veh/h	169	178	0	26	416	0	93	0	121	100	0	293
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1828	1781	0	1656
Q Serve(g_s), s	5.5	4.5	0.0	0.9	13.3	0.0	3.2	0.0	3.1	3.5	0.0	9.5
Cycle Q Clear(g_c), s	5.5	4.5	0.0	0.9	13.3	0.0	3.2	0.0	3.1	3.5	0.0	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.64
Lane Grp Cap(c), veh/h	156	596		52	487		119	0	538	128	0	495
V/C Ratio(X)	1.08	0.30		0.50	0.85		0.78	0.00	0.23	0.78	0.00	0.59
Avail Cap(c_a), veh/h	156	596		142	535		142	0	538	142	0	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.7	16.1	0.0	30.1	22.1	0.0	28.9	0.0	16.8	28.7	0.0	18.8
Incr Delay (d2), s/veh	96.5	0.3	0.0	7.4	12.0	0.0	20.6	0.0	1.0	22.1	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	1.8	0.0	0.5	7.0	0.0	2.0	0.0	1.4	2.2	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.2	16.4	0.0	37.4	34.1	0.0	49.5	0.0	17.7	50.8	0.0	23.9
LnGrp LOS	F	B		D	C		D	A	B	D	A	C
Approach Vol, veh/h		347	A		442	A		214			393	
Approach Delay, s/veh		69.4			34.3			31.5			30.7	
Approach LOS		E			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	23.0	6.3	24.5	8.7	23.3	10.0	20.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	5.5	5.1	2.9	6.5	5.2	11.5	7.5	15.3				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.7	0.0	1.0	0.0	0.7				

Intersection Summary


























HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
9: 7th Ave & Capitola Rd

Cumulative Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	7	323	154	53	594	103	222	314	54	65	188	30
Future Volume (veh/h)	7	323	154	53	594	103	222	314	54	65	188	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	7	336	160	55	619	107	231	327	56	68	196	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	16	796	353	90	801	138	169	614	514	153	498	79
Arrive On Green	0.01	0.22	0.22	0.05	0.27	0.27	0.09	0.33	0.33	0.09	0.32	0.32
Sat Flow, veh/h	1781	3554	1574	1781	3018	520	1781	1870	1566	1767	1559	247
Grp Volume(v), veh/h	7	336	160	55	364	362	231	327	56	68	0	227
Grp Sat Flow(s),veh/h/ln	1781	1777	1574	1781	1777	1761	1781	1870	1566	1767	0	1805
Q Serve(g_s), s	0.2	4.7	5.1	1.8	11.0	11.0	5.5	8.2	1.0	2.1	0.0	5.7
Cycle Q Clear(g_c), s	0.2	4.7	5.1	1.8	11.0	11.0	5.5	8.2	1.0	2.1	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	16	796	353	90	472	468	169	614	514	153	0	577
V/C Ratio(X)	0.43	0.42	0.45	0.61	0.77	0.77	1.37	0.53	0.11	0.45	0.00	0.39
Avail Cap(c_a), veh/h	154	1105	489	154	552	547	169	614	514	153	0	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	19.3	19.4	26.9	19.6	19.7	26.2	15.8	6.5	25.1	0.0	15.3
Incr Delay (d2), s/veh	16.6	0.4	0.9	6.5	5.7	5.9	197.6	3.3	0.4	2.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.8	1.8	0.9	4.8	4.8	11.5	3.7	0.5	0.9	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	19.6	20.3	33.4	25.3	25.5	223.8	19.1	6.9	27.2	0.0	17.4
LnGrp LOS	D	B	C	C	C	C	F	B	A	C	A	B
Approach Vol, veh/h		503			781			614			295	
Approach Delay, s/veh		20.2			26.0			95.0			19.6	
Approach LOS		C			C			F			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	7.4	17.5	10.0	23.0	5.0	19.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	4.1	10.2	3.8	7.1	7.5	7.7	2.2	13.0				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.1	0.0	0.9	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.1									
HCM 6th LOS			D									

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Vol, veh/h	6	6	9	208	6	189	15	279	118	130	206	9
Future Vol, veh/h	6	6	9	208	6	189	15	279	118	130	206	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	5	5	5	2	2	2	3	3	3	4	4	4
Mvmt Flow	6	6	9	219	6	199	16	294	124	137	217	9
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10.7	14.1	20.7	18.3
HCM LOS	B	B	C	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	4%	29%	97%	0%	38%
Vol Thru, %	68%	29%	3%	0%	60%
Vol Right, %	29%	43%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	412	21	214	189	345
LT Vol	15	6	208	0	130
Through Vol	279	6	6	0	206
RT Vol	118	9	0	189	9
Lane Flow Rate	434	22	225	199	363
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.69	0.045	0.456	0.336	0.612
Departure Headway (Hd)	5.731	7.316	7.293	6.082	6.065
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	625	493	491	587	592
Service Time	3.807	5.316	5.075	3.863	4.144
HCM Lane V/C Ratio	0.694	0.045	0.458	0.339	0.613
HCM Control Delay	20.7	10.7	16.1	11.9	18.3
HCM Lane LOS	C	B	C	B	C
HCM 95th-tile Q	5.4	0.1	2.3	1.5	4.1



















HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Cumulative Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	20	694	383	64	679	73	712	19	85	21	9	24
Future Volume (veh/h)	20	694	383	64	679	73	712	19	85	21	9	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	23	807	0	74	790	85	844	0	0	24	10	28
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	2	2	2
Cap, veh/h	45	817		95	833	90	916	0		292	122	363
Arrive On Green	0.03	0.23	0.00	0.05	0.26	0.26	0.26	0.00	0.00	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	3226	347	3534	0	1572	1275	531	1585
Grp Volume(v), veh/h	23	807	0	74	435	440	844	0	0	34	0	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1796	1767	0	1572	1807	0	1585
Q Serve(g_s), s	1.0	17.8	0.0	3.2	18.9	18.9	18.3	0.0	0.0	1.2	0.0	1.1
Cycle Q Clear(g_c), s	1.0	17.8	0.0	3.2	18.9	18.9	18.3	0.0	0.0	1.2	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	45	817		95	459	464	916	0		413	0	363
V/C Ratio(X)	0.51	0.99		0.78	0.95	0.95	0.92	0.00		0.08	0.00	0.08
Avail Cap(c_a), veh/h	115	817		124	459	464	916	0		413	0	363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	30.2	0.0	36.8	28.7	28.7	28.4	0.0	0.0	23.9	0.0	23.8
Incr Delay (d2), s/veh	8.8	28.2	0.0	20.3	29.3	29.1	15.9	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	10.5	0.0	1.9	11.4	11.5	9.4	0.0	0.0	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	58.4	0.0	57.0	57.9	57.8	44.2	0.0	0.0	24.2	0.0	24.2
LnGrp LOS	D	E		E	E	E	D	A		C	A	C
Approach Vol, veh/h		830	A		949			844	A		62	
Approach Delay, s/veh		58.1			57.8			44.2			24.2	
Approach LOS		E			E			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.9	8.7	22.6		22.5	6.5	24.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.4	5.5	18.1		18.0	5.1	18.5				
Max Q Clear Time (g_c+I1), s		20.3	5.2	19.8		3.2	3.0	20.9				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			52.9									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
12: 7th Ave & Soquel Ave

Cumulative Plus Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	655	71	235	750	0	142	0	470	0	0	0
Future Volume (veh/h)	0	655	71	235	750	0	142	0	470	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1856	1856	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	720	78	258	824	0	156	0	516	0	0	0
Peak Hour Factor	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	3	3	0	2	2	2	2	2	2
Cap, veh/h	0	890	96	307	1876	0	550	0	475	0	583	0
Arrive On Green	0.00	0.28	0.28	0.17	0.53	0.00	0.31	0.00	0.31	0.00	0.00	0.00
Sat Flow, veh/h	0	3265	343	1767	3618	0	1363	0	1524	0	1870	0
Grp Volume(v), veh/h	0	397	401	258	824	0	156	0	516	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1749	1768	1767	1763	0	1363	0	1524	0	1870	0
Q Serve(g_s), s	0.0	12.2	12.2	8.2	8.2	0.0	5.1	0.0	18.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.2	12.2	8.2	8.2	0.0	5.1	0.0	18.0	0.0	0.0	0.0
Prop In Lane	0.00		0.19	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	491	496	307	1876	0	550	0	475	0	583	0
V/C Ratio(X)	0.00	0.81	0.81	0.84	0.44	0.00	0.28	0.00	1.09	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	545	551	321	2016	0	550	0	475	0	583	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.3	19.3	23.1	8.2	0.0	15.4	0.0	19.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.1	8.1	17.2	0.2	0.0	1.3	0.0	66.4	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.5	5.6	4.6	2.5	0.0	1.6	0.0	14.4	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	27.4	27.4	40.3	8.4	0.0	16.7	0.0	86.2	0.0	0.0	0.0
LnGrp LOS	A	C	C	D	A	A	B	A	F	A	A	A
Approach Vol, veh/h		798			1082			672				0
Approach Delay, s/veh		27.4			16.0			70.1				0.0
Approach LOS		C			B			E				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	14.5	20.7		22.5		35.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		20.0	10.2	14.2		0.0		10.2				
Green Ext Time (p_c), s		0.0	0.0	1.8		0.0		6.1				
Intersection Summary												
HCM 6th Ctrl Delay				33.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Cumulative Plus Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	774	457	340	754	1	277	5	1020	1	1	1
Future Volume (veh/h)	3	774	457	340	754	1	277	5	1020	1	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	823	0	362	802	1	295	5	1085	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	836		427	1721	2	331	4	859	79	75	37
Arrive On Green	0.00	0.24	0.00	0.24	0.47	0.47	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1767	3526	1572	1781	3642	5	708	12	1585	0	247	124
Grp Volume(v), veh/h	3	823	0	362	391	412	300	0	1085	3	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1869	720	0	1585	371	0	0
Q Serve(g_s), s	0.1	14.2	0.0	11.9	9.1	9.1	0.0	0.0	18.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	14.2	0.0	11.9	9.1	9.1	18.5	0.0	18.5	18.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.98		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	7	836		427	840	883	334	0	859	191	0	0
V/C Ratio(X)	0.42	0.98		0.85	0.47	0.47	0.90	0.00	1.26	0.02	0.00	0.00
Avail Cap(c_a), veh/h	145	836		685	959	1009	334	0	859	191	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.4	23.2	0.0	22.2	10.9	10.9	23.9	0.0	14.0	16.6	0.0	0.0
Incr Delay (d2), s/veh	34.4	27.2	0.0	5.7	0.4	0.4	28.9	0.0	127.6	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.6	0.0	5.2	3.1	3.3	6.9	0.0	39.6	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.8	50.4	0.0	27.9	11.3	11.3	52.7	0.0	141.6	16.8	0.0	0.0
LnGrp LOS	E	D		C	B	B	D	A	F	B	A	A
Approach Vol, veh/h		826	A		1165			1385				3
Approach Delay, s/veh		50.4			16.5			122.3				16.8
Approach LOS		D			B			F				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	19.1	19.0		23.0	4.7	33.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	23.5	14.5		18.5	5.0	33.0				
Max Q Clear Time (g_c+I1), s		20.5	13.9	16.2		20.5	2.1	11.1				
Green Ext Time (p_c), s		0.0	0.8	0.0		0.0	0.0	5.2				
Intersection Summary												
HCM 6th Ctrl Delay			68.2									
HCM 6th LOS			E									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th TWSC
 1: Project Dwy (West)/15th Ave & Capitola Road

Cumulative Plus Project PM

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕				↗		↕	
Traffic Vol, veh/h	20	1107	8	28	612	18	0	0	23	12	0	22
Future Vol, veh/h	20	1107	8	28	612	18	0	0	23	12	0	22
Conflicting Peds, #/hr	20	0	21	21	0	20	8	0	0	0	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	1178	9	30	651	19	0	0	24	13	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	690	0	0	1208	0	0	-	-	615	1372	1991	363
Stage 1	-	-	-	-	-	-	-	-	-	741	741	-
Stage 2	-	-	-	-	-	-	-	-	-	631	1250	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	900	-	-	573	-	-	0	0	434	105	60	634
Stage 1	-	-	-	-	-	-	0	0	-	374	421	-
Stage 2	-	-	-	-	-	-	0	0	-	436	243	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	883	-	-	562	-	-	-	-	425	91	53	617
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	91	53	-
Stage 1	-	-	-	-	-	-	-	-	-	358	391	-
Stage 2	-	-	-	-	-	-	-	-	-	401	232	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.5			14			26.5		
HCM LOS							B			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	425	883	-	-	562	-	-	203
HCM Lane V/C Ratio	0.058	0.024	-	-	0.053	-	-	0.178
HCM Control Delay (s)	14	9.2	-	-	11.8	-	-	26.5
HCM Lane LOS	B	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.2	-	-	0.6

HCM 6th TWSC
 2: Project Dwy (East)/16th Ave & Capitola Road

Cumulative Plus Project PM

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖				↗		↔	
Traffic Vol, veh/h	0	1135	7	0	651	14	0	0	41	14	0	8
Future Vol, veh/h	0	1135	7	0	651	14	0	0	41	14	0	8
Conflicting Peds, #/hr	25	0	21	21	0	25	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	0	1207	7	0	693	15	0	0	44	15	0	9






















Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	733	0	0	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	-
Pot Cap-1 Maneuver	868	-	0	-
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Platoon blocked, %		-	-	-
Mov Cap-1 Maneuver	847	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.7	18.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	415	847	-	-	-	-	282
HCM Lane V/C Ratio	0.105	-	-	-	-	-	0.083
HCM Control Delay (s)	14.7	0	-	-	-	-	18.9
HCM Lane LOS	B	A	-	-	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	-	-	0.3





















HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Cumulative Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	929	120	125	508	53	87	283	96	253	473	45
Future Volume (veh/h)	53	929	120	125	508	53	87	283	96	253	473	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	978	126	132	535	56	92	298	101	266	498	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	887	114	149	1039	108	118	338	114	278	578	55
Arrive On Green	0.04	0.28	0.28	0.08	0.32	0.32	0.07	0.25	0.25	0.16	0.34	0.34
Sat Flow, veh/h	1781	3155	406	1781	3243	338	1781	1331	451	1781	1682	159
Grp Volume(v), veh/h	56	551	553	132	292	299	92	0	399	266	0	545
Grp Sat Flow(s),veh/h/ln	1781	1777	1785	1781	1777	1804	1781	0	1782	1781	0	1840
Q Serve(g_s), s	2.5	22.5	22.5	5.9	10.7	10.8	4.1	0.0	17.2	11.8	0.0	22.1
Cycle Q Clear(g_c), s	2.5	22.5	22.5	5.9	10.7	10.8	4.1	0.0	17.2	11.8	0.0	22.1
Prop In Lane	1.00		0.23	1.00		0.19	1.00		0.25	1.00		0.09
Lane Grp Cap(c), veh/h	79	500	502	149	569	578	118	0	452	278	0	633
V/C Ratio(X)	0.71	1.10	1.10	0.88	0.51	0.52	0.78	0.00	0.88	0.96	0.00	0.86
Avail Cap(c_a), veh/h	122	500	502	149	569	578	149	0	452	278	0	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.7	28.8	28.8	36.3	22.1	22.1	36.8	0.0	28.7	33.5	0.0	24.5
Incr Delay (d2), s/veh	10.9	70.9	71.1	42.0	0.8	0.8	18.3	0.0	21.3	41.9	0.0	14.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	18.9	19.1	4.2	4.4	4.5	2.3	0.0	9.7	8.2	0.0	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	99.7	99.9	78.2	22.9	22.9	55.1	0.0	50.0	75.4	0.0	38.8
LnGrp LOS	D	F	F	E	C	C	E	A	D	E	A	D
Approach Vol, veh/h		1160			723			491			811	
Approach Delay, s/veh		97.3			33.0			51.0			50.8	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	24.8	11.2	27.0	9.8	32.0	8.1	30.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	20.3	6.7	22.5	6.7	26.1	5.5	23.7				
Max Q Clear Time (g_c+I1), s	13.8	19.2	7.9	24.5	6.1	24.1	4.5	12.8				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.7	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay				63.7								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
4: Chanticleer Ave & Capitola Rd

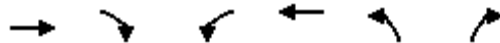
Cumulative Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1263	57	50	595	81	29	58	56	299	194	33
Future Volume (veh/h)	43	1263	57	50	595	81	29	58	56	299	194	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	1302	59	52	613	84	30	60	58	308	200	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	1107	50	77	1017	139	55	214	207	284	584	99
Arrive On Green	0.04	0.32	0.32	0.04	0.32	0.32	0.03	0.25	0.25	0.16	0.38	0.38
Sat Flow, veh/h	1781	3451	156	1781	3134	429	1781	867	838	1781	1556	265
Grp Volume(v), veh/h	44	669	692	52	347	350	30	0	118	308	0	234
Grp Sat Flow(s),veh/h/ln	1781	1777	1831	1781	1777	1785	1781	0	1705	1781	0	1820
Q Serve(g_s), s	1.9	25.1	25.1	2.3	12.8	12.9	1.3	0.0	4.4	12.5	0.0	7.2
Cycle Q Clear(g_c), s	1.9	25.1	25.1	2.3	12.8	12.9	1.3	0.0	4.4	12.5	0.0	7.2
Prop In Lane	1.00		0.09	1.00		0.24	1.00		0.49	1.00		0.15
Lane Grp Cap(c), veh/h	70	570	587	77	577	579	55	0	420	284	0	684
V/C Ratio(X)	0.63	1.17	1.18	0.67	0.60	0.60	0.55	0.00	0.28	1.08	0.00	0.34
Avail Cap(c_a), veh/h	114	570	587	116	577	579	125	0	420	284	0	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.0	26.6	26.6	36.9	22.2	22.2	37.4	0.0	23.9	32.9	0.0	17.5
Incr Delay (d2), s/veh	8.9	96.0	97.1	9.8	1.8	1.8	8.4	0.0	1.7	77.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	25.1	26.1	1.2	5.4	5.4	0.7	0.0	1.9	11.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	122.6	123.7	46.7	23.9	24.0	45.8	0.0	25.5	110.1	0.0	18.9
LnGrp LOS	D	F	F	D	C	C	D	A	C	F	A	B
Approach Vol, veh/h		1405			749			148				542
Approach Delay, s/veh		120.8			25.6			29.6				70.7
Approach LOS		F			C			C				E
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	23.8	7.9	29.6	6.9	33.9	7.6	29.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	19.3	5.1	25.1	5.5	26.3	5.0	25.2				
Max Q Clear Time (g_c+I1), s	14.5	6.4	4.3	27.1	3.3	9.2	3.9	14.9				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	1.2	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay			81.4									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary

5: 17th Ave & Soquel Ave

Cumulative Plus Project PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Volume (veh/h)	612	686	55	221	362	44
Future Volume (veh/h)	612	686	55	221	362	44
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	624	700	56	226	411	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	727	1117	92	974	1139	515
Arrive On Green	0.39	0.39	0.05	0.52	0.32	0.00
Sat Flow, veh/h	1870	1569	1781	1870	3563	1610
Grp Volume(v), veh/h	624	700	56	226	411	0
Grp Sat Flow(s),veh/h/ln	1870	1569	1781	1870	1781	1610
Q Serve(g_s), s	17.2	13.2	1.7	3.7	5.0	0.0
Cycle Q Clear(g_c), s	17.2	13.2	1.7	3.7	5.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	727	1117	92	974	1139	515
V/C Ratio(X)	0.86	0.63	0.61	0.23	0.36	0.00
Avail Cap(c_a), veh/h	781	1161	158	1096	1139	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	4.3	26.1	7.4	14.7	0.0
Incr Delay (d2), s/veh	9.0	1.0	6.3	0.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	8.8	0.9	1.2	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.8	5.3	32.4	7.5	15.6	0.0
LnGrp LOS	C	A	C	A	B	A
Approach Vol, veh/h	1324			282	411	
Approach Delay, s/veh	14.5			12.4	15.6	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.5	7.4	26.4		33.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.0	23.5		33.0
Max Q Clear Time (g_c+I1), s		7.0	3.7	19.2		5.7
Green Ext Time (p_c), s		1.1	0.0	2.7		1.3

Intersection Summary

HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	30	12	478	688	16
Future Vol, veh/h	7	30	12	478	688	16
Conflicting Peds, #/hr	0	0	8	0	0	8
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	32	13	514	740	17

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1297	757	765	0	-	0
Stage 1	757	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	179	408	848	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	173	405	842	-	-	-
Mov Cap-2 Maneuver	307	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	579	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.5	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	842	-	382	-	-
HCM Lane V/C Ratio	0.015	-	0.104	-	-
HCM Control Delay (s)	9.3	-	15.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-























HCM 6th Signalized Intersection Summary
7: 17th Ave & Brommer St

Cumulative Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	331	139	113	187	37	66	401	111	73	534	62
Future Volume (veh/h)	52	331	139	113	187	37	66	401	111	73	534	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	341	143	116	193	38	68	413	114	75	551	64
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	338	142	147	474	93	88	498	138	96	594	69
Arrive On Green	0.04	0.28	0.28	0.08	0.31	0.31	0.05	0.36	0.36	0.05	0.36	0.36
Sat Flow, veh/h	1781	1226	514	1781	1509	297	1781	1394	385	1781	1640	190
Grp Volume(v), veh/h	54	0	484	116	0	231	68	0	527	75	0	615
Grp Sat Flow(s),veh/h/ln	1781	0	1740	1781	0	1807	1781	0	1779	1781	0	1830
Q Serve(g_s), s	2.3	0.0	21.5	5.0	0.0	7.9	2.9	0.0	21.1	3.2	0.0	25.2
Cycle Q Clear(g_c), s	2.3	0.0	21.5	5.0	0.0	7.9	2.9	0.0	21.1	3.2	0.0	25.2
Prop In Lane	1.00		0.30	1.00		0.16	1.00		0.22	1.00		0.10
Lane Grp Cap(c), veh/h	79	0	479	147	0	567	88	0	636	96	0	663
V/C Ratio(X)	0.69	0.00	1.01	0.79	0.00	0.41	0.77	0.00	0.83	0.78	0.00	0.93
Avail Cap(c_a), veh/h	139	0	479	171	0	567	116	0	636	116	0	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	28.3	35.1	0.0	21.1	36.7	0.0	22.9	36.5	0.0	23.9
Incr Delay (d2), s/veh	10.1	0.0	43.5	19.0	0.0	0.5	20.2	0.0	11.9	23.7	0.0	21.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	14.3	2.9	0.0	3.3	1.7	0.0	10.4	2.0	0.0	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	71.8	54.1	0.0	21.5	56.9	0.0	34.8	60.1	0.0	45.1
LnGrp LOS	D	A	F	D	A	C	E	A	C	E	A	D
Approach Vol, veh/h		538			347			595			690	
Approach Delay, s/veh		69.3			32.4			37.3			46.7	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	32.4	10.9	26.0	8.4	32.8	7.9	29.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	27.9	7.5	21.5	5.1	27.9	6.1	22.9				
Max Q Clear Time (g_c+I1), s	5.2	23.1	7.0	23.5	4.9	27.2	4.3	9.9				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	0.3	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			47.4									
HCM 6th LOS			D									
























HCM 6th Signalized Intersection Summary
8: East Cliff Dr & Portola Dr & 17th Ave

Cumulative Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	579	260	23	299	106	99	89	12	160	145	137
Future Volume (veh/h)	122	579	260	23	299	106	99	89	12	160	145	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	128	609	0	24	315	0	104	94	13	168	153	144
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	639		47	402		133	424	59	206	261	245
Arrive On Green	0.15	0.34	0.00	0.03	0.21	0.00	0.07	0.26	0.26	0.12	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1601	221	1781	851	801
Grp Volume(v), veh/h	128	609	0	24	315	0	104	0	107	168	0	297
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1822	1781	0	1653
Q Serve(g_s), s	4.7	22.8	0.0	1.0	11.4	0.0	4.1	0.0	3.3	6.6	0.0	10.9
Cycle Q Clear(g_c), s	4.7	22.8	0.0	1.0	11.4	0.0	4.1	0.0	3.3	6.6	0.0	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.48
Lane Grp Cap(c), veh/h	273	639		47	402		133	0	483	206	0	506
V/C Ratio(X)	0.47	0.95		0.51	0.78		0.78	0.00	0.22	0.81	0.00	0.59
Avail Cap(c_a), veh/h	273	639		124	530		166	0	483	211	0	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.7	23.0	0.0	34.4	26.6	0.0	32.6	0.0	20.6	30.9	0.0	21.0
Incr Delay (d2), s/veh	1.2	24.5	0.0	8.2	5.6	0.0	17.0	0.0	1.1	20.9	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.6	0.0	0.5	5.5	0.0	2.3	0.0	1.5	3.9	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	47.5	0.0	42.7	32.2	0.0	49.6	0.0	21.6	51.8	0.0	26.0
LnGrp LOS	C	D		D	C		D	A	C	D	A	C
Approach Vol, veh/h		737	A		339	A		211			465	
Approach Delay, s/veh		44.3			32.9			35.4			35.3	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	23.5	6.4	29.0	9.9	26.4	15.5	19.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	19.0	5.0	24.5	6.7	20.8	9.2	20.3				
Max Q Clear Time (g_c+I1), s	8.6	5.3	3.0	24.8	6.1	12.9	6.7	13.4				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	1.1	0.1	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			38.6									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 9: 7th Ave & Capitola Rd

Cumulative Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1044	307	86	533	57	147	147	58	101	216	13
Future Volume (veh/h)	13	1044	307	86	533	57	147	147	58	101	216	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	1088	320	90	555	59	153	153	60	105	225	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	1056	457	115	1117	118	168	529	440	168	492	31
Arrive On Green	0.02	0.30	0.30	0.06	0.34	0.34	0.09	0.28	0.28	0.09	0.28	0.28
Sat Flow, veh/h	1781	3554	1537	1781	3238	343	1781	1870	1555	1781	1741	108
Grp Volume(v), veh/h	14	1088	320	90	304	310	153	153	60	105	0	239
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1781	1777	1804	1781	1870	1555	1781	0	1849
Q Serve(g_s), s	0.5	20.5	12.7	3.4	9.3	9.4	5.9	4.4	1.4	3.9	0.0	7.3
Cycle Q Clear(g_c), s	0.5	20.5	12.7	3.4	9.3	9.4	5.9	4.4	1.4	3.9	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	30	1056	457	115	613	622	168	529	440	168	0	523
V/C Ratio(X)	0.46	1.03	0.70	0.78	0.50	0.50	0.91	0.29	0.14	0.63	0.00	0.46
Avail Cap(c_a), veh/h	129	1056	457	142	613	622	168	529	440	168	0	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.6	24.2	21.5	31.8	17.8	17.9	30.9	19.3	9.8	30.1	0.0	20.4
Incr Delay (d2), s/veh	10.5	35.6	4.7	19.7	0.6	0.6	44.7	1.4	0.6	7.1	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	13.2	4.9	2.1	3.6	3.7	4.5	2.0	0.7	1.9	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	59.9	26.2	51.5	18.5	18.5	75.7	20.7	10.4	37.1	0.0	23.2
LnGrp LOS	D	F	C	D	B	B	E	C	B	D	A	C
Approach Vol, veh/h		1422			704			366			344	
Approach Delay, s/veh		52.1			22.7			42.0			27.5	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	24.0	9.0	25.0	11.0	24.0	5.7	28.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	19.5	5.5	20.5	6.5	19.5	5.0	21.0				
Max Q Clear Time (g_c+I1), s	5.9	6.4	5.4	22.5	7.9	9.3	2.5	11.4				
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	0.9	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay			40.5									
HCM 6th LOS			D									

Intersection	
Intersection Delay, s/veh	33.3
Intersection LOS	D























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Vol, veh/h	14	8	19	175	3	129	14	193	289	231	271	14
Future Vol, veh/h	14	8	19	175	3	129	14	193	289	231	271	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	8	20	182	3	134	15	201	301	241	282	15
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	12	14.7	32.9	46.5
HCM LOS	B	B	D	E

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	34%	98%	0%	45%
Vol Thru, %	39%	20%	2%	0%	53%
Vol Right, %	58%	46%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	496	41	178	129	516
LT Vol	14	14	175	0	231
Through Vol	193	8	3	0	271
RT Vol	289	19	0	129	14
Lane Flow Rate	517	43	185	134	538
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.844	0.095	0.418	0.257	0.927
Departure Headway (Hd)	5.884	8.023	8.122	6.894	6.212
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	615	444	443	520	586
Service Time	3.93	6.113	5.877	4.649	4.259
HCM Lane V/C Ratio	0.841	0.097	0.418	0.258	0.918
HCM Control Delay	32.9	12	16.6	12	46.5
HCM Lane LOS	D	B	C	B	E
HCM 95th-tile Q	9.2	0.3	2	1	11.8



















HCM 6th Signalized Intersection Summary
 11: Capitola Rd/Commercial Dwy & Soquel Ave

Cumulative Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1087	1248	68	559	35	612	15	43	33	35	30
Future Volume (veh/h)	8	1087	1248	68	559	35	612	15	43	33	35	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	1132	0	71	582	36	649	0	0	34	36	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1322		91	1403	87	710	0		167	177	298
Arrive On Green	0.01	0.37	0.00	0.05	0.41	0.41	0.20	0.00	0.00	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3395	210	3563	0	1585	887	939	1577
Grp Volume(v), veh/h	8	1132	0	71	304	314	649	0	0	70	0	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1828	1781	0	1585	1826	0	1577
Q Serve(g_s), s	0.4	28.0	0.0	3.8	11.6	11.6	17.0	0.0	0.0	3.1	0.0	1.6
Cycle Q Clear(g_c), s	0.4	28.0	0.0	3.8	11.6	11.6	17.0	0.0	0.0	3.1	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	0.49		1.00
Lane Grp Cap(c), veh/h	18	1322		91	734	755	710	0		345	0	298
V/C Ratio(X)	0.45	0.86		0.78	0.41	0.42	0.91	0.00		0.20	0.00	0.10
Avail Cap(c_a), veh/h	93	1487		95	745	767	710	0		345	0	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.9	27.6	0.0	44.7	19.8	19.8	37.4	0.0	0.0	32.6	0.0	32.0
Incr Delay (d2), s/veh	16.6	4.7	0.0	31.7	0.4	0.4	18.3	0.0	0.0	1.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.3	0.0	2.4	4.7	4.9	9.1	0.0	0.0	1.5	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	32.3	0.0	76.4	20.2	20.2	55.7	0.0	0.0	33.9	0.0	32.7
LnGrp LOS	E	C		E	C	C	E	A		C	A	C
Approach Vol, veh/h		1140	A		689			649	A		101	
Approach Delay, s/veh		32.5			26.0			55.7			33.6	
Approach LOS		C			C			E			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	9.4	40.0		22.5	5.5	43.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	5.1	39.9		18.0	5.0	40.0				
Max Q Clear Time (g_c+I1), s		19.0	5.8	30.0		5.1	2.4	13.6				
Green Ext Time (p_c), s		0.0	0.0	5.5		0.3	0.0	4.0				
Intersection Summary												
HCM 6th Ctrl Delay			36.7									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
12: 7th Ave & Soquel Ave

Cumulative Plus Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1053	81	290	597	0	88	0	241	0	0	0
Future Volume (veh/h)	0	1053	81	290	597	0	88	0	241	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1074	83	296	609	0	90	0	246	0	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1001	77	312	1955	0	545	0	471	0	561	0
Arrive On Green	0.00	0.30	0.30	0.17	0.55	0.00	0.30	0.00	0.30	0.00	0.00	0.00
Sat Flow, veh/h	0	3431	258	1781	3647	0	1418	0	1569	0	1870	0
Grp Volume(v), veh/h	0	571	586	296	609	0	90	0	246	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1777	1819	1781	1777	0	1418	0	1569	0	1870	0
Q Serve(g_s), s	0.0	18.0	18.0	9.9	5.6	0.0	2.8	0.0	7.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	18.0	18.0	9.9	5.6	0.0	2.8	0.0	7.8	0.0	0.0	0.0
Prop In Lane	0.00		0.14	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	533	546	312	1955	0	545	0	471	0	561	0
V/C Ratio(X)	0.00	1.07	1.07	0.95	0.31	0.00	0.17	0.00	0.52	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	533	546	312	1955	0	545	0	471	0	561	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	21.0	21.0	24.5	7.3	0.0	15.7	0.0	17.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	59.7	59.6	37.6	0.1	0.0	0.7	0.0	4.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.5	15.9	7.1	1.7	0.0	0.9	0.0	3.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	80.7	80.6	62.1	7.4	0.0	16.3	0.0	21.5	0.0	0.0	0.0
LnGrp LOS	A	F	F	E	A	A	B	A	C	A	A	A
Approach Vol, veh/h		1157			905			336				0
Approach Delay, s/veh		80.7			25.3			20.1				0.0
Approach LOS		F			C			C				
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		22.5	15.0	22.5		22.5		37.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0		33.0				
Max Q Clear Time (g_c+I1), s		9.8	11.9	20.0		0.0		7.6				
Green Ext Time (p_c), s		0.9	0.0	0.0		0.0		4.4				
Intersection Summary												
HCM 6th Ctrl Delay				51.3								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 13: Soquel Ave & Soquel Dr & Commercial Dwy

Cumulative Plus Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	875	482	434	683	5	235	5	751	6	2	8
Future Volume (veh/h)	6	875	482	434	683	5	235	5	751	6	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	911	0	452	711	5	245	5	782	6	2	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	847		452	1752	12	336	5	878	76	43	43
Arrive On Green	0.01	0.24	0.00	0.25	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3616	25	755	15	1585	0	144	144
Grp Volume(v), veh/h	6	911	0	452	349	367	250	0	782	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1865	770	0	1585	288	0	0
Q Serve(g_s), s	0.2	15.5	0.0	16.5	8.2	8.2	0.0	0.0	19.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	15.5	0.0	16.5	8.2	8.2	19.5	0.0	19.5	19.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.98		1.00	0.37		0.50
Lane Grp Cap(c), veh/h	14	847		452	861	903	341	0	878	163	0	0
V/C Ratio(X)	0.43	1.08		1.00	0.41	0.41	0.73	0.00	0.89	0.10	0.00	0.00
Avail Cap(c_a), veh/h	137	847		452	861	903	341	0	878	163	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.1	24.8	0.0	24.2	10.8	10.8	23.5	0.0	12.8	18.1	0.0	0.0
Incr Delay (d2), s/veh	19.1	53.1	0.0	42.2	0.3	0.3	13.1	0.0	13.2	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	12.3	0.0	11.7	2.9	3.0	4.8	0.0	11.2	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	77.9	0.0	66.5	11.1	11.0	36.6	0.0	26.0	19.3	0.0	0.0
LnGrp LOS	D	F		E	B	B	D	A	C	B	A	A
Approach Vol, veh/h		917	A		1168			1032			16	
Approach Delay, s/veh		77.7			32.5			28.5			19.3	
Approach LOS		E			C			C			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	21.0	20.0		24.0	5.0	36.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	16.5	15.5		19.5	5.0	27.0				
Max Q Clear Time (g_c+I1), s		21.5	18.5	17.5		21.5	2.2	10.2				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	4.1				

Intersection Summary

HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.























HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Cumulative Plus Project AM
With Improvement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	304	104	75	509	77	147	472	69	76	352	91
Future Volume (veh/h)	50	304	104	75	509	77	147	472	69	76	352	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	307	105	76	514	78	148	477	70	77	356	92
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	554	185	100	690	104	186	651	96	100	517	134
Arrive On Green	0.05	0.21	0.21	0.06	0.22	0.22	0.10	0.41	0.41	0.06	0.36	0.36
Sat Flow, veh/h	1781	2594	867	1781	3081	465	1781	1589	233	1781	1429	369
Grp Volume(v), veh/h	51	208	204	76	295	297	148	0	547	77	0	448
Grp Sat Flow(s),veh/h/ln	1781	1777	1685	1781	1777	1769	1781	0	1823	1781	0	1799
Q Serve(g_s), s	1.9	7.1	7.4	2.9	10.5	10.6	5.5	0.0	17.2	2.9	0.0	14.4
Cycle Q Clear(g_c), s	1.9	7.1	7.4	2.9	10.5	10.6	5.5	0.0	17.2	2.9	0.0	14.4
Prop In Lane	1.00		0.51	1.00		0.26	1.00		0.13	1.00		0.21
Lane Grp Cap(c), veh/h	81	379	360	100	398	396	186	0	747	100	0	651
V/C Ratio(X)	0.63	0.55	0.57	0.76	0.74	0.75	0.80	0.00	0.73	0.77	0.00	0.69
Avail Cap(c_a), veh/h	133	472	448	144	483	481	233	0	747	144	0	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.9	23.9	24.0	31.7	24.6	24.6	29.8	0.0	16.9	31.7	0.0	18.5
Incr Delay (d2), s/veh	7.8	1.2	1.4	13.4	4.9	5.2	14.0	0.0	6.3	14.1	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.0	2.9	1.6	4.7	4.8	3.0	0.0	7.8	1.6	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	25.1	25.4	45.0	29.5	29.8	43.8	0.0	23.2	45.8	0.0	24.3
LnGrp LOS	D	C	C	D	C	C	D	A	C	D	A	C
Approach Vol, veh/h		463			668			695			525	
Approach Delay, s/veh		26.8			31.4			27.6			27.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	32.4	8.3	19.0	11.6	29.1	7.6	19.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	27.9	5.5	18.1	8.9	24.5	5.1	18.5				
Max Q Clear Time (g_c+I1), s	4.9	19.2	4.9	9.4	7.5	16.4	3.9	12.6				
Green Ext Time (p_c), s	0.0	2.4	0.0	1.6	0.0	1.8	0.0	1.8				
Intersection Summary												
HCM 6th Ctrl Delay			28.5									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
3: 17th Ave & Capitola Rd

Cumulative Plus Project PM
With Improvement

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	53	929	120	125	508	53	87	283	96	253	473	45
Future Volume (veh/h)	53	929	120	125	508	53	87	283	96	253	473	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	978	126	132	535	56	92	298	101	266	498	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	1000	129	152	1169	122	117	315	107	287	558	53
Arrive On Green	0.04	0.32	0.32	0.09	0.36	0.36	0.07	0.24	0.24	0.16	0.33	0.33
Sat Flow, veh/h	1781	3157	407	1781	3243	338	1781	1330	451	1781	1682	159
Grp Volume(v), veh/h	56	550	554	132	292	299	92	0	399	266	0	545
Grp Sat Flow(s),veh/h/ln	1781	1777	1786	1781	1777	1805	1781	0	1781	1781	0	1840
Q Serve(g_s), s	2.8	27.6	27.6	6.6	11.3	11.4	4.6	0.0	19.8	13.3	0.0	25.3
Cycle Q Clear(g_c), s	2.8	27.6	27.6	6.6	11.3	11.4	4.6	0.0	19.8	13.3	0.0	25.3
Prop In Lane	1.00		0.23	1.00		0.19	1.00		0.25	1.00		0.09
Lane Grp Cap(c), veh/h	75	563	566	152	640	650	117	0	422	287	0	611
V/C Ratio(X)	0.75	0.98	0.98	0.87	0.46	0.46	0.79	0.00	0.95	0.93	0.00	0.89
Avail Cap(c_a), veh/h	141	563	566	152	640	650	119	0	422	287	0	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.7	30.4	30.5	40.6	22.0	22.1	41.4	0.0	33.8	37.2	0.0	28.5
Incr Delay (d2), s/veh	14.0	32.3	32.4	37.3	0.5	0.5	28.1	0.0	32.3	34.4	0.0	17.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	16.4	16.5	4.4	4.7	4.8	2.9	0.0	12.1	8.4	0.0	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	62.7	62.8	77.9	22.5	22.6	69.6	0.0	66.1	71.6	0.0	46.3
LnGrp LOS	E	E	E	E	C	C	E	A	E	E	A	D
Approach Vol, veh/h		1160			723			491			811	
Approach Delay, s/veh		62.5			32.7			66.7			54.6	
Approach LOS		E			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	25.8	12.2	33.0	10.4	34.4	8.3	36.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.5	21.3	7.7	28.5	6.0	29.8	7.1	29.1				
Max Q Clear Time (g_c+I1), s	15.3	21.8	8.6	29.6	6.6	27.3	4.8	13.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay			54.4									
HCM 6th LOS			D									

Appendix L

Volume-to-
Capacity Ratio
Calculations

JMW-027
1500 Capitola Road
Significant Impact Analysis
Santa Cruz County Signalized Intersections

Intersection	Cumulative Without Project Conditions					Cumulative Plus Project Conditions					Change in Critical v/c	Is Change Significant? (i.e. =>0.01)		
	EB T-R	WB L	NB T-R	SB L	Total	EB T-R	WB L	NB T-R	SB L	Total				
3. 17th Avenue / Capitola Road (PM)														
Critical Movements	1065	132	399	266	1862	1104	132	399	266	1901			0.0213	Yes
Lane Group Flow (vehicles/hr)	1003	149	452	278	1882	1002	149	452	278	1881				
Capacity Flow (vehicles/hr)														
Critical v/c Ratio	1.0618	0.8859	0.8827	0.9568	0.9894	1.1018	0.8859	0.8827	0.9568	1.0106				
4. Chanticleer Avenue / Capitola Road (PM)														
Critical Movements	1355	52	118	308	1833	1361	52	118	308	1839			0.0031	No
Lane Group Flow (vehicles/hr)	1157	77	420	284	1938	1157	77	420	284	1938				
Capacity Flow (vehicles/hr)														
Critical v/c Ratio	1.1711	0.6753	0.2810	1.0845	0.9458	1.1763	0.6753	0.2810	1.0845	0.9489				
13. Soquel Avenue - Commercial Driveway / Soquel Avenue - Soquel Drive (AM)														
Critical Movements	823	349	299		1471	823	362	300		1485			0.0082	No
Lane Group Flow (vehicles/hr)	844	414	338		1596	836	427	334		1597				
Capacity Flow (vehicles/hr)														
Critical v/c Ratio	0.9751	0.8430	0.8846		0.9217	0.9844	0.8478	0.8982		0.9299				

Notes:

1. EB, WB, NB, SB, L, T, R = Eastbound, Westbound, Northbound, Southbound, Left Turn, Through, Right Turn.
2. Calculations utilize data from level of service calculation sheets contained in **Appendices J and K**, which are based on the Highway Capacity Manual 6th Edition methodologies.
3. Data from either AM or PM peak hour, whichever time period would experience deficient operations for that analysis scenario.
4. Lane Group Flow volumes are the traffic volumes under the cited scenario, grouped by lane type and with the peak hour factor applied.
5. Satd. Flow = Saturated Flow Rate
6. v/s = Flow Ratio
7. v/c = Volume-to-Capacity Ratio
8. Critical v/c is the volume-to-capacity ratio for the critical movements of the intersection.

Appendix M

Project
Parking Demand
and Supply
Letter



Jeff Waller Consulting

May 8, 2019

Ashley Schweickart
MidPen Housing
275 Main Street, Suite 204
Watsonville, CA 95076

Re: 1412, 1438, 1500 and 1514 Capitola Road Mixed-Use Development, Santa Cruz County, CA –
Parking Demand Estimates

Dear Ashley,

Jeff Waller Consulting has prepared weekday and Saturday parking demand estimates for your proposed mixed-use project at 1412, 1438, 1500 and 1514 Capitola Road (“project”) in the Live Oak neighborhood of Santa Cruz County, California. The proposed project includes MidPen Housing’s 56 affordable rental housing units (plus 1 manager’s unit), clinics and office space for Dientes Community Dental and the Santa Cruz Community Health Centers, and a small pharmacy. **Exhibit 1** depicts the location of the proposed project. **Exhibit 2** depicts the site plan for the project.

Due to the mixed-use nature of the proposed project, the peak parking demand for the various site components would occur at different times of day. This will allow for some parking spaces to be shared between different components throughout a typical day, reducing the total parking demand for the project, as compared to Santa Cruz County parking standards. A parking demand estimate (i.e., maximum parking demand per day) has been prepared for the project on both weekdays and Saturdays using this concept of shared spaces. This demand estimate has been compared to the proposed onsite parking supply to determine if it can be fully accommodated at the project site. The following letter identified these parking estimates and summarizes their derivation. Additional information regarding restrictions on parking space usage is also provided.

A. Project Definition

The proposed project is composed of the following elements:

1. MidPen Housing Development:
 - a. 56 affordable rental apartments, plus 1 manager’s unit
 - b. Community building and open green space including BBQs, seating, and children’s playscapes
2. Dientes Community Dental (“Dientes”)
 - a. Clinic: 5,552 square feet

- b. Office (Administrative): 5,486 square feet
- 3. Santa Cruz Community Health Centers (“SCCHC”):
 - a. Clinic: 11,386 square feet
 - b. Office (Administrative): 6,603 square feet
- 4. Pharmacy: 1,308 square feet

The apartments and pharmacy would be new to the area. The Dientes clinic would also be new, augmenting the services of the existing Dientes clinics in Santa Cruz County, including the nearby clinic on Commercial Way near the intersection of Thurber Lane and Soquel Drive (see **Exhibit 1**). However, the Dientes office space would be relocated from its existing location on Soquel Avenue near Chanticleer Avenue in Live Oak (see **Exhibit 1**). The SCCHC clinic and offices would also relocate from their existing location in the Twin Lakes neighborhood at the East Cliff Village Shopping Center between 17th and 14th Avenues (see **Exhibit 1**). The total relocated clinic and office space on the project site for both Dientes and SCCHC will be larger than at either of their current sites.

B. Derivation of Project Parking Demand and Supply Estimates

Parking demand for the various project components were derived by using parking surveys and various transportation and parking industry publications, as described below.

Residential and Clinics:

Peak parking demand estimates for the residential and clinic components of the project site are based on parking surveys. These surveys were conducted between Monday, July 9 and Thursday, July 12, 2018 at the existing Dientes facility on Commercial Way, existing SCCHC facility in Twin Lakes, and MidPen affordable housing developments in Scotts Valley and Aptos. Each location was surveyed for one day. Parking demand at each of these facilities were documented for each hour of the survey.

The parking survey locations and hours are as follows:

- 1. Emerald Hill Apartments, 101 Civic Center Drive, Scotts Valley, CA – July 9, 2018, 4:00 – 8:00 PM
- 2. Aptos Blue Apartments, 3200 Aptos Rancho Road, Aptos, CA – July 10, 2018, 4:00 – 8:00 PM
- 3. Dientes Community Dental, 1830 Commercial Way, Santa Cruz, CA – July 11, 2018, 2:00 – 6:00 PM
- 4. Santa Cruz Community Health Centers (East Cliff Clinic), 21501 East Cliff Drive, Santa Cruz, CA – July 12, 2018, 2:00 – 8:00 PM

Exhibit 3 depicts the locations of the above parking surveys. The survey data can be found in **Appendix A**.



The survey results were used to estimate the peak daily parking demand for each of the two clinics/offices and each residential facility on weekdays and Saturdays, using the hourly percentages of the peak daily parking demand for that specific land use, as documented in *Shared Parking, 2nd Edition*, published by the Urban Land Institute in 2005. For example, according to *Shared Parking*, the peak parking demand for a clinic on weekdays occurs at 10:00 AM, 11:00 AM, 2:00 PM and 3:00 PM. However, on Saturdays, the Dientes and SCCHC clinics/offices would be operating at only 40% and 50% of their weekday staffing levels, respectively. These staffing reductions would reduce both employee and patient parking demand on Saturdays, compared to weekdays. Therefore, the peak parking demand on Saturdays for the clinics/offices were reduced by these same 40% and 50% levels, respectively.

Residential and clinic/office uses typically have their highest weekly parking demands on weekdays. For residential uses, peak parking demands on weekdays and Saturdays will typically be nearly identical. For the remaining commercial uses, peak parking demand will vary, depending on the hours of operation on weekdays and Saturdays. Due to the reduced staffing on Saturdays, the clinics would generate less parking demand on Saturdays, compared to weekdays. Hence, parking surveys on weekdays best identify the weekly parking demand for these uses.

Twenty-four-hour profiles of the parking demand for each surveyed facility – both on weekdays and Saturdays – were developed, again using the *Shared Parking* percentages. Adjustments to some of the hourly parking demand percentages from *Shared Parking* were made, for two reasons:

1. Variations in hours of operation for certain project components on weekdays and Saturdays, as compared to *Shared Parking*. The anticipated hours of operation for the clinics are as follows:
 - a. Dientes Clinic:
 - i. Weekday: 8:00 AM – 5:00 PM
 - ii. Saturday: 8:00 AM – 4:00 PM
 - b. SCCHC Clinic:
 - i. Weekday: 8:00 AM – 8:00 PM
 - ii. Saturday: 8:00 AM – 4:00 PM
2. Estimated parking demand projections due to incomplete data from *Shared Parking* during the overnight hours (generally 12:00 AM – 5:00 AM and 10:00 PM – 11:00 PM). For the clinics and pharmacy, overnight parking demand projections would be zero, as they are not open. For the residential component, overnight demand projections would be nearly 100%, as nearly all residents would be home during these hours.

The parking profiles of the two surveyed residential facilities were averaged to create composite residential profiles for both weekdays and Saturdays.

The 24-hour parking demand profiles for the proposed project residential and clinic components were then created by proportionally scaling up the profiles of the surveyed facilities, based on the ratio of each surveyed facility's size to the overall proposed project component size.

Pharmacy:

Peak daily parking demand for the pharmacy component was estimated using the proposed project square footage and maximum parking demand rates for a pharmacy from *Parking Generation*, 4th Edition, published by the Institute of Transportation Engineers in 2018.

Pharmacies typically have higher patronage on Saturdays compared to weekdays. However, the small size of the pharmacy – especially compared to drugstores like CVS or Walgreens – limits the difference in maximum parking demand to only one vehicle. In addition, most of the pharmacy patrons are anticipated to be patients of the two clinics, hence, the pharmacy parking demand could vary somewhat based on the number of patients per day at each of the two clinics.

Twenty-four hour profiles of the parking demand for the pharmacy – weekday and Saturday – were developed, again using the *Shared Parking* percentages. Adjustments to the *Shared Parking* percentages were also made for the pharmacy, for the same reasons as the residential and clinic components.

Total Project Parking Demand

The resulting 24-hour project parking demand profiles for each of the project components – residential, the two clinics/offices and the pharmacy – were then summed together for each hour of the day to create the total project parking profiles shown on **Exhibit 4** (weekday) and **Exhibit 5** (Saturday).

Note: Some of the project site parking spaces will be reserved for exclusive use by apartment residents – one space for every apartment unit, plus one space for the on-site property manager, or 57 spaces. These spaces will not be available to be shared by other project components, such as the clinics, even when empty. To account for this in the parking demand estimate, a minimum parking demand for the residential component is set at 57 spaces for hours when residential parking demand would otherwise be lower. This minimum demand effectively increases the residential parking demand between the hours of 10:00 AM and 3:00 PM.



As shown on **Exhibits 4 and 5**, the peak parking demand for the project is 180 spaces on weekdays – which occurs at 11:00 AM, 2:00 PM and 3:00 PM – and 119 spaces on weekends – which occurs on 1:00 PM, 2:00 PM and 3:00 PM. The peak parking demand for each project component at those times is as follows:

- Residential: 57 spaces (weekday), 57 spaces (Saturday)
- Dientes: 38 spaces (weekday), 16 spaces (Saturday)
- SCCHC: 82 spaces (weekday), 42 spaces (Saturday)
- Pharmacy: 3 spaces (weekday), 4 spaces (Saturday)

The project's preliminary site plan shown in **Exhibit 2** proposes 190 on-site parking spaces, which is more than the parking demand of 180 spaces (weekday) and 119 spaces (Saturday). It is concluded that the proposed project supply can accommodate all of the project parking demand.

C. Guidance on Parking Space Restrictions

Beyond the proposed reserving of 57 spaces for residential use only, any further restrictions on parking to one specific site component should be limited to no more than 15% of the remaining spaces, or approximately 20 additional spaces. Exceeding this amount of restricted spaces would reduce the ability of the overall project parking area to accommodate the parking demand reductions with a shared-use parking area. Excessive further parking restrictions could potentially lead to use of restricted parking spaces by frustrated drivers for other site uses not able to find parking elsewhere on the project site, thus defeating the purpose of restricting use of the spaces for any one use.

That said, time and component restrictions between specific complementary components of the project could be added to some spaces outside of the regular retail and clinic hours. These restrictions, if structured correctly, would control exactly when specific parking spaces are shared between different site components. For example, spaces roughly equidistant from both the residential and clinic components could be restricted for use only by residents of the project site between the hours of 6:00 PM and 7:00 AM of the following day – when the residential parking demand is heaviest – while the spaces are open to all project components during the remainder of the day – when the parking demand for the clinic and retail components are heaviest. Regardless of how any parking restrictions are structured, all use or time restriction on individual parking spaces should be signed to alert drivers of the restriction prior to parking.

D. ADA Spaces

The project site plan (**Exhibit 2**) depicts eight ADA, or disabled, parking spaces. This exceeds the County of Santa Cruz zoning regulations, which would require six ADA spaces.

While some disabled parking demand is inferred from the surveys, *Shared Parking* and *Parking Generation* estimates, the exact amount of ADA parking demand is not clear. To be conservative, assuming that none of the project parking demand includes ADA demand, adding the additional 8 ADA spaces would increase the minimum parking supply to 188 spaces (weekday) and 127 spaces (Saturday). The number of parking spaces proposed on the preliminary project site plan is 190 spaces; hence, the project can also accommodate all of the necessary ADA spaces and the projected parking demand.

E. CONCLUSION

In summary, the projected parking demand for the project has been estimated at 180 spaces (weekdays) and 119 spaces (Saturdays), using parking demand surveys of residential uses and clinics in Santa Cruz County, additional hourly parking demand information for all of the project components, restrictions on the use of some spaces and a sharing of the remaining on-site parking spaces between the different project components. The parking demand estimate is less than the 190 spaces proposed on the project site plan. It is therefore concluded that the project on-site parking supply will be adequate for the projected parking demand.

Any further restrictions on parking to one specific site component -- beyond the proposed reserving of 57 spaces for residential use only -- should be limited to no more than 15% of the remaining spaces, or approximately 20 additional spaces. However, time and component restrictions between specific complementary components of the project could be added to some spaces outside of the retail and clinic hours of operation. Regardless of how any parking restrictions are structured, all use or time restriction on individual parking spaces should be signed to alert drivers of the restriction prior to parking.

The exact amount of ADA (or disabled) parking from the surveys, *Shared Parking* and *Parking Generation* estimates is not clear. To be conservative, assuming that none of the project parking demand includes ADA demand, adding the additional 8 ADA spaces – as proposed on the project site plan – would increase the minimum parking supply to 188 (weekdays) and 127 (Saturday) spaces. This is below the 190 spaces proposed on the project site plan. Hence, the project can also accommodate all of the necessary ADA spaces and the projected parking demand.

Ashley Schweickart
May 8, 2019

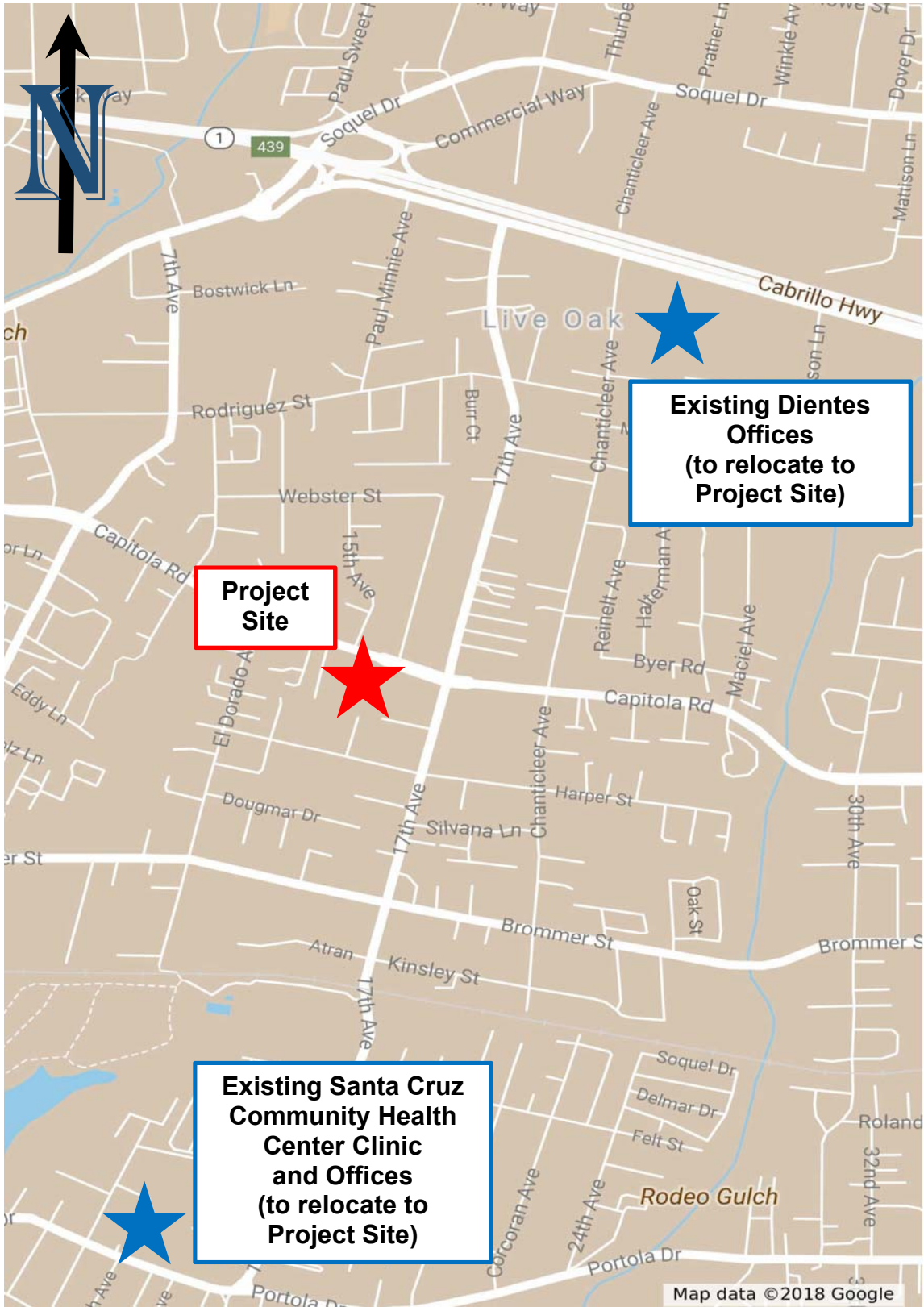
If you have any questions regarding the contents of this letter or need additional information, please contact me at your convenience. Thank you for the opportunity to assist you with this project.

Respectfully submitted,

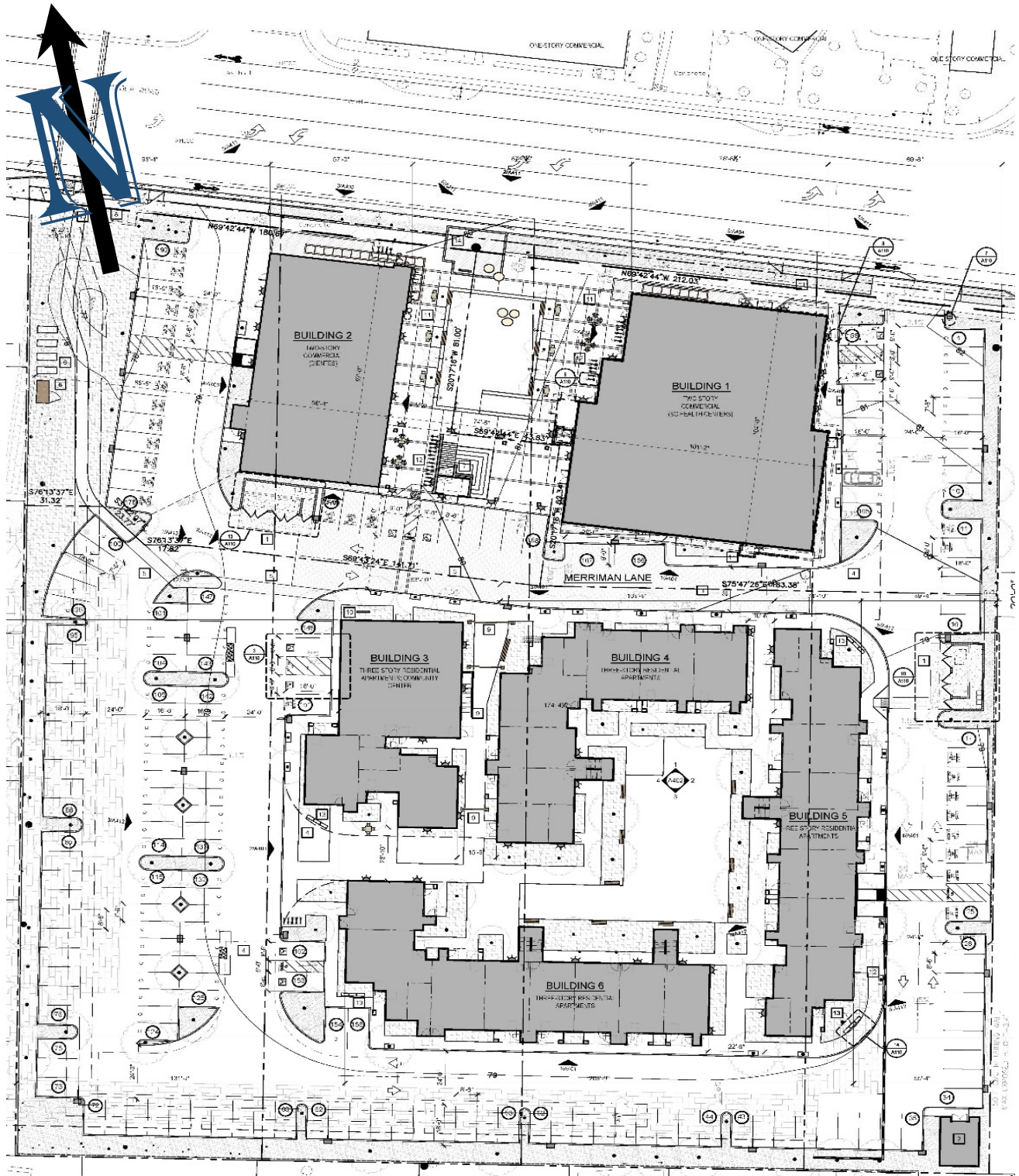


Jeff Waller, TE
Owner / Senior Analyst
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E: jeffwallerconsulting@gmail.com

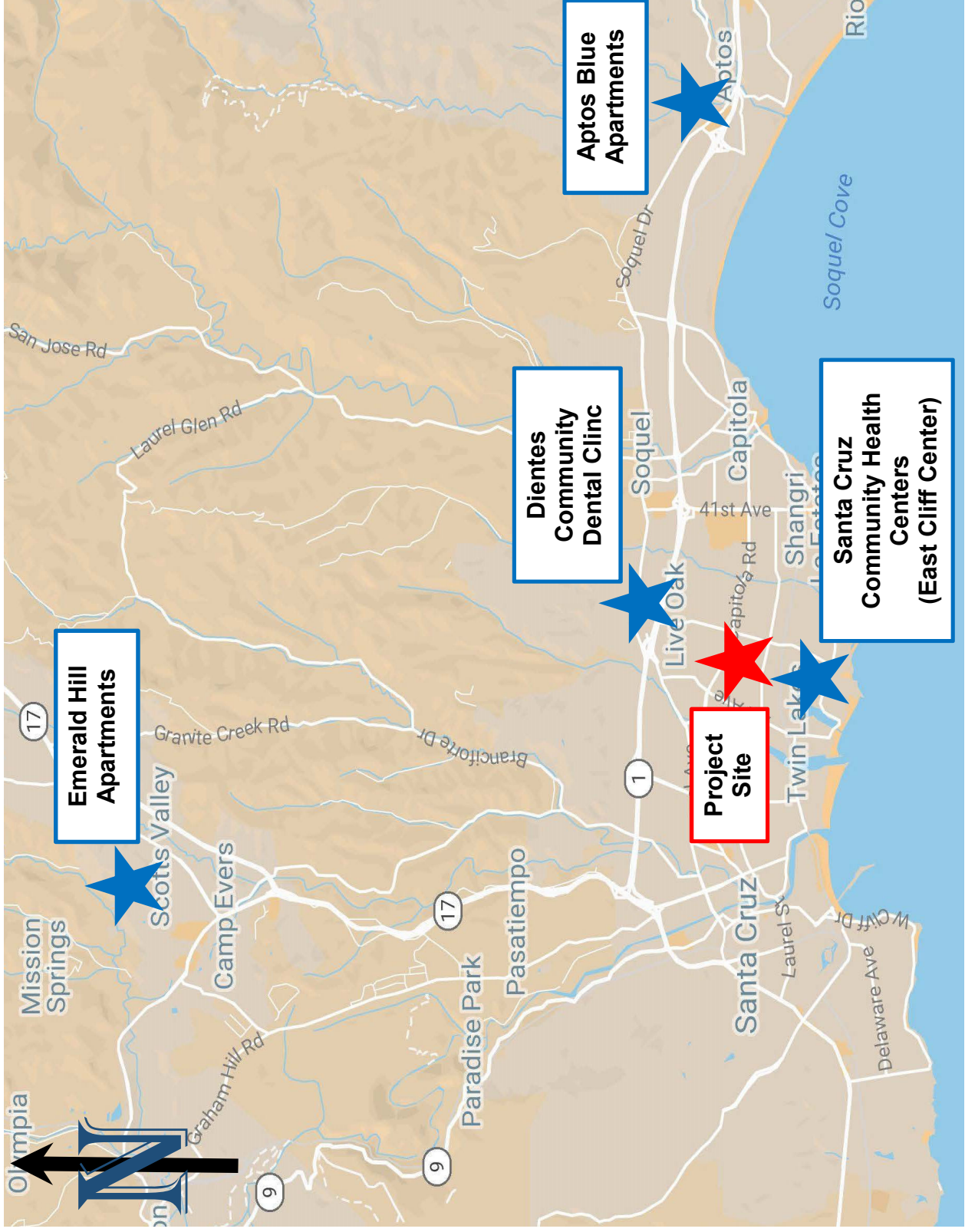
Cc: Carlos Jurado, MidPen Housing



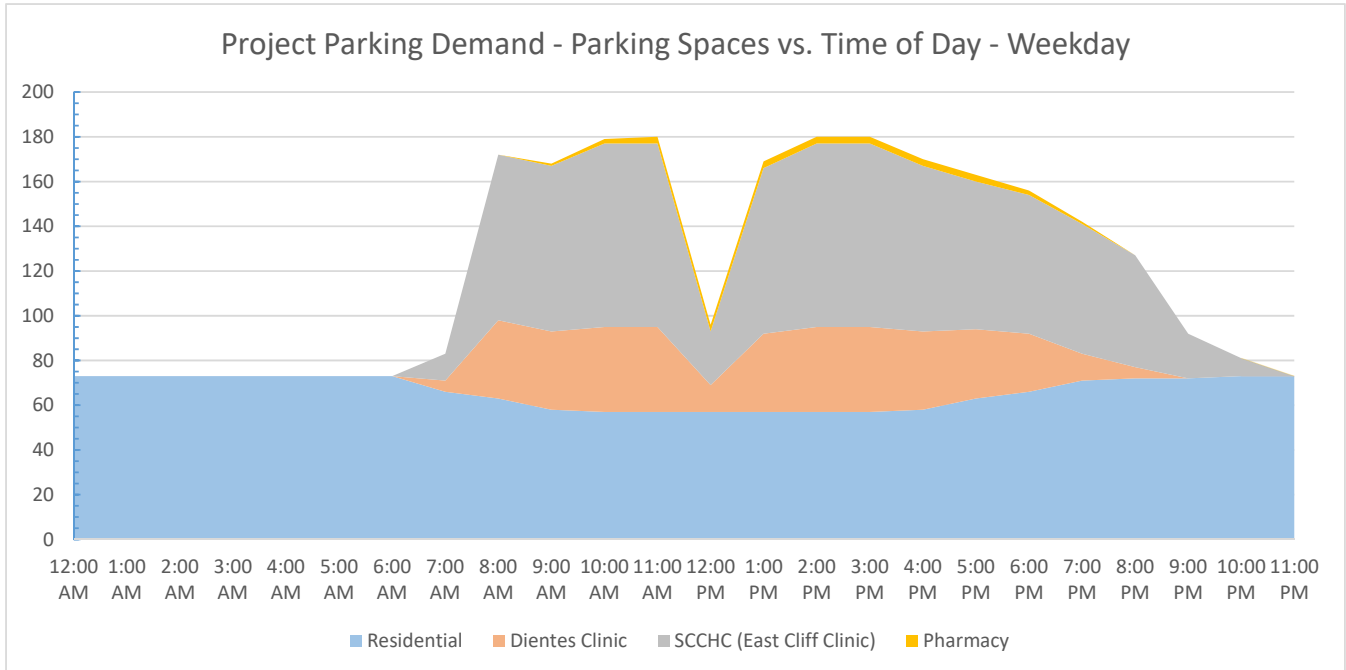
Basemap Source: Google Maps, 2018.



Source: Wald Ruhnke & Dost Architects, April 24, 2019.



Basemap Source: Google Maps, 2018.

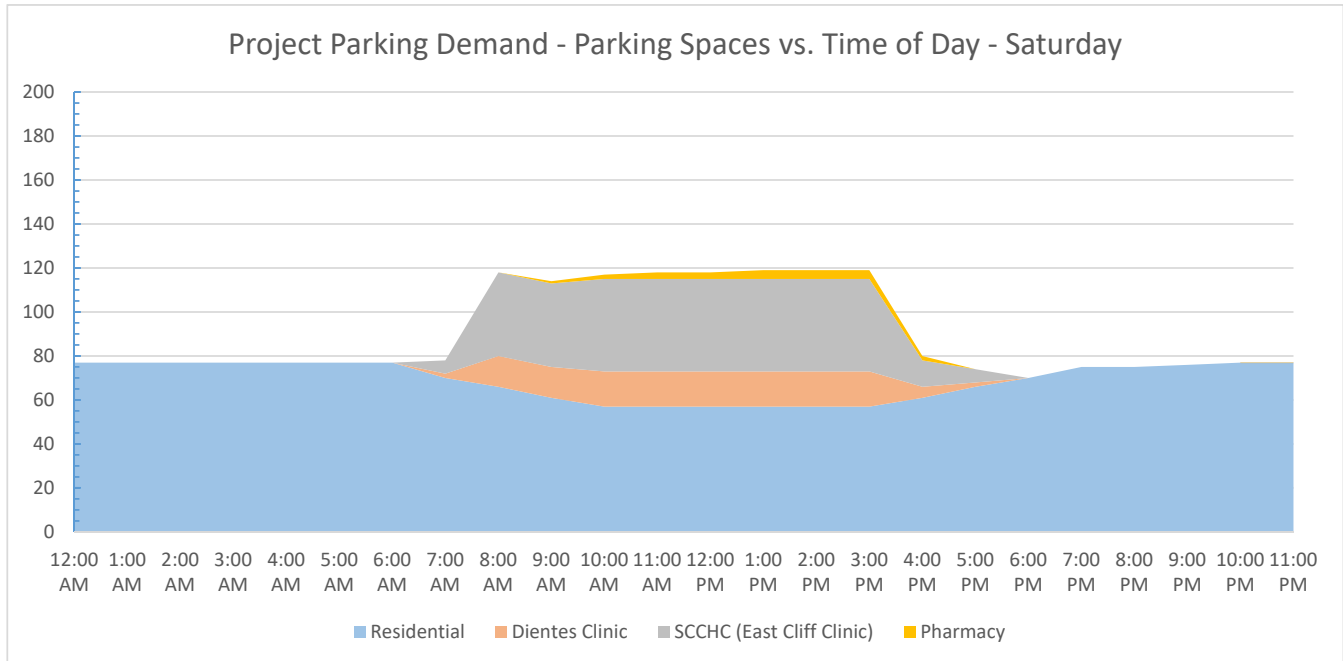


Peak Demand occurs at: 11:00 AM 2:00 PM 3:00 PM (Weekday)
180 spaces

Provided Spaces: 190 spaces
(per site plan - **Exhibit 2**)

Notes:

1. Parking demand for residential and clinics are estimated using parking surveys in Santa Cruz County and the proportion of maximum demand per hour. Parking demand for pharmacy is estimated using estimated parking demand and the proportion of maximum demand per hour.
2. Parking survey locations, dates and times:
 - a. Emerald Hill Apartments, Scotts Valley, CA -- July 9, 2018, 4-8 PM
 - b. Aptos Blue Apartments, Aptos, CA -- July 10, 2018, 4-8 PM
 - c. Dientes Community Dental, Santa Cruz, CA -- July 11, 2018, 2-6 PM
 - d. Santa Cruz Community Health Centers (East Cliff Drive), Santa Cruz, CA -- July 12, 2018, 2-8 PM
3. Percentage of parking demand per hour for all uses cited from *Shared Parking*, 2nd Edition, Urban Land Institute, 2005. Adjustments to percentages made due to extended hours at East Cliff Family Health Clinic and incomplete data from cited source.
4. Maximum parking demand for pharmacy is estimated using parking demand rates from *Parking Generation*, 4th Edition, Institute of Transportation Engineers, 2018.



Peak Demand occurs at: 1:00 PM 2:00 PM 3:00 PM
119 spaces

Provided Spaces: 190 spaces
(per site plan - **Exhibit 2**)

Notes:

1. Maximum Saturday parking peak demand for residential and pharmacy are assumed to be equal to weekday maximum demand.
2. Clinics with both be open on Saturdays, but Dientes will only be operating with 40% of weekday staffing and SCCHC will only be operating with 50% of weekday staffing. Hence, maximum parking demand for these uses is assumed as 40% and 50% of the weekday maximum parking demand, respectively.
3. Percentage of parking demand per hour for all uses cited from *Shared Parking*, 2nd Edition, Urban Land Institute, 2005. Adjustments to percentages made due to anticipated hours at both clinics (i.e., 8:00 AM - 4:00 PM) and Pharmacy (i.e., 8 AM - 5 PM).
4. Maximum parking demand for pharmacy is estimated using parking demand rates from *Parking Generation*, 4th Edition, Institute of Transportation Engineers, 2018.

Appendix A

Parking Survey Data

Emerald Hill Apartments

Aptos Blue Apartments

Dientes Community Dental

Santa Cruz Community Health Centers
(East Cliff Center)

Legend				
<i>Abbreviation</i>	<i>Location</i>	<i>City/Community</i>	<i>Parking Count Locations</i>	
			<i>On-Site</i>	<i>Adjacent On-Street</i>
EH Lot/Block Face	Emerald Hill Apartments	101 Civic Center Drive, Scotts Valley	Yes	Yes
AB Lot	Aptos Blue Apartments	3200 Aptos Rancho Road, Aptos	Yes	No
DHC Lot	Dientes Community Dental	1830 Commercial Way, Santa Cruz	Yes	No
SCCHC Lot	Santa Cruz Community Health Centers (East Cliff Center)	21501 East Cliff Drive, Santa Cruz	Yes	No

Note: Emerald Hill has adjacent on-street parking along its frontage and directly across the street. Aptos Blue, Dientes and Santa Cruz Community Health Centers do not have any adjacent on-street parking near them.

Parking Survey

Emerald Hill Apartments (MidPen Housing Corporation)
101 Civic Center Drive, Scotts Valley, CA 95066

Data Collected: Monday, July 9, 2018

Location	Time	Unique ID	Kapturit ID	Block ID	Occupancy %	Supply	Vehicle Count
Survey 1	4:00 PM	1	1	1 EH Lot, EH Block Face 1 & EH Block Face 2	47%	114	54
Survey 1	5:00 PM	1	1	1 EH Lot, EH Block Face 1 & EH Block Face 2	51%	114	58
Survey 1	6:00 PM	1	1	1 EH Lot, EH Block Face 1 & EH Block Face 2	50%	114	57
Survey 1	7:00 PM	1	1	1 EH Lot, EH Block Face 1 & EH Block Face 2	54%	114	62
Survey 1	8:00 PM	1	1	1 EH Lot, EH Block Face 1 & EH Block Face 2	56%	114	64

Note: Data collected by IDAX Data Solutions.

Parking Survey

Aptos Blue Apartments (MidPen Housing Corporation)

3200 Aptos Rancho Road, Aptos, CA 95003

Data Collected: Tuesday, July 10, 2018

Location	Time	Unique ID	Kapturit ID	Block ID	Occupancy %	Supply	Vehicle Count
Survey 2	4:00 PM	4		1 AB Lot	31%	98	30
Survey 2	5:00 PM	4		1 AB Lot	31%	98	30
Survey 2	6:00 PM	4		1 AB Lot	34%	98	33
Survey 2	7:00 PM	4		1 AB Lot	36%	98	35
Survey 2	8:00 PM	4		1 AB Lot	43%	98	42

Note: Data collected by IDAX Data Solutions.

Parking Survey

Dientes Community Dental Clinic
1830 Commercial Way, Santa Cruz, CA 95065
Data Collect Wednesday, July 11, 2018

Location	Time	Unique ID	Kapturit ID	Block ID	Occupancy %	Supply	Vehicle Count
Survey 3	2:00 PM	5	1	DCD Lot	71%	31	22
Survey 3	3:00 PM	5	1	DCD Lot	58%	31	18
Survey 3	4:00 PM	5	1	DCD Lot	65%	31	20
Survey 3	5:00 PM	5	1	DCD Lot	19%	31	6
Survey 3	6:00 PM	5	1	DCD Lot	10%	31	3

Note: Data collected by IDAX Data Solutions.

Parking Survey

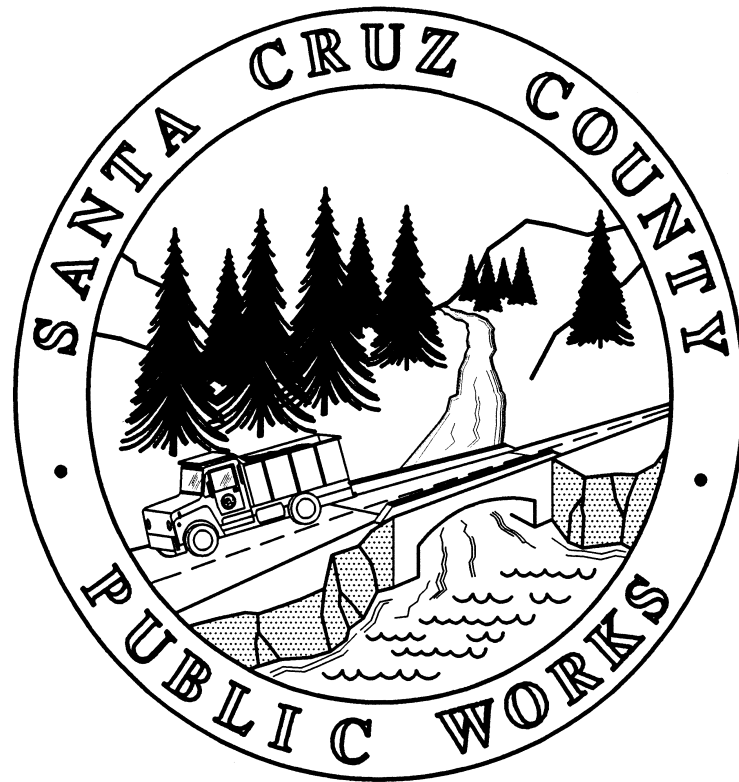
Santa Cruz Community Health Centers (East Cliff Center)
21501 East Cliff Drive, Santa Cruz, CA 95062

Data Collected: Thursday, July 12, 2018

Location	Time	Unique ID	Kapturit ID	Block ID	Occupancy %	Supply	Vehicle Count
Survey 4	2:00 PM	6	1	SCCHC Lot	93%	42	39
Survey 4	3:00 PM	6	1	SCCHC Lot	76%	42	32
Survey 4	4:00 PM	6	1	SCCHC Lot	88%	42	37
Survey 4	5:00 PM	6	1	SCCHC Lot	71%	42	30
Survey 4	6:00 PM	6	1	SCCHC Lot	60%	42	25
Survey 4	7:00 PM	6	1	SCCHC Lot	52%	42	22
Survey 4	8:00 PM	6	1	SCCHC Lot	33%	42	14

Note: Data collected by IDAX Data Solutions.

**SANTA CRUZ COUNTY
DEPARTMENT OF PUBLIC WORKS**



MAINTAINED ROAD DATA

MAINTAINED ROAD DATA – KEY

1		2				3				4		
ROAD NUMBER	UPDATED	ROAD NAME	ROAD #	ROAD NAME	ROAD #	ROAD NAME	LENGTH MILES	ROAD DIST. (Old)	ROAD DIST. (New)		NON-CNTY	FUNCTIONAL CLASS
32015	X	COAST RD	32005	OCEAN ST		END OF COUNTY MAINTAINED	0.32	A	9D1		LOCAL	3
32015	X	OLD COAST RD	32009	DAVENPORT AVE		END OF COUNTY MAINTAINED	0.19	A	9D1		LOCAL	3
25176		COATES DR	25173	HILLCREST DR	25050	SEACLIFF DR	0.41	C	9D2		LOCAL	2
26074		COFFEE LN	2504	FREEDOM BLVD		END OF COUNTY MAINTAINED	0.14	D	9D3		LOCAL	2
26074	X	COFFEE LN	1502	BUENA VISTA		END OF COUNTY MAINTAINED	0.14	D	9D3		LOCAL	2
42039		COFFEEBERRY DR	42006	CHINA GRADE RD		END OF COUNTY MAINTAINED	0.18	B	9D1		LOCAL	5
5 N4305		COLEMAN AVE	43022	LAKE BLVD		END OF COUNTY MAINTAINED		B		0.25	NA	
24231		COLLEEN WY	24229	MULBERRY DR		END OF COUNTY MAINTAINED	0.06	C	9D2		LOCAL	1
24231	X	COLLEEN WY	24229	MULBERRY DR	24230	MAPLETHORPE LN	0.06	C	9D2		LOCAL	1

KEY BOXES

1. Updated Column – Denotes Changes in Road Name, Limits, or Length
 - i. Field Highlighted designates changes made
2. Maintained Road Limits – Road Number Start, Street Name Start
3. Maintained Road Limits – Road Number End, Street Name End
 - i. **End of County Maintained** – Road Limits do not always extend to the “End of the Road” this designation may represent the end of the road **OR** just the end of the county maintained segment.
4. Road Attribute Information
 - i. Length Miles – Length of County Maintained Road
 - ii. Road Dist. Old – Old Designation (A,B,C,D)
 - iii. Road Dist. New - Current Designation (9D1,9D2,9D3)
 - iv. Non-Cnty – Length of Non-County Maintained Road
 - v. Functional Class – Classification of road
 - vi. Supv District – Supervisor District
5. Road Number with “N” preceding number is a **NON-County Maintained Road**

			FROM LIMITS		TO LIMITS							
ROAD NUMBER	UPDATED	ROAD NAME	ROAD #	ROAD NAME	ROAD #	ROAD NAME	LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
32002		1ST ST	32016	CEMENT PLANT		END OF COUNTY MAINTAINED	0.11	A	9D1		LOCAL	3
32002	X	1ST AVE	32016	CEMENT PLANT		END OF COUNTY MAINTAINED	0.11	A	9D1		LOCAL	3
42017		1ST AVE	42023	WEST PARK AVE		STATE HIGHWAY 236	0.05	B	9D1		LOCAL	3
42018		2ND ST		STATE HIGHWAY 236	42023	WEST PARK AVE	0.03	B	9D1		NA	5
32003		3RD ST	32016	CEMENT PLANT		END OF COUNTY MAINTAINED	0.09	A	9D1		LOCAL	3
24008		5TH AVE	2408	EAST CLIFF DR	24005	LAKE AVE	0.09	A	9D2		COLLECTOR	3
24008		5TH AVE	24005	LAKE AVE		END OF COUNTY MAINTAINED	0.29	A	9D2		COLLECTOR	3
24009		6TH AVE	2408	EAST CLIFF DR		END OF COUNTY MAINTAINED	0.41	A	9D2		LOCAL	3
2402		7TH AVE	2411	CAPITOLA RD	2421	SOQUEL AVE	0.50	A	9D2		ARTERIAL	1
2402		7TH AVE	2408	EAST CLIFF DR	2411	CAPITOLA RD	1.20	A	9D2		ARTERIAL	1
24010		8TH AVE	24015	EATON ST	2408	EAST CLIFF DR	0.32	A	9D2		LOCAL	1
24011		9TH AVE	2408	EAST CLIFF DR	24015	EATON ST	0.35	A	9D2		LOCAL	1
24004		10TH AVE	24014	DOLORES —	24013	CARMEL —	0.08	A	9D2		LOCAL	1
24004	X	10TH AVE	24014	DOLORES ST	24013	CARMEL ST	0.08	A	9D2		LOCAL	1
24016		12TH AVE	2408	EAST CLIFF DR		END OF COUNTY MAINTAINED	0.25	A	9D2		LOCAL	1
24017		13TH AVE		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.31	A	9D2		LOCAL	1
24037		14TH AVE	24038	MERRILL ST		END OF COUNTY MAINTAINED	0.36	A	9D2		COLLECTOR	1
24117		15TH AVE	2408	EAST CLIFF DR		END OF COUNTY MAINTAINED	0.10	A	9D2		LOCAL	1
24145		15TH AVE	2411	CAPITOLA RD	24020	WEBSTER ST	0.20	A	9D2		COLLECTOR	1
N2414		15TH AVE	2408	EAST CLIFF DR		END		A		0.06	NA	
24018		16TH AVE	24020	WEBSTER ST	2411	CAPITOLA RD	0.26	A	9D2		LOCAL	1
24115		16TH AVE	2408	EAST CLIFF DR	24116	GEOFFROY DR	0.24	A	9D2		LOCAL	1
2403		17TH AVE	2409	PORTOLA DR	2411	CAPITOLA RD	1.00	A	9D2		ARTERIAL	1
2403		17TH AVE	2411	CAPITOLA RD	2421	SOQUEL DR	0.68	A	9D2		ARTERIAL	1
24106		17TH AVE	24025	COMMERICAL WY		END OF COUNTY MAINTAINED	0.13	A	9D2		LOCAL	1

ROAD NUMBER	UPDATED	ROAD NAME	FROM LIMITS		TO LIMITS		LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
24025		18TH AVE	2409	PORTOLA DR		END OF COUNTY MAINTAINED	0.17	A	9D2		LOCAL	1
24026		19TH AVE	2409	PORTOLA DR		END OF COUNTY MAINTAINED	0.13	A	9D2		LOCAL	1
24027		20TH AVE	2409	PORTOLA DR		END OF COUNTY MAINTAINED	0.14	A	9D2		LOCAL	1
24028		21ST AVE	2409	PORTOLA DR		END OF COUNTY MAINTAINED	0.13	A	9D2		LOCAL	1
24019		24TH AVE	24043	FELT ST	2409	PORTOLA DR	0.21	A	9D2		LOCAL	1
24112		24TH AVE	2413	26TH AVE	2408	EAST CLIFF DR	0.20	C	9D2		LOCAL	1
N2425		24TH AVE	2408	EAST CLIFF DR		END		A		0.09	NA	
24102		25TH AVE	24112	24TH AVE		END OF COUNTY MAINTAINED	0.20	C	9D2		LOCAL	1
N2427		25TH AVE	24102	25TH AVE		END		C		0.02	NA	
2413		26TH AVE	2408	EAST CLIFF DR		END OF COUNTY MAINTAINED	0.08	C	9D2		COLLECTOR	1
2413		26TH AVE	2409	PORTOLA DR	2408	E CLIFF DR	0.43	C	9D2		COLLECTOR	
2417		30TH AVE	2409	PORTOLA DR	2411	CAPITOLA RD	0.74	C	9D2		COLLECTOR	1
2417		30TH AVE	2408	EAST CLIFF DR	2409	PORTOLA DR	0.52	C	9D2		COLLECTOR	1
24103		32ND AVE NORTH	2409	PORTOLA DR	24109	ROLAND DR	0.20	C	9D2		LOCAL	1
24123		32ND AVE SOUTH	2408	EAST CLIFF DR	24049	HAWES DR	0.19	C	9D2		LOCAL	1
N2441		33RD AVE	24056	ACRIVER ST	2408	EAST CLIFF DR		C		0.22	NA	1
24048		34TH AVE	2408	EAST CLIFF DR	24057	YUCCA DR	0.42	C	9D2		LOCAL	1
24050		35TH AVE	2408	EAST CLIFF DR	24057	YUCCA DR	0.36	C	9D2		LOCAL	1
24079		35TH AVE	24109	ROLAND DR	2409	PORTOLA DR	0.20	C	9D2		LOCAL	1
24059		36TH AVE	2409	PORTOLA DR	2408	EAST CLIFF DR	0.40	C	9D2		LOCAL	1
24054		37TH AVE	2408	EAST CLIFF DR	2409	PORTOLA DR	0.35	C	9D2		LOCAL	1
24078		38TH AVE		CAPITOLA CITY LIMITS		CAPITOLA CITY LIMIT	0.10	C	9D2		COLLECTOR	1
24078		38TH AVE		CAPITOLA CITY LIMITS		CAPITOLA CITY LIMIT	0.09	C	9D2		COLLECTOR	1
24078		38TH AVE		CAPITOLA CITY LIMITS	2408	EAST CLIFF DR	0.63	C	9D2		COLLECTOR	1

			FROM LIMITS		TO LIMITS							
ROAD NUMBER	UPDATED	ROAD NAME	ROAD #	ROAD NAME	ROAD #	ROAD NAME	LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
24055		40TH AVE	24091	GROSS RD		END OF COUNTY MAINTAINED	0.07	C	9D2		COLLECTOR	1
24222		40TH AVE	2409	PORTOLA DR		END OF COUNTY MAINTAINED	0.10	C	9D2		LOCAL	1
2404		41ST AVE	2408	E CLIFF DR	2409	PORTOLA DR	0.22	C	9D2		ARTERIAL	1
2404		41ST AVE	2409	PORTOLA DR		CAPITOLA CITY LIMIT	0.30	C	9D2		ARTERIAL	1
2404		41ST AVE		CAPITOLA CITY LIMITS		CAPITOLA CITY LIMIT	0.10	C	9D2		ARTERIAL	1
2404		41ST AVE		CAPITOLA CITY LIMITS	2416	SOQUEL DR	0.21	C	9D2		ARTERIAL	1
24100	DELETE	47TH AVE	2409	PORTOLA DR		CAPITOLA CITY LIMIT	0.12	C			NA	
25122	X	A ST (Kamian Way)	25092	DANUBE DR		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	2
42014		ACORN DR		STATE HIGHWAY 236		STATE HIGHWAY 236	0.88	B	9D1		LOCAL	5
33024		ADA AVE	33046	VALLEY DR	33044	PLATEAU DR	0.07	B	9D1		LOCAL	5
44009		ADAMS RD	44008	SKYLAND RD		END OF COUNTY MAINTAINED	1.00	C	9D2		LOCAL	1
24236		ADAR LN	24235	MERLIN WAY		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
24300		ADELAIDA CT	24003	JOSE AV		END OF COUNTY MAINTAINED	0.02	A	9D2		LOCAL	1
32004		ADELINE ST	32002	FIRST ST	32003	THIRD ST	0.06	A	9D1		LOCAL	3
24072		ADRIENE WAY		BAIN AVE	24074	COURT DR	0.10	C	9D2		LOCAL	1
26182		AGATE DR	26181	LAPIS DR	26181	LAPIS DR	0.16	D	9D3		LOCAL	4
24187		AGUAZUL DR	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.11	C	9D2		LOCAL	1
2601	X	AIRPORT BLVD		WATSONVILLE CITY LIMITS	2604	GREEN VALLEY RD	0.35	D	9D3		ARTERIAL	2
43028		ALAMEDA AVE		STATE HIGHWAY 9	43035	BERKELEY WY	0.09	B	9D1		LOCAL	5
33009		ALBA RD		URBAN LIMIT	2301	EMPIRE GRADE	0.54	B	9D1		COLLECTOR	3
33009		ALBA RD		STATE HIGHWAY 9		URBAN LIMIT	3.40	B	9D1		COLLECTOR	3
24296		ALDO CT	24094	HILLTOP RD		END OF COUNTY MAINTAINED	0.06	A	9D2		LOCAL	1
25048		ALDRIDGE LN	2508	CORRALITOS RD	25047	BLAKE AVE	0.27	D	9D3		LOCAL	2
N3415		ALFADEL LN	2405	SOQUEL SAN JOSE		END		A		0.76	NA	

			FROM LIMITS		TO LIMITS							
ROAD NUMBER	UPDATED	ROAD NAME	ROAD #	ROAD NAME	ROAD #	ROAD NAME	LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
24021		ALICE ST	24024	CORCORAN AVE	2403	17TH AVE	0.30	A	9D2		COLLECTOR	1
24149		ALOHA LN	24043	FELT ST		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
N4308		ALPINE AVE	43014	REDWOOD	43056	HAZEL AVE		B		0.04	NA	
24007		ALPINE ST	2402	7TH AVE	24009	6TH AVE	0.06	A	9D2		LOCAL	1
25001		ALTA DR	25029	VISTA DEL MAR	25010	CLUB HOUSE DR	0.13	C	9D2		LOCAL	2
25064		ALTA DR	25187	LA SELVA DR.	2506	MAR MONTE AVE	0.75	C	9D2		LOCAL	2
N2493		ALTA LOMA DR	24015	EATON ST		END		A		0.03	NA	
24003		ALTA LOMA LN	24005	LAKE AVE	24015	EATON AVE	0.19	A	9D2		LOCAL	3
25100		ALTA VERDI DR	25095	SIESTA AVE		END OF COUNTY MAINTAINED	0.06	C	9D2		LOCAL	2
43027		ALTA VIA RD	43029	CLEAR CREEK RD		STATE HIGHWAY 9	0.79	B	9D1		LOCAL	5
33163		ALTENITAS RD	33063	LA CUESTA DR		SCOTTS VALLEY CITY LIMITS	0.03	B	9D1		LOCAL	5
25074		ALTIVO AVE	1601	SAN ANDREAS RD		END OF COUNTY MAINTAINED	0.61	C	9D2		LOCAL	2
26174		AMADOR	2604	GREEN VALLEY RD	26180	OSO MESA	0.27	D	9D3		LOCAL	4
24146		AMAYA CT	24145	15TH AVE		END OF COUNTY MAINTAINED	0.03	A	9D2		LOCAL	1
24275		AMBER AVE		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
2608		AMESTI RD	2604	GREEN VALLEY RD	2609	BROWN VALLEY RD	3.79	D	9D3		COLLECTOR	2
24144		ANCHORAGE AVE	2408	E CLIFF DR	24056	SANTA CRUZ CITY LIMITS	0.22	C	9D2		LOCAL	1
26056		ANDERSON DR	2610	COLLEGE RD	2610	COLLEGE RD	0.19	D	9D3		LOCAL	4
N2551		ANITA AVE	25041	VISTA DR		END		C		0.09	NA	
24294		ANTONELLI CT	24295	WILLA WAY		END OF COUNTY MAINTAINED	0.03	A	9D2		LOCAL	1
25165		APPLETON DR	25009	CLIFF DR	25012	TOWNSEND DR	0.15	C	9D2		LOCAL	2
2502		APTOS BEACH DR	2511	ESPLANADE	2509	TREASURE ISL AVE	0.18	C	9D2		COLLECTOR	2
2502		APTOS BEACH DR	2509	TREASURE ISL AVE	2510	RIO DEL MAR BLVD	0.50	C	9D2		COLLECTOR	2
25034		APTOS SCHOOL RD	2503	VALENCIA RD		END OF COUNTY MAINTAINED	0.16	C	9D2		SELECT LOCAL	2
25071		APTOS ST	25031	TROUT GULCH RD	2416	SOQUEL DR	0.12	C	9D2		LOCAL	2

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
25049		APTOS WHARF RD	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2
N2552		AQUA VIEW DR	25064	ALTA DR		END		C		0.14	NA	
25036		ARBOLADO DR	25038	ESTRELLA AVE	25037	BREVE AVE	0.09	C	9D2		LOCAL	2
25073		ARBOLADO DR	1601	SAN ANDREAS RD	N2549	ARBOLADO DR.	0.05	C	9D2		LOCAL	2
N2549		ARBOLADO DR	25036	ARBOLADO DR	25038	ESTRELLA AVE		C	9D2	0.33	LOCAL	2
N3358		ARDEN AVE	33025	HERMOSA	3307	GLEN ARBOR RD		B		0.16	NA	
N2501		ARDEN WY	25060	LEDYARD WAY	25060	LEDYARD WAY		C		0.19	NA	
33107		ARENOSA LN	33106	EDUARDO AVE		END OF COUNTY MAINTAINED	0.06	B	9D1		LOCAL	5
N3364		ARNOLD AVE	33011	LOVE CREEK RD		END		B		0.45	NA	
26133		ARROYO DR	2604	GREEN VALLEY RD	26080	JOLON DR	0.24	D	9D3		LOCAL	4
25026		ARTHUR AVE	25023	PALMER AVE	25023	PALMER AVE	0.24	C	9D2		LOCAL	2
25026	X	ARTHUR AVE	25023	PALMER AVE	26092	SUMNER AV	0.24	C	9D2		LOCAL	2
33090		ASHLEY ST	3301	FELTON EMPIRE RD (BENNETT ST)	N3319	FARMERS	0.21	B	9D1		LOCAL	5
N2402		ASSEMBLY AVE	24014	DOLORES ST	2408	E CLIFF DR		A		0.28	NA	
N2550		ASTA DR	N2549		25073	ARBOLADO DR		C		0.29	NA	
24261		ATHERTON DR	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.27	C	9D2		LOCAL	2
25091		AUSTRIAN WAY	25089	VIENNA DR		END OF COUNTY MAINTAINED	0.07	C	9D2		LOCAL	2
24283		AVILA AVE	24029	EL DORADO	24030	HARPER ST	0.11	A	9D2		LOCAL	1
24156		AXFORD RD		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.23	C	9D2		LOCAL	1
N3338		AZALEA	33039	PINE AVE		END		B		0.15	NA	
N3354		AZALEA DR	3307	GLEN ARBOR RD		END		B		1.03	NA	
43001		AZALIA ST		STATE HIGHWAY 236		END OF COUNTY MAINTAINED	0.05	B	9D1		LOCAL	5
33158		BAHR DR	33157	KIM WY		END OF COUNTY MAINTAINED	0.34	B	9D1		LOCAL	5
24073		BAIN AVE	24069	NOVA DR	2404	41ST ST	0.34	C	9D2		LOCAL	1

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
N2428		BAKER ST	N2429	LAKEVIEW		END		C		0.12	NA	
25181		BALDWIN DR	25024	SEAVIEW DR	25012	TOWNSEND DR	0.18	C	9D2		LOCAL	2
24212		BALL DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	1
25080		BALTUSROL DR	25081	ST ANDREWS DR	25080	BALTUSROL DR	0.69	C	9D2		LOCAL	2
25082		BALTUSROL WAY	25080	BALTUSROL DR	25010	CLUB HOUSE DR	0.05	C	9D2		LOCAL	2
26153		BAR HARBOR CT	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.07	C	9D2		LOCAL	2
26121		BARBARA WAY	26021	CALABASAS RD		END OF COUNTY MAINTAINED	0.16	D	9D3		LOCAL	2
24262		BASELINE DR	24250	WILLOWBROOK LN	24261	ATHERTON DR	0.13	C	9D2		LOCAL	2
25004		BAY VIEW DR	25009	CLIFF DR	25012	TOWNSEND DR	0.71	C	9D2		LOCAL	2
25005		BEACH DR	2502	APTOS BEACH RD		END OF COUNTY MAINTAINED	0.67	C	9D2		LOCAL	2
25160		BEACH PINES DR	2510	RIO DEL MAR BLVD	25158	SANDALWOOD DR	0.10	C	9D2		LOCAL	2
1501		BEACH RD	1601	SAN ANDREAS	15001	SHELL RD	1.40	D	9D3		COLLECTOR	2
1501		BEACH RD	15001	SHELL RD		END OF COUNTY MAINTAINED	0.28	D	9D3		COLLECTOR	2
1501		BEACH RD		WATSONVILLE CITY LIMITS	1601	SAN ANDREAS	1.34	D	9D3		COLLECTOR	2
1501	X	WEST BEACH RD	1601	SAN ANDREAS	15001	SHELL RD	1.40	D	9D3		COLLECTOR	2
1501	X	WEST BEACH RD	15001	SHELL RD		END OF COUNTY MAINTAINED	0.28	D	9D3		COLLECTOR	2
1501	X	WEST BEACH RD		WATSONVILLE CITY LIMITS	1601	SAN ANDREAS	1.34	D	9D3		COLLECTOR	2
25175		BEACHGATE WY	25176	COATES DR	25173	HILLCREST DR	0.08	C	9D2		LOCAL	2
33030		BEAN CREEK RD		SCOTTS VALLEY CITY LIMITS		URBAN LIMIT	0.50	B	9D1		COLLECTOR	5
33030		BEAN CREEK RD		URBAN LIMIT	34005	GLENWOOD DR	2.27	B	9D1		COLLECTOR	5
4301		BEAR CREEK RD		STATE HIGHWAY 9		URBAN LIMIT	1.55	B	9D1		COLLECTOR	5
4301		BEAR CREEK RD		URBAN LIMIT		STATE HIGHWAY 35	8.27	B	9D1		COLLECTOR	5
25076		BEAR VALLEY RD	2503	VALENCIA RD		END OF COUNTY MAINTAINED	0.85	C	9D2		LOCAL	2
24191		BEGONIA PL		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.08	A	9D2		LOCAL	1

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
44023		BEL AIR CT	44022	SKYVIEW TER		END OF COUNTY MAINTAINED	0.17	A	9D2		LOCAL	1
N2617		BELLA VISTA LN		STATE HIGHWAY 152		END		D		0.93	NA	
25006		BELLE MONTI AVE	25023	PALMER AVE	25007	BELLE MONTI CT	0.16	C	9D2		LOCAL	2
25007		BELLE MONTI CT		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	2
24128		BELLEVUE ST	2415	CAPITOLA RD	24129	LAFAYETTE ST	0.08	C	9D2		LOCAL	1
33059		BEN LOMOND TOLL RD		STATE HIGHWAY 9		STATE HIGHWAY 9	0.57	B	9D1		LOCAL	5
33059	X	OLD COUNTRY ROAD		STATE HIGHWAY 9		STATE HIGHWAY 9	0.57	B			LOCAL	5
24171		BENEDICT AVE	24140	CABRILLO AVE		END OF COUNTY MAINTAINED	0.02	A	9D2		LOCAL	1
N2544		BENITO AVE	25040	PLAYA BLVD	25041	VISTA DR		C		0.15	NA	
25008		BENNETT RD	25022	MOOSEHEAD DR	25028	VENETIAN RD	0.16	C	9D2		LOCAL	2
24266		BENSON AVE	24143	THURBER LN		END OF COUNTY MAINTAINED	0.37	A	9D2		LOCAL	1
43035		BERKELEY WAY	43028	ALAMEDA AVE		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
25072		BERNAL ST	25071	APTOS ST	25035	VALENCIA ST	0.04	C	9D2		LOCAL	2
42009		BERNSTEIN DR	42012	TEILH DR	N4205		0.19	B	9D1		LOCAL	5
N3331		BETH DR		STATE HIGHWAY 9		END		B		0.28	NA	
26068		BEVERLY DR		STATE HIGHWAY 152		STATE HIGHWAY 152	0.23	D	9D3		LOCAL	4
33104		BEVERLY DR	33071	CALIFORNIA DR	33072	RIVERSIDE DR	0.06	B	9D1		LOCAL	5
53001		BIELWASKI RD		STATE HIGHWAY 35		END OF COUNTY MAINTAINED	0.22	B			NA	
N2305		BIRD HILL LN	N2303			END		B		0.11	NA	
N2415		BLACKPOINT LN	2408	E CLIFF DR		END		A		0.18	NA	
42048		BLACKSTONE CT	42047	BLACKSTONE DR		END OF COUNTY MAINTAINED	0.04	B	9D1		LOCAL	5
42047		BLACKSTONE DR	42023	W. PARK AVE		END OF COUNTY MAINTAINED	0.28	B	9D1		LOCAL	5
33102		BLAIR ST	33001	COOPER ST	33003	WRIGHT ST	0.08	B	9D1		LOCAL	5
25047		BLAKE AVE	25048	ALDRIDGE LN	2507	HAMES RD	0.35	D	9D3		LOCAL	2

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42053		BLOOM GRADE RD	42035	HILTON DR		END OF COUNTY MAINTAINED	0.15	B	9D1		LOCAL	5
26075		BLOSSOM DR	2610	COLLEGE RD	26076	PARKWOOD DR	0.14	D	9D3		LOCAL	4
43043		BLUE RIDGE DR	43026	KINGS CREEK RD	N4324	CIRCLE DR	0.72	B	9D1		LOCAL	5
43043	X	BLUE RIDGE DR	43026	KINGS CREEK RD		GROVE DRIVE	0.72	B	9D1		LOCAL	5
24213		BOGEY DR	24206	HARDIN WAY		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	1
26159		BOLLINGER PL	2608	AMESTI RD		END OF COUNTY MAINTAINED	0.10	D	9D3		LOCAL	2
25130		BONITA DR	2504	FREEDOM BLVD		END OF COUNTY MAINTAINED	0.13	C	9D2		LOCAL	2
25130		BONITA DR	2504	FREEDOM BLVD	1601	SAN ANDREAS RD	1.16	C	9D2		LOCAL	2
25130		BONITA DR	25010	CLUBHOUSE DR		END OF COUNTY MAINTAINED	0.19	C	9D2		LOCAL	2
24012		BONNIE ST	24009	6TH AVE		9TH AVE	0.16	A	9D2		LOCAL	1
3202		BONNY DOON RD		STATE HIGHWAY 1	3201	PINE FLAT RD	3.56	A	9D1		COLLECTOR	3
3202		BONNY DOON RD	3201	PINE FLAT RD	3201	PINE FLAT RD	3.34	A	9D1		COLLECTOR	3
24126		BORREGAS DR	24087	ESTATES	24087	ESTATES DR	0.28	C	9D2		LOCAL	2
24126	X	BORREGAS DR	2416	SOQUEL DR	24087	ESTATES DR	0.28	C	9D2		LOCAL	2
24263		BOSTWICK LN	2402	SEVENTH AVE		END OF COUNTY MAINTAINED	0.17	A	9D2		SELECT LOCAL	1
42025		BOULDER BROOK DR		STATE HIGHWAY 236	42016	REDWOOD DR	0.61	B	9D1		LOCAL	5
43002		BOULDER ST	43007	HARMON ST	43006	GROVE ST	0.29	B	9D1		LOCAL	5
25111		BOWEN AVE	25085	WALLACE AVE	25115	MONROE AVE	0.32	C	9D2		LOCAL	2
26014		BOWEN AVE	26017	VELASQUEZ ST	2608	CORRALITOS RD	0.10	D	9D3		LOCAL	2
26014	X	BOWEN AVE	26017	VELASQUEZ ST	2608	AMESTI RD	0.10	D	9D3		LOCAL	2
26022		BOWKER RD	1502	BUENA VISTA DR	N2620		0.11	D	9D3		LOCAL	2
26022		BOWKER RD	26021	CALABASAS RD	2504	FREEDOM BLVD	0.22	D	9D3		LOCAL	2
N2620		BOWKER RD	26022	BOWKER RD	26021	CALABASAS RD		D		0.10	NA	
24267		BOWMAN CT	24266	BENSON AVE		END OF COUNTY MAINTAINED	0.02	A	9D2		LOCAL	1

ROAD NUMBER	UPDATED	ROAD NAME	FROM LIMITS		TO LIMITS		LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
26140		BOWSPRIT DR	26093	DOLPHIN DR		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	2
33066		BRACKNEY RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.25	B	9D1		LOCAL	5
26097		BRADFORD RD	26021	CALABASAS RD	N2604		0.11	D	9D3		LOCAL	2
N2604		BRADFORD RD	1502	BUENA VISTA DR	26097	BRADFORD RD		D		0.19	NA	
3401		BRANCIFORTE DR	3402	MT VIEW RD		URBAN LIMIT	4.10	A	9D2		LOCAL	1
3401		BRANCIFORTE DR		URBAN LIMIT	2401	GLEN CANYON RD	0.84	A	9D2		LOCAL	1
3401		BRANCIFORTE DR		SANTA CRUZ CITY LIMITS		SANTA CRUZ CITY LIMITS CL	0.48	A	9D2		LOCAL	1
25037		BREVE AVE	25036	ARBOLADO DR	25040	PLAYA BLVD	0.06	C	9D2		LOCAL	2
26111	DELETE	BREWINGTON AVE		WATSONVILLE CITY LIMITS		WATSONVILLE CITY LIMITS		D			NA	
26096		BRIARWOOD DR		URBAN LIMIT		END OF COUNTY MAINTAINED	0.09	D	9D3		LOCAL	2
26096		BRIARWOOD DR	26097	BRADFORD RD		URBAN LIMIT	0.19	D	9D3		LOCAL	2
24062		BRIDGE ST	24063	CENTER ST		END OF COUNTY MAINTAINED	0.16	C	9D2		LOCAL	1
N4317		BRIER DR	4301	BEAR CREEK RD		END		B		0.32	NA	
43031		BRIMBLECOM RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.53	B	9D1		LOCAL	5
24085		BROADWAY	25050	SEA CLIFF DR	25057	CENTER AVE	0.11	C	9D2		LOCAL	2
26147		BRODIN LN	25047	BLAKE AVE		END OF COUNTY MAINTAINED	0.13	D	9D3		LOCAL	2
24022		BROMMER ST	2417	30TH AVE	2402	7TH AVE	1.25	A	9D2		ARTERIAL	1
24022		BROMMER ST		CAPITOLA CITY LIMITS	2417	30TH AVE	0.24	C	9D2		ARTERIAL	1
24197		BROMMER WY	24022	BROMMER ST		END OF COUNTY MAINTAINED	0.10	A	9D2		LOCAL	1
N4314		BROOK DR		STATE HIGHWAY 9		END		B		0.45	NA	
33162		BROOK KNOLL DR	3305	SIMS RD	33140	TREETOP DR	0.31	B	9D1		LOCAL	5
42038		BROOK LN		STATE HIGHWAY 236		END OF COUNTY MAINTAINED	0.32	B	9D1		LOCAL	5
33017		BROOKSIDE AVE	33011	LOVE CREEK RD	3307	GLEN ARBOR RD	0.45	B	9D1		LOCAL	5
33036		BROOKSIDE WAY	N3324	GOLD GULCH AVE	33037	LAKEVIEW RD	0.42	B	9D1		LOCAL	5

			FROM LIMITS		TO LIMITS							
ROAD NUMBER	UPDATED	ROAD NAME	ROAD #	ROAD NAME	ROAD #	ROAD NAME	LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
24099		BROOKWOOD DR	24041	PAUL SWEET RD		SANTA CRUZ CITY LIMITS	0.14	A	9D2		LOCAL	1
2609		BROWN VALLEY RD	2508	CORRALITOS RD	2608	AMESTI RD	0.33	D	9D3		COLLECTOR	2
2609		BROWN VALLEY RD	2608	AMESTI RD	36001	REDWOOD RD	3.13	D	9D3		COLLECTOR	2
2609	X	BROWNS VALLEY RD	2508	CORRALITOS RD	2608	AMESTI RD	0.33	D	9D3		COLLECTOR	2
2609	X	BROWNS VALLEY RD	2608	AMESTI RD	36001	REDWOOD RD	3.13	D	9D3		COLLECTOR	2
25201		BRYCE CT	25163	MEADOWLARK LN		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	2
24210		BUCK CT	2406	MAIN ST		END OF COUNTY MAINTAINED	0.04	C	9D2		LOCAL	1
N3335		BUCKEYE	33038	FORREST RD	33039	PINE AVE		B		0.25	NA	
33068		OLD ZAYANTE RD	3303	EAST ZAYANTE RD		END OF COUNTY MAINTAINED	0.04	B			NA	5
33068	X	BUCKLIEN WAY		WOODWARDIA AV		END OF COUNTY MAINTAINED	0.04	B	9D1		LOCAL	5
1502		BUENA VISTA DR	2504	FREEDOM BLVD	N2604		0.86	D	9D3		COLLECTOR	2
1502		BUENA VISTA DR	N2604	N2604 BRADFORD RD		URBAN LIMIT	0.15	D	9D3		COLLECTOR	2
1502		BUENA VISTA DR		URBAN LIMIT	1601	SAN ANDREAS DR	3.75	D	9D3		COLLECTOR	2
24061		BULB AVE	24060	GARDEN ST		CAPITOLA CITY LIMIT	0.26	C	9D2		LOCAL	1
24176		BURR CT	24044	RODRIGUEZ ST		END OF COUNTY MAINTAINED	0.10	A	9D2		LOCAL	1
35002		BUZZARD LAGOON RD	35003	EUREKA CYN RD	35001	RIDER RD	5.87	D	9D3		LOCAL	1
N2447		BYE WAY	24073	BAIN AVE		END		C		0.05	NA	
24290		BYER CT	24163	BYER RD		END OF COUNTY MAINTAINED	0.02	A	9D2		LOCAL	1
24163		BYER RD	24162	REINELT AVE	24035	MACIEL AVE	0.15	A	9D2		LOCAL	1
25189		BYERS LN	1601	SAN ANDREAS RD		END OF COUNTY MAINTAINED	0.43	C	9D2		LOCAL	2
26173		CABO CT	26172	VIA PACIFICA		END OF COUNTY MAINTAINED	0.04	C	9D2		LOCAL	2
24140		CABRILLO AVE	24139	SERRELL AVE	24143	THURBER LN	0.54	A	9D2		LOCAL	1
24076		CABRILLO COLLEGE D	24082	PARK AVE		END OF COUNTY MAINTAINED	0.18	C	9D2		COLLECTOR	2
24076		CABRILLO COLLEGE D	2416	SOQUEL DR	24082	PARK AVE	1.00	C	9D2		COLLECTOR	2
26021		CALABASAS RD	1502	BUENA VISTA DR		URBAN LIMIT	0.60	D	9D3		SELECT LOCAL	2

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26021		CALABASAS RD		URBAN LIMIT	25043	WHITE RD	2.96	D	9D3		SELECT LOCAL	2
25203		CALABRIA ST	2416	SOQUEL DRIVE		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	2
24249		CALDWELL DR	24248	RESEARCH PK DR	24110	RODEO GULCH RD S	0.05	C	9D2		LOCAL	1
33071		CALIFORNIA DR		STATE HIGHWAY 9	33072	RIVERSIDE DR	0.30	B	9D1		LOCAL	5
33071	X	CALIFORNIA DR	33077	MIDDLE RD	33072	RIVERSIDE DR	0.30	B	9D1		LOCAL	5
N3301		CALIFORNIA DR	33028	LOCKHART GULCH		END		B		0.28	NA	
24058		CALLA DR	24107	PALISADES AVE	24123	32ND AVE	0.14	C	9D2		LOCAL	1
26179		CALLE CUESTA	26177	CALLE DEL RIO	26180	OSO MESA	0.10	D	9D3		LOCAL	4
26177		CALLE DEL RIO	26174	AMADOR	26179	CALLE CUESTA	0.09	D	9D3		LOCAL	4
26139		CALYPSO DR	26092	SUMNER AVE	26093	DOLPHIN DR	0.31	C	9D2		LOCAL	2
26108		CAMBRIDGE DR	26107	KINGSTON DR	26106	CRESTWOOD DR	0.09	D	9D3		LOCAL	4
24269		CAMDEN CT	24092A	WINKLE AVE		END OF COUNTY MAINTAINED	0.03	A	9D2		LOCAL	1
24152		CAMPO WAY	24151	SEVILLA DR	24154	VIA FLORES	0.09	C	9D2		LOCAL	1
33081		CANEPA DR	33063	LA CUESTA	33082	ELENA DR	0.08	B	9D1		LOCAL	5
34006		CANHAM RD		SCOTTS VALLEY CITY LIMITS		END OF COUNTY MAINTAINED	0.63	B	9D1		LOCAL	5
33060		CAPELLI DR	33076	HACIENDA WAY		END OF COUNTY MAINTAINED	0.18	B	9D1		LOCAL	5
2415		CAPITOLA AVE	2416	SOQUEL DR		CAPITOLA CITY LIMIT	0.23	C	9D2		ARTERIAL	1
2411		CAPITOLA RD		SANTA CRUZ CITY LIMITS	2417	30TH AVE	1.48	A	9D2		ARTERIAL	1
24131		CAPITOLA RD EXT	2411	CAPITOLA RD	2421	SOQUEL AVE	0.30	A	9D2		COLLECTOR	3
26071		CARLENE CT	26011	MONUMENT AVE		END OF COUNTY MAINTAINED	0.06	D	9D3		LOCAL	2
N2545		CARLOS	25041	VISTA DR	25041	VISTA DR		C		0.22	NA	
2612		CARLTON RD		STATE HIGHWAY 129		STATE HIGHWAY 152	3.27	D	9D3		COLLECTOR	4
24013		CARMEL ST	24004	10TH AVE	24003	ALTA LOMA LN	0.24	A	9D2		LOCAL	1
25167		CAROL WAY	25085	WALLACE AVE		END OF COUNTY MAINTAINED	0.26	C	9D2		LOCAL	2

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43021		CARROL AVE	43022	LAKE BLVD	33031	LOMPICO RD	0.54	B	9D1		LOCAL	5
33133		CASETA CT	33132	CASETA WAY		END OF COUNTY MAINTAINED	0.02	B	9D1		LOCAL	5
33132		CASETA WAY	33116	LOCKWOOD LN		END OF COUNTY MAINTAINED	0.11	B	9D1		LOCAL	5
2607		CASSERLY RD		STATE HIGHWAY 152	2604	GREEN VALLEY RD	3.70	D	9D3		COLLECTOR	4
N3203		CASTANAS DR	N3202	VICK DR	2301	EMPIRE GRADE		A		0.16	NA	
24168		CATALINA DR	24156	AXFORD RD		END OF COUNTY MAINTAINED	0.12	C	9D2		LOCAL	1
25033		CATHEDRAL DR	N2524			END OF COUNTY MAINTAINED	1.17	C	9D2		COLLECTOR	2
25033		CATHEDRAL DR	25031	TROUT GULCH RD	N2524		0.23	C	9D2		COLLECTOR	2
N3302		CATHEDRAL DR	N3301			END		B		0.62	NA	
25169		CEDAR ST	25050	SEA CLIFF DR	25059	MAR VISTA DR	0.31	C	9D2		LOCAL	2
26164		CELIA DR	2604	GREEN VALLEY RD	26183	ONYX DR	0.18	D	9D3		LOCAL	2
32016		CEMENT PLANT RD		STATE HIGHWAY 1		STATE HIGHWAY 1	1.18	A	9D1		LOCAL	3
25057		CENTER AVE	2407	STATE PARK DR	25051	EL CAMINO DEL MAR	0.30	C	9D2		COLLECTOR	2
24063		CENTER ST	24064	E WALNUT ST	24062	BRIDGE ST	0.31	C	9D2		LOCAL	1
32018		CENTER ST	32006	MARINE VIEW AVE		END OF COUNTY MAINTAINED	0.02	A	9D1		LOCAL	3
33010		CENTRAL AVE	33042	SUNNYSIDE AVE	33011	LOVE CREEK RD	0.19	B	9D1		LOCAL	5
33010	X	CENTRAL AVE	33152	FAIRVIEW AVE	33011	LOVE CREEK RD	0.19	B	9D1		LOCAL	5
24297		CHANTICLEER LN	24023	CHANTICLEER AVE		END OF COUNTY MAINTAINED	0.09	A	9D2		LOCAL	1
24023		CHANTICLEER AVE	2421	SOQUEL AVE	24034	KINSLEY ST	1.14	A	9D2		LOCAL	1
24023		CHANTICLEER AVE	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.19	A	9D2		LOCAL	1
N2484		CHARLOTTE	24193	MARGARET AVE	24192	GERTRUDE AVE		C		0.03	NA	
N2537		CHARLSON RD	25076	BEAR VALLEY RD		END		C		0.54	NA	
24147		CHECOLA CT	24145	15TH AVE		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
24097		CHERRYVALE AVE	2406	MAIN ST		END OF COUNTY MAINTAINED	1.04	C	9D2		LOCAL	1

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25119		CHERYL WAY	25089	VIENNA DR		END OF COUNTY MAINTAINED	0.17	C	9D2		LOCAL	2
25119		CHERYL WAY	25089	VIENNA DR		URBAN LIMIT	0.06	C	9D2		LOCAL	2
N2434		CHESTERFIELD DR	2408	E CLIFF DR	2408	E CLIFF DR		C		0.08	NA	
24277		CHILDERS LN	2417	30TH AVE		END OF COUNTY MAINTAINED	0.06	C	9D2		LOCAL	1
42006		CHINA GRADE		STATE HIGHWAY 236		END OF COUNTY MAINTAINED	5.97	B	9D1		LOCAL	3
24153		CHIUQUITA WAY	24151	SEVILLA DR	24154	VIA FLORES	0.07	C	9D2		LOCAL	1
24142		CHIRCO AVE	24141	GERMAINE AVE		END OF COUNTY MAINTAINED	0.19	A	9D2		LOCAL	1
24240		CHRIS CT	24095	CORNWELL RD		END OF COUNTY MAINTAINED	0.06	A	9D2		LOCAL	1
32010		CHURCH ST	32006	MARINE VIEW AVE	32006	MARINE VIEW AVE	0.12	A	9D1		LOCAL	3
24186		CINDY LN	24094	HILLTOP RD		END OF COUNTY MAINTAINED	0.06	A	9D2		LOCAL	1
N4321		CIRCLE DR	43043	BLUE RIDGE DR	43043	BLUE RIDGE DR		B		0.50	NA	
43037		CIRCLE WAY	43036	CRESTA DR	43036	CRESTA DR	0.13	B	9D1		LOCAL	5
25178		CLAUDIUS DR	2510	RIO DEL MAR BLVD		END OF COUNTY MAINTAINED	0.14	C	9D2		LOCAL	2
43029		CLEAR CREEK RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.60	B	9D1		LOCAL	5
33086		CLEARVIEW PL	33001	COOPER ST		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
24304		CLEARWATER CT	2409	PORTOLA DR		END OF COUNTY MAINTAINED	0.09	A	9D2		LOCAL	1
33093		CLEMENT ST	33094	HIHN RD	33092	LARITA DR	0.05	B	9D1		LOCAL	5
25009		CLIFF DR	2510	RIO DEL MAR BLVD	25063	MARTIN DR	0.25	C	9D2		COLLECTOR	2
25009		CLIFF DR	25063	MARTIN DR		END OF COUNTY MAINTAINED	0.68	C	9D2		COLLECTOR	2
24297		CLIPPER COVE	24022	BROMMER ST		END OF COUNTY MAINTAINED	0.03	A	9D2		LOCAL	1
25010		CLUB HOUSE DR	26092	SUMNER AVE		END OF COUNTY MAINTAINED	0.12	C	9D2		COLLECTOR	2
25010		CLUB HOUSE DR	2510	RIO DEL MAR BLVD	26092	SUMNER AVE	1.55	C	9D2		COLLECTOR	2
22002		COAST RD		STATE HIGHWAY 1		STATE HIGHWAY 1	0.30	A	9D1		LOCAL	3
32015		COAST RD	32005	OCEAN ST		END OF COUNTY MAINTAINED	0.32	A	9D1		LOCAL	3

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32015	X	OLD COAST RD	32009	DAVENPORT AVE		END OF COUNTY MAINTAINED	0.19	A	9D1		LOCAL	3
25176		COATES DR	25173	HILLCREST DR	25050	SEACLIFF DR	0.41	C	9D2		LOCAL	2
26074		COFFEY LN	2504	FREEDOM BLVD		END OF COUNTY MAINTAINED	0.14	D	9D3		LOCAL	2
26074	X	COFFEY LN	1502	BUENA VISTA		END OF COUNTY MAINTAINED	0.14	D	9D3		LOCAL	2
42039		COFFEEBERRY DR	42006	CHINA GRADE RD		END OF COUNTY MAINTAINED	0.18	B	9D1		LOCAL	5
N4305		COLEMAN AVE	43022	LAKE BLVD		END		B		0.25	NA	
24231		COLLEEN WY	24229	MULBERRY DR		END OF COUNTY MAINTAINED	0.06	C	9D2		LOCAL	1
24231	X	COLLEEN WY	24229	MULBERRY DR	24230	MAPLETHORPE LN	0.06	C	9D2		LOCAL	1
2610		COLLEGE RD		STATE HIGHWAY 152	2603	LAKEVIEW RD	0.69	D	9D3		ARTERIAL	4
24284		COMMERCIAL CRSNG	2416	SOQUEL DR	24205	COMMERCIAL WAY	0.07	A	9D2		LOCAL	1
24205		COMMERCIAL WAY	2416	SOQUEL DR	2416	SOQUEL DR	0.37	A	9D2		LOCAL	1
42051		COMPASS CT	42035	HILTON DR		END OF COUNTY MAINTAINED	0.11	B	9D1		LOCAL	5
42051	X	COMPASS CT	42035	EAST HILTON DR		END OF COUNTY MAINTAINED	0.11	B	9D1		LOCAL	5
N3201		COMSTOCK LN	3201	PINE FLAT RD		END		A		0.49	NA	
33153		CONFERENCE DR	2302	GRAHAM HILL RD	33041	ROARING CAMP RD	0.26	B	9D1		LOCAL	5
33153		CONFERENCE DR	3302	MT HERMON RD		END OF COUNTY MAINTAINED	0.28	B	9D1		LOCAL	5
N3380		CONFERENCE DR	33041	ROARING CAMP RD		END (@WEST END OF SLIDE)		B		1.11	NA	
33001		COOPER ST	3301	FELTON EMPIRE RD	33086	CLEARVIEW PL	0.31	B	9D1		LOCAL	5
N8000		COOPER ST	33086	CLEARVIEW PL		STATE HIGHWAY 9		B		0.07	NA	
24024		CORCORAN AVE	2409	PORTOLA DR	24043	FELT ST	0.27	A	9D2		COLLECTOR	1
24224		CORCORAN ST	24043	FELT ST		END OF COUNTY MAINTAINED	0.13	A	9D2		COLLECTOR	1
24024	X	CORCORAN AVE	24043	FELT ST		END OF COUNTY MAINTAINED	0.13	A	9D2		COLLECTOR	1
24172		CORINNE AVE	24092	WINKLE AVE	24198	KENNY AVE	0.16	A	9D2		LOCAL	1
24095		CORNWELL RD	24094	HILLTOP RD		END OF COUNTY MAINTAINED	0.31	A	9D2		LOCAL	1

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25103		CORONADA DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.16	C	9D2		LOCAL	2
25103	X	CORONADO DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.16	C	9D2		LOCAL	2
26102		CORRALA VISTA DR	2608	AMESTI RD	26085	KAREN DR	0.15	D	9D3		LOCAL	2
2508		CORRALITOS RD	2504	FREEDOM BLVD	2507	HAMES RD	1.84	D	9D3		COLLECTOR	2
24280		CORTE CABRILLO	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.17	C	9D2		LOCAL	2
24183		CORTEZ DR	24181	VALERA DR	24189	VISTA DR	0.12	A	9D2		LOCAL	1
N2449		CORY ST	2404	41ST AVE		END		C		0.13	NA	
26077		COTTAGE DR	2610	COLLEGE RD	26076	PARKWOOD DR	0.11	D	9D3		LOCAL	4
24074		COURT DR	2410	OPAL CLIFF DR	2404	FORTY FIRST AVE	0.30	C	9D2		LOCAL	1
33073		COVERED BR RD NO	2302	GRAHAM HILL RD		END OF COUNTY MAINTAINED	0.15	B	9D1		LOCAL	5
33074		COVERED BR RD SO	2302	GRAHAM HILL RD		END OF COUNTY MAINTAINED	0.12	B	9D1		LOCAL	5
33073	X	COVERED BR RD	2302	GRAHAM HILL RD		END OF COUNTY MAINTAINED	0.15	B	9D1		LOCAL	5
33074	X	COVERED BR RD	2302	GRAHAM HILL RD		END OF COUNTY MAINTAINED	0.12	B	9D1		LOCAL	5
26023		COWARD RD		STATE HIGHWAY 129	2612	CARLTON RD	1.17	D	9D3		LOCAL	4
26165		COWLES ST	2604	GREEN VALLEY RD	26161	PINTO ST	0.15	D	9D3		LOCAL	2
25045		COX RD	25075	DAY VALLEY RD	2503	VALENCIA RD	2.16	C	9D2		COLLECTOR	2
N4319		CREEK CT	43026	KINGS CR		END		B		0.09	NA	
42045		CREEK DR	42011	STEWART ST	42046	RAMBLING RD	0.34	B	9D1		LOCAL	5
33100		GRESS DR	2302	GRAHAM HILL RD		END OF COUNTY MAINTAINED	0.18	B	9D1		LOCAL	1
33100	X	GRESS RD	2302	GRAHAM HILL RD		END OF COUNTY MAINTAINED	0.18	B	9D1		LOCAL	1
N1502		CREST DR	1601	ANDREAS RD		END		D		0.58	NA	
43036		CRESTA DR		STATE HIGHWAY 9	43038	UPPER RD	0.23	B	9D1		LOCAL	5
N4322		CRESTA DR		STATE HIGHWAY 9		END		B		0.21	NA	
N2459		CRESTLINE WAY	24096	FAIRWAY DR		END		C		0.46	NA	

ROAD NUMBER	UPDATED	ROAD NAME	FROM LIMITS		TO LIMITS		LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
26106		CRESTWOOD DR	2603	LAKEVIEW RD		END OF COUNTY MAINTAINED	0.08	D	9D3		LOCAL	4
24133		CROSS WAY	24132	MIDDLEFIELD DR	25050	SEA CLIFF DR	0.04	C	9D2		LOCAL	2
23004		CROSSING ST	23003	OCEAN ST		SANTA CRUZ CITY LIMITS	0.10	B	9D1		LOCAL	5
26015		CROW AVE	26014	BOWEN AVE		END OF COUNTY MAINTAINED	0.16	D	9D3		LOCAL	2
33142		CROWN DR	33094	HIHN RD		END OF COUNTY MAINTAINED	0.08	B	9D1		LOCAL	5
N1701		CROWN RD		STATE HIGHWAY 129		END		D		0.53	NA	
42050		CROWS NEST DR	42035	HILTON DR		END OF COUNTY MAINTAINED	0.33	B	9D1		LOCAL	5
24196		CRYSTAL HEIGHTS DR	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.26	C	9D2		LOCAL	1
24105		CRYSTAL LN	2402	7TH AVE		END OF COUNTY MAINTAINED	0.08	A	9D2		LOCAL	1
25148		CUESTA DR	25029	VISTA DEL MAR DR	25010	CLUB HOUSE DR	0.45	C	9D2		LOCAL	2
42049		CULLIGAN CT	42035	HILTON DR		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
26105		CUNNINGHAM WY	26104	TREMBLY LN		END OF COUNTY MAINTAINED	0.13	D	9D3		LOCAL	4
24287		CUNNISON LN	2416	SOQUEL DR	N2463	CUNNISON LN	0.13	C	9D2		LOCAL	1
N2463		CUNNISON LN	24287	CUNNISON LN		END		C		0.25	NA	
26040		CUTTER DR	2610	COLLEGE RD		END OF COUNTY MAINTAINED	0.77	D	9D3		LOCAL	4
26122		CYPRESS LN	2608	AMESTI RD		END OF COUNTY MAINTAINED	0.11	D	9D3		LOCAL	2
25156		CYPRESS POINT CT	25117	PEBBLE BEACH DR		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	2
42044		CYPRESS TREE LN	42042	FERN ROCK WY		END OF COUNTY MAINTAINED	0.05	B	9D1		LOCAL	5
43054		DAISY PL	43053	REBECCA DR		END OF COUNTY MAINTAINED	0.03	B	9D1		LOCAL	5
25092		DANUBE DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.29	C	9D2		LOCAL	2
24220		DARLENE DR	24022	BROMMER ST	24034	KINSLEY ST	0.11	A	9D2		LOCAL	1
24093		DAUBENBISS AVE	24065	W WALNUT ST	2416	SOQUEL DR	0.13	C	9D2		SELECT LOCAL	1
32009		DAVENPORT AVE	32006	MARINE VIEW AVE	32015	COAST RD	0.10	A	9D1		LOCAL	3
32017		DAVENPORT LANDING RD		STATE HIGHWAY 1		STATE HIGHWAY 1	0.47	A	9D1		LOCAL	3

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
43055		DAVIDSON WAY	43056	HAZEL AVE		END OF COUNTY MAINTAINED	0.11	B	9D1		LOCAL	5
24234		DAWN LN	2405	SOQUEL SAN JOSE RD		END OF COUNTY MAINTAINED	0.08	A	9D2		LOCAL	1
25190		DAY CT	25193	MEADOW RD		END OF COUNTY MAINTAINED	0.08	C	9D2		LOCAL	2
25075		DAY VALLEY RD	2504	FREEDOM BLVD		COX RD	1.11	C	9D2		COLLECTOR	2
25075		DAY VALLEY RD		COX RD	25044	MC DONALD RD	0.13	C	9D2		COLLECTOR	2
25075		DAY VALLEY RD	25044	MCDONALD RD	2503	VALENCIA RD	0.75	C	9D2		COLLECTOR	2
24184		DE ANZA CT	24181	VALERA DR		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
26035		DE LANEY AVE		STATE HIGHWAY 152		END OF COUNTY MAINTAINED	0.19	D	9D3		LOCAL	4
43049		DEBBIE CT	43048	DEBBIE DR		END OF COUNTY MAINTAINED	0.06	B	9D1		LOCAL	5
43048		DEBBIE DR	43047	FAIRMOUNT DR	43047	FAIRMOUNT DR	0.18	B	9D1		LOCAL	5
24150		DEE ST	24077	THOMPSON AVE		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	1
44021		DEERFIELD RD	44020	EVERGREEN LN		END OF COUNTY MAINTAINED	0.54	A	9D2		LOCAL	1
43061		DEERWOOD DR	4301	BEAR CREEK RD	43062	FOREST HILL DR	0.04	B	9D1		LOCAL	5
24273		DEL MAR CT	2403	17TH AVE		END OF COUNTY MAINTAINED	0.02	A	9D2		LOCAL	1
44019		DELMONTE WAY		SANTA CLARA COUNTY	44018	SUNSET DR	0.09	A	9D2		LOCAL	1
N2609		DEVON LN	2604	GREEN VALLEY RD		END		D		0.11	NA	
24134		DIANA DR	24120	DOUGMAR DR		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
26030		DICK PHELPS RD	26032	MEIDL AVE	2604	GREEN VALLEY RD	0.13	D	9D3		LOCAL	4
N2607		DOERING LN	2604	GREEN VALLEY RD		END		D		0.17	NA	
42041		DOGWOOD WAY	42008	MEMORY LN		END OF COUNTY MAINTAINED	0.07	B	9D1		LOCAL	5
24014		DOLORES ST	24006	LAGO LN	24004	10TH AVE	0.27	A	9D2		LOCAL	1
26093		DOLPHIN DR	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.35	C	9D2		COLLECTOR	2
26093		DOLPHIN DR	26092	SUMNER AVE	26094	SEASCAPE BLVD	0.75	C	9D2		COLLECTOR	2
26131		DON LORENZO CT	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	2

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25145		DORIS AVE	26092	SUMNER AVE	25140	LOS ALTOS DR	0.15	C	9D2		LOCAL	2
25011		DORSEY AVE	25010	CLUB HOUSE DR	2510	RIO DEL MAR BLVD	0.15	C	9D2		LOCAL	2
42036		DOUBLE BOGEY DR	42035	HILTON DR		END OF COUNTY MAINTAINED	0.25	B	9D1		LOCAL	5
24120		DOUGMAR DR	24029	EL DORADO AVE		END OF COUNTY MAINTAINED	0.19	A	9D2		LOCAL	1
24244		DOVER DR	2416	SOQUEL DR	24031	HOWE ST	0.16	A	9D2		LOCAL	1
25162		DOVEWOOD LN	25161	ROBIN DR		END OF COUNTY MAINTAINED	0.06	C	9D2		LOCAL	2
25191		DOWNING DR	25193	MEADOW RD		END OF COUNTY MAINTAINED	0.17	C	9D2		LOCAL	2
26135		DRIFTWOOD CT	26093	DOLPHIN DR		END OF COUNTY MAINTAINED	0.10	C	9D2		LOCAL	2
25126		DUNES PL	26092	SUMNER AVE		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	2
24276		DUSTIN WY	24044	RODRIGUEZ ST		END OF COUNTY MAINTAINED	0.14	A	9D2		LOCAL	1
26115		DUTCHMAN RD	2604	GREEN VALLEY RD		END OF COUNTY MAINTAINED	0.26	D	9D3		LOCAL	4
33144		E CANYON VIEW DR	33145	EAST TERRACE DR		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
2408		E CLIFF DR		SANTA CRUZ CITY LIMITS	2409	PORTOLA DR	0.80	A	9D2		ARTERIAL	1
2408		E CLIFF DR	2409	PORTOLA DR		23RD AVE	0.38	A	9D2		ARTERIAL	1
2408		E CLIFF DR		23RD AVE	2404	41ST AVE	1.41	C	9D2		ARTERIAL	1
25013		E TOWNSEND DR	25150	TOLEDO DR	25009	CLIFF DR	0.20	C	9D2		COLLECTOR	2
24064		E WALNUT ST	2406	MAIN ST	2416	SOQUEL DR	0.16	C	9D2		SELECT LOCAL	1
25198		EAST BEL MAR	2506	MAR MONTE AVE		END OF COUNTY MAINTAINED	0.58	D	9D3		LOCAL	2
N4301		EAST CREEK RD	3303	EAST ZAYANTE RD		END		B		0.10	NA	
24086		EAST ST	25053	SANTA CRUZ AVE	25057	CENTER AVE	0.06	C	9D2		LOCAL	2
43004		EAST ST	43006	GROVE ST	43016	SOUTH ST	0.06	B	9D1		LOCAL	5
N2442		EAST ST	25057	CENTER AVE	25058	NORTH AVE		C		0.05	NA	
33145		EAST TERRACE DR	33094	HIHN RD		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
3303		EAST ZAYANTE RD	33031	LOMPICO RD	44012	UPPER E ZAYANTE	4.88	B	9D1		COLLECTOR	5

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3303		EAST ZAYANTE RD	2302	GRAHAM HILL RD	33031	LOMPICO RD	2.60	B	9D1		COLLECTOR	5
24148		EASTCREST LN	24145	15TH AVE		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
24148	X	EASTCREST CT	24145	15TH AVE		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
N2306		EASTRIDGE DR	N2303	PASATIEMPO DR		END		B		0.56	NA	
33062		EATON DR	33045	REDWOOD DR		END OF COUNTY MAINTAINED	0.16	B	9D1		LOCAL	5
24015		EATON ST	24005	LAKE AVE	2402	7TH AVE	0.20	A	9D2		ARTERIAL	1
24015		EATON ST	2402	7TH AVE	24011	9TH AVE	0.09	A	9D2		ARTERIAL	1
24173		EDDY LN	2402	7TH AVE		END OF COUNTY MAINTAINED	0.16	A	9D2		COLLECTOR	1
33106		EDUARDO AVE	33105	PEDRO AVE		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
42030		EITHER WAY	42012	TEILH DR		END OF COUNTY MAINTAINED	0.12	B	9D1		LOCAL	5
25051		EL CAMINO DEL MAR	25050	SEA CLIFF DR	25057	CENTER AVE	0.06	C	9D2		LOCAL	2
25051		EL CAMINO DEL MAR	25057	CENTER AVE	25050	SEACLIFF DR	0.20	C	9D2		LOCAL	2
24029		EL DORADO AVE	2411	CAPITOLA RD		END OF COUNTY MAINTAINED	0.53	A	9D2		COLLECTOR	1
2304		EL RANCHO DR		STATE HIGHWAY 17		SCOTTS VALLEY CITY LIMITS	2.42	A	9D1		LOCAL	1
2304	X	EL RANCHO DR	23006	N PLYMOUTH ST		SCOTTS VALLEY CITY LIMITS	2.42	A	9D1		LOCAL	1
33064		EL SERENO DR	33063	LA CUESTA DR		END OF COUNTY MAINTAINED	0.14	B	9D1		LOCAL	5
N3361		EL SOLYO DR	33019	MANZANITA AVE		END		B		0.17	NA	
33075		EL SOLYO HTS DR		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.40	B	9D1		LOCAL	5
N2424		ELEANOR WAY	N2423	SALISBURY DR	N2423	SALISBURY DR		A		0.04	NA	
33082		ELENA DR	33081	CANEPA DR		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
25078		ELENA RD	25074	ALTIVO AVE		END OF COUNTY MAINTAINED	0.13	C	9D2		LOCAL	2
43052		ELSIE MAE DR	43053	REBECCA DR		END OF COUNTY MAINTAINED	0.22	B	9D1		LOCAL	5
25180		ELVA DR	25009	CLIFF DR	25063	MARTIN DR	0.14	C	9D2		LOCAL	2
N2508		ELVA DR	N2509	KINGSBURY DR		CLIFF DR		C		0.08	NA	

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26073		EMME LN	2504	FREEDOM BLVD		END OF COUNTY MAINTAINED	0.12	D	9D3		LOCAL	2
2301		EMPIRE GRADE RD	42004	EMPIRE GRADE	4201	JAMISON CREEK RD	0.63	A	9D1		ARTERIAL	3
2301		EMPIRE GRADE RD	4201	JAMISON CREEK RD		URBAN BDY	13.85	A	9D1		ARTERIAL	3
2301		EMPIRE GRADE RD		URBAN BOUNDARY		SANTA CRUZ CITY LIMITS	1.85	A	9D1		ARTERIAL	3
42004		EMPIRE GRADE	2301	EMPIRE GRADE RD		END OF COUNTY MAINTAINED	0.62	A	9D1		ARTERIAL	3
24159		ENCINA DR	24160	HALTERMAN AVE	N2419	ENCINA DR	0.10	A	9D2		LOCAL	1
N2419		ENCINA DR	24035	MACIEL AVE	24159	ENCINA DR		A		0.13	NA	
N2522		ENCINO DR	25130	BONITA RD		END		C		0.56	NA	
24209		ENTRANCE DR	24206	HARDIN WY	N2456	ENTRANCE DR	0.05	C	9D2		LOCAL	1
N2456		ENTRANCE DR	24096	FAIRWAY DR		END		C		0.08	NA	
N2530		ESCUELA RD	25074	ALTIVO AVE	1601	SAN ANDREAS RD		C		0.07	NA	
2511		ESPLANADE	25022	MOOSEHEAD DR	2502	APTOS BEACH DR	0.06	C	9D2		LOCAL	2
24264		ESTA LN	24066	ROBERTSON ST		END OF COUNTY MAINTAINED	0.11	C	9D2		LOCAL	1
24087		ESTATES DR	2446	SOQUEL DR		STATE HIGHWAY 1	0.41	C	9D2		LOCAL	2
24087	X	ESTATES DR	24126	BORREGAS RD		STATE HIGHWAY 1	0.41	C	9D2		LOCAL	
25038		ESTRELLA AVE	1601	SAN ANDREAS RD	25036	ARBOLADO DR	0.30	C	9D2		COLLECTOR	2
35003		EUREKA CANYON RD	2507	HAMES RD	35001	RIDER RD	2.40	D	9D3		COLLECTOR	2
35003		EUREKA CANYON RD	35001	RIDER RD	35002	BUZZARD LAGOON	6.67	D	9D3		COLLECTOR	2
44020		EVERGREEN LN	44018	SUNSET DR		END OF COUNTY MAINTAINED	0.24	A	9D2		LOCAL	1
25014		EWELL AVE	25011	DORSEY AVE	25010	CLUB HOUSE DR	0.20	C	9D2		LOCAL	2
25144		EWELL CT	25014	EWELL AVE		END OF COUNTY MAINTAINED	0.06	C	9D2		LOCAL	2
32008		FAIR AVE	32015	COAST RD		END OF COUNTY MAINTAINED	0.07	A	9D1		LOCAL	3
32008	X	FAIR AVE	32015	OLD COAST RD		END OF COUNTY MAINTAINED	0.07	A	9D1		LOCAL	3
26066		FAIRHAVEN CT	26057	LAKEN DR		END OF COUNTY MAINTAINED	0.03	D	9D3		LOCAL	4

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
43047		FAIRMOUNT DR	43030	IRWIN WY	43050	NINA DR	0.58	B	9D1		LOCAL	5
33152		FAIRVIEW AVE	33012	SUNNYSIDE AVE	33010	CENTRAL AVE	0.17	B	9D1		LOCAL	5
24096		FAIRWAY DR	2416	SOQUEL DR	N2458	HAZZARD ST	0.63	C	9D2		LOCAL	1
24096		FAIRWAY DR	N2458	HAZZARD ST		END OF COUNTY MAINTAINED	0.92	C	9D2		LOCAL	1
33080		FALL CREEK DR		STATE HIGHWAY 9	N3319	FARMERS ST	0.47	B	9D1		LOCAL	5
42043		FALLEN LEAF DR		STATE HIGHWAY 236		END OF COUNTY MAINTAINED	0.14	B	9D1		LOCAL	5
26149		FALMOUTH CT	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2
26129		FARALLON CT		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	2
25172		FARLEY DR	25009	CLIFF DR	25012	TOWNSEND DR	0.11	C	9D2		LOCAL	2
N2511		FARLEY DR	25009	CLIFF DR	25024	SEA VIEW DR		C		0.10	NA	
N3319		FARMERS ST	33001	COOPER ST	33080	FALL CREEK RD		B		0.28	NA	
43068		FAWN CT	43050	NINA DR		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
24043		FELT ST	2403	17TH AVE		END OF COUNTY MAINTAINED	0.40	A	9D2		COLLECTOR	1
3301		FELTON EMPIRE RD		URBAN LIMIT		STATE HIGHWAY 9	1.56	B	9D1		COLLECTOR	5
3301		FELTON EMPIRE RD	2301	EMPIRE GRADE		URBAN LIMIT	2.20	B	9D1		COLLECTOR	5
N3328		FERN AVE	33037	LAKEVIEW RD		END		B		0.40	NA	
42013		FERN DR		STATE HIGHWAY 9	N4206	REYNOLDS DR	0.24	B	9D1		LOCAL	5
42042		FERN ROCK WY	42044	CYPRESS TREE LN		END OF COUNTY MAINTAINED	0.14	B	9D1		LOCAL	5
42042	X	FERN ROCK WY	42043	FALLEN LEAF DR		END OF COUNTY MAINTAINED	0.14	B	9D1		LOCAL	5
43071		FERN ST	43070	RIVERSIDE RD		RIVER ST	0.08	B	9D1		LOCAL	5
43060		FERNWOOD DR	4301	BEAR CREEK RD		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
N3316		FETHERSTON WY	3301	FELTON EMPIRE		END		A		0.25	NA	
25183		FIESTA WY	1502	BUENA VISTA DR		END OF COUNTY MAINTAINED	0.80	D	9D3		LOCAL	2
33013		FILLMORE ST		STATE HIGHWAY 9	33010	CENTRAL AVE	0.09	B	9D1		LOCAL	5

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33013	X	FILLMORE AVE		STATE HIGHWAY 9	33010	CENTRAL AVE	0.09	B	9D1		LOCAL	5
43005		FLAT ST	43002	BOULDER ST		END OF COUNTY MAINTAINED	0.14	B	9D1		LOCAL	5
26145		FLETCHER CT		END OF COUNTY MAINTAINED	26104	TREMBLEY LN	0.11	D	9D3		LOCAL	4
24051		FLORAL DR	24078	38TH AVE	24048	34TH AVE	0.21	C	9D2		LOCAL	1
N2507		FLORENCE DR	25063	MARTIN DR	N2554	KINGSBURY DR		C		0.26	NA	
N2543		FLORIDO AVE	N2545	CARLOS		END		C		0.12	NA	
N2502		FOREST DR	2501	SPRECKELS DR		END		C		0.34	NA	
43062		FOREST HILL DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.45	B	9D1		LOCAL	5
43034		FOREST ST	43009	LOMOND ST	43013	PINE ST	0.10	B	9D1		LOCAL	5
N3377		FORREST RD	N3376	N3376 SUMMIT AVE.	N3380	CONFERENCE DR		B		0.51	NA	
24226		FOSTER CT	2411	CAPITOLA RD		END OF COUNTY MAINTAINED	0.06	A	9D2		LOCAL	1
24238		FRANKY CT	24239	HOUTS DR		END OF COUNTY MAINTAINED	0.03	A	9D2		LOCAL	1
2504	COMBINE	FREEDOM BLVD		URBAN BDY		URBAN BDY	5.92	D	9D2		ARTERIAL	2
2504	COMBINE	FREEDOM BLVD		URBAN BDY		WATSONVILLE CITY LIMITS	0.63	D	9D2		ARTERIAL	2
2504	COMBINE	FREEDOM BLVD	25130	BONITA DR		URBAN BDY	1.40	D	9D2		ARTERIAL	2
2504	X	FREEDOM BLVD	25130	BONITA DR		WATSONVILLE CITY LIMITS	7.32	D	9D2		ARTERIAL	2
N3359		FREMONT AVE	N3358	ARDEN AVE		END		B		0.07	NA	
24084		FRESNO ST	2413	TWENTY SIXTH AVE	N2430	PERALTA WY	0.22	C	9D2		LOCAL	1
26034		GAFFEY RD	26059	MT MADONNA RD		END OF COUNTY MAINTAINED	0.82	D	9D3		LOCAL	4
24060		GARDEN ST	24077	THOMPSON AVE	24078	THIRTY EIGHTH AVE	0.20	C	9D2		LOCAL	1
24201		GARY DR	2415	CAPITOLA AVE		END OF COUNTY MAINTAINED	0.20	C	9D2		LOCAL	1
25141		GAY RD	25137	HUMES AVE	25140	LOS ALTOS DR	0.12	C	9D2		LOCAL	2
33108		GENEVA CT	33101	LA CANADA WY		END OF COUNTY MAINTAINED	0.05	B	9D1		LOCAL	5
26088		GENEVA WAY	26086	LUCERNE AVE	26089	ZURICH AVE	0.05	D	9D3		LOCAL	2

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24116		GEOFFROY DR	24115	16TH AVE		END OF COUNTY MAINTAINED	0.24	A	9D2		LOCAL	1
24141		GERMAINE AVE	24140	CABRILLO AVE		END OF COUNTY MAINTAINED	0.13	A	9D2		LOCAL	1
24192		GERTRUDE AVE	24118	MAR VISTA AVE	25059	MAR VISTA DR	0.12	C	9D2		LOCAL	2
33091		GEYER RD	33028	LOCKHART GULCH		END OF COUNTY MAINTAINED	0.32	B	9D1		LOCAL	5
24070		GLADYS AVE	2404	FORTY FIRST AVE	24069	NOVA DR	0.24	C	9D2		LOCAL	1
3307		GLEN ARBOR RD		STATE HIGHWAY 9		STATE HIGHWAY 9	1.75	B	9D1		COLLECTOR	5
2401		GLEN CANYON RD	3401	BRANCIFORTE DR		SCOTTS VALLEY CITY LIMITS	3.13	A	9D2		COLLECTOR	1
33137		GLEN COOLIDGE DR		SANTA CRUZ CITY LIMITS		SANTA CRUZ CITY LIMITS	0.64	A			NA	
33137	X	COOLIDGE DR		HIGH ST		END OF COUNTY MAINTAINED	0.64	A			NA	
24088		GLEN HAVEN RD		URBAN LIMIT		END OF COUNTY MAINTAINED	2.14	C	9D2		COLLECTOR	1
24088		GLEN HAVEN RD	24097	CHERRYVALE AVE		URBAN LIMIT	1.25	C	9D2		COLLECTOR	1
33035		GLENGARRY RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.31	B	9D1		LOCAL	5
44011		GLENWOOD CUT OFF		STATE HIGHWAY 17	34005	GLENWOOD DR	0.75	B	9D1		LOCAL	1
34005		GLENWOOD DR		SCOTTS VALLEY CITY LIMITS	44011	GLENWOOD CUTOFF	2.47	B	9D1		COLLECTOR	1
34005		GLENWOOD DR	44011	GLENWOOD CUTOFF		STATE HIGHWAY 17	3.43	B	9D1		COLLECTOR	1
N3324		GOLD AVE	33050	MCKINLEY WAY	33036	BROOKSIDE WAY		B		0.15	NA	
24208		GOLF DR	24206	HARDEN WAY	N2457	GOLF DR	0.01	C	9D2		LOCAL	1
N2457		GOLF DR	24096	FAIRWAY	24208	GOLF DR		C		0.09	NA	
2302		GRAHAM HILL RD	3302	MT HERMON RD	33116	LOCKWOOD LN	2.30	B	9D1		ARTERIAL	5
2302		GRAHAM HILL RD	33116	LOCKWOOD LN		SANTA CRUZ CITY LIMITS	3.30	B	9D1		ARTERIAL	5
2302		GRAHAM HILL RD		STATE HIGHWAY 9	3302	MT HERMON	0.13	B	9D1		ARTERIAL	5
25015		GRANADA DR	25012	TOWNSEND DR	25004	BAY VIEW DR	0.14	C	9D2		LOCAL	2
34002		GRANITE CREEK RD		SCOTTS VALLEY CITY LIMITS	3401	BRANCIFORTE DR	2.75	A	9D2		COLLECTOR	1
N2523		GRANITE WAY	25033	CATHEDRAL DR	2416	SOQUEL DR		C		0.21	NA	

			FROM LIMITS		TO LIMITS							
ROAD NUMBER	UPDATED	ROAD NAME	ROAD #	ROAD NAME	ROAD #	ROAD NAME	LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
2604		GREEN VALLEY RD		WATSONVILLE CITY LIMITS	2605	HOLOHAN RD	0.14	D	9D3		ARTERIAL	4
2604		GREEN VALLEY RD	2605	HOLOHAN RD	2607	CASSERLY RD	1.96	D	9D3		ARTERIAL	4
2604		GREEN VALLEY RD	2607	CASSERLY RD	2602	HAZEL DELL RD	5.16	D	9D3		ARTERIAL	4
N2604		GREEN VALLEY RD		WATSONVILLE CITY LIMITS		WATSONVILLE CITY LIMITS		D		0.65	NA	
N3305		GREEN VALLEY RD	33028	LOCKHART GULCH		END		B		0.29	NA	
N3305		GREEN VALLEY RD		WATSONVILLE CITY LIMITS		END		B		0.05	NA	
N3368		GREENBANK DR	33018	SCENIC WAY		END		B		0.10	NA	
25107		GREENBRIER CT	25106	GREENBRIER DR		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	2
25106		GREENBRIER DR	25094	PINEHURST DR	25118	TAMARACK DR	0.19	C	9D2		LOCAL	2
N3370		GREENFIELD ST	N3369	HILLCREST DR	33018	SCENIC WY		B		0.07	NA	
43059		GREENVIEW DR	4301	BEAR CREEK RD	43058	OAKKNOLL DR	0.03	B	9D1		LOCAL	5
24292		GREY SEAL RD	2411	CAPITOLA RD		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
	NEW	GREYSTONE CT	24036	MATTISON LN		END OF COUNTY MAINTAINED	0.10	A	9D2		LOCAL	1
24091		GROSS RD		CAPITOLA CITY LIMITS	24110	RODEO GULCH RD S	0.22	C	9D2		ARTERIAL	1
24091		GROSS RD	24110	RODEO GULCH RD S		END OF COUNTY MAINTAINED	0.25	C	9D2		ARTERIAL	1
43006		GROVE ST	43002	BOULDER ST	43004	EAST ST	0.14	B	9D1		LOCAL	5
N4324		GROVE ST	43004	EAST ST		END		B		0.07	NA	
33004		GUSHEE ST	3301	FELTON EMPIRE RD	33006	HIHN ST	0.25	B	9D1		LOCAL	5
33008		GUSHEE ST	33043	LAUREL DR	33044	PLATEAU DR	0.20	B	9D1		LOCAL	5
33008	X	GUSHEE ST	33043	LAUREL DR	33006	HIHN ST	0.20	B	9D1		LOCAL	5
24052		HAAS DR	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.58	C	9D2		LOCAL	2
33076		HACIENDA WAY		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.13	B	9D1		LOCAL	5
25016		HAINLINE RD	25028	VENETIAN RD	25022	MOOSEHEAD DR	0.15	C	9D2		LOCAL	2
33096		HALLSONS LN	33084	RANCHO RIO AVE		END OF COUNTY MAINTAINED	0.12	B	9D1		LOCAL	5

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
24160		HALTERMAN AVE	24036	MATTISON LN	24163	BYER RD	0.27	A	9D2		LOCAL	1
25068		HALTON LN	25043	WHITE RD		END OF COUNTY MAINTAINED	0.74	D	9D3		LOCAL	2
2507		HAMES RD	2508	CORRALITOS RD	2504	FREEDOM BLVD	2.17	D	9D3		COLLECTOR	2
34003		HAPPY VALLEY RD	3401	BRANCIFORTE DR		END OF COUNTY MAINTAINED	1.24	A	9D2		LOCAL	1
24298		HARBOR BEACH CT		7TH AVE		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
24299		HARBOR VISTA LN	2402	7TH AVE		END OF COUNTY MAINTAINED	0.06	A	9D2		LOCAL	1
24206		HARDIN WAY	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.24	C	9D2		LOCAL	1
42033		HARE WAY	42036	DOUBLE BOGEY DR	42032	LAKE DR	0.05	B	9D1		LOCAL	5
1602	COMBINE	HARKINS SLOUGH RD		URBAN LIMIT		WATSONVILLE CITY LIMITS	0-40	D	9D3		COLLECTOR	
1602	COMBINE	HARKINS SLOUGH RD		WATSONVILLE CITY LIMITS		WATSONVILLE CITY LIMITS	0-40	D	9D3		COLLECTOR	
1602	X	HARKINS SLOUGH RD	1502	BUENA VISTA DR		WATSONVILLE CITY LIMITS	1.91	D	9D3		COLLECTOR	2
24200		HARKLEROAD AVE	24044	RODRIGUEZ ST	24278	PINEWOOD ST	0.11	A	9D2		LOCAL	1
43007		HARMON ST	43013	PINE ST		END OF COUNTY MAINTAINED	0.24	B	9D1		LOCAL	5
33058		HARMONY HILL RD	33057	HUBBARD GULCH RD		END OF COUNTY MAINTAINED	0.46	B	9D1		LOCAL	5
24282		HARPER CT	24029	EL DORADO AV		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
24030		HARPER ST	24029	EL DORADO AV	N2408	HARPER ST	0.66	A	9D2		SELECT LOCAL	1
N2408		HARPER ST	24030	HARPER ST		END		A		0.08	NA	
24119		HARRIET AVE	24119	ORD ST	25059	MAR VISTA DR	0.18	C	9D2		LOCAL	2
33085		HART LN	33084	RANCHO RIO AVE		END OF COUNTY MAINTAINED	0.12	B	9D1		LOCAL	5
33141		HARVARD DR	33147	STANFORD DR		END OF COUNTY MAINTAINED	0.27	B	9D1		LOCAL	5
26101		HATHAWAY AVE	2604	GREEN VALLEY RD		END OF COUNTY MAINTAINED	0.26	D	9D3		LOCAL	4
26016		HATTON AVE	26015	CROW AVE	26017	VELASQUEZ ST	0.10	D	9D3		LOCAL	2
24049		HAWES DR	24059	36TH AVE	2417	30TH AVE	0.20	C	9D2		LOCAL	1
26019		HAWTHORNE AVE	2608	AMESTI RD		END OF COUNTY MAINTAINED	0.19	D	9D3		LOCAL	2

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
24190		HAWTHORNE WAY	2411	CAPITOLA RD	24191	BEGONIA PL	0.05	A	9D2		LOCAL	1
43056		HAZEL AVE		STATE HIGHWAY 236	N4308	ALPINE AVE	0.09	B	9D1		LOCAL	5
24188		HAZEL CT	24187	AGUAZUL DR		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	1
2602		HAZEL DELL RD	36001	REDWOOD DR	2604	GREEN VALLEY RD	2.97	D	9D3		COLLECTOR	2
2602		HAZEL DELL RD	2604	GREEN VALLEY RD	26059	MT MADONNA RD	0.72	D	9D3		COLLECTOR	2
N2458		HAZZARD ST	24096	FAIRWAY DR	24096	FAIRWAY DR		C		0.40	NA	
25204		HEATHER TERRACE	2416	SOQUEL DR	2416	SOQUEL DR	0.19	A	9D2		LOCAL	2
24137		HELEN AVE	24143	THURBER LN	24139	SERRELL AVE	0.25	A	9D2		LOCAL	1
24137	X	HELEN AVE	24143	THURBER LN	24138	PESTANA AVE	0.25	A	9D2		LOCAL	1
24243		HELEN CT	24137	HELEN AVE		END OF COUNTY MAINTAINED	0.06	A	9D2		LOCAL	1
33025		HERMOSA AVE	N3358	ARDEN AVE	33026	OAK AVE	0.23	B	9D1		LOCAL	5
33160		HIDDEN GLEN DR	33116	LOCKWOOD LN	33159	SPREADING OAKS	0.47	B	9D1		LOCAL	5
33113		HIDDEN VALLEY DR	3304	QUAIL HOLLOW RD	33111	NOTEWARE DR	0.06	B	9D1		LOCAL	5
43017		HIGH ST	43029	CLEAR CREEK RD	43019	WESTERN AVE	0.47	B	9D1		LOCAL	5
N3346		HIGHLAND AVE	3303	E. ZAYANTE RD		END		B		0.13	NA	
25017		HIGHLAND DR	2510	RIO DEL MAR BLVD	2502	APTOS BEACH DR	0.19	C	9D2		LOCAL	2
35005		HIGHLAND WAY		ROAD DISTRICT D	4402	SUMMIT RD	6.20	C	9D2		COLLECTOR	1
35005		HIGHLAND WAY		ROAD DISTRICT C	35002	BUZZARD LAGOON R	1.59	D	9D2		COLLECTOR	
33094		HIHN RD	3307	GLEN ARBOR RD		END OF COUNTY MAINTAINED	1.59	B	9D1		COLLECTOR	5
33006		HIHN ST		STATE HIGHWAY 9	N3307	HIHN ST	0.22	B	9D1		LOCAL	5
N3307		HIHN ST	33006	HIHN ST		END		B		0.10	NA	
33016		HILLCREST AVE	3307	GLEN ARBOR RD		END OF COUNTY MAINTAINED	0.08	B	9D1		LOCAL	5
25173		HILLCREST DR	2407	STATE PARK DR	25059	MAR VISTA DR	0.29	C	9D2		LOCAL	2
33042		HILLCREST DR	33045	REDWOOD DR		END OF COUNTY MAINTAINED	0.39	B	9D1		LOCAL	5

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33042	X	HILLCREST DR		PLEASANT WAY		END OF COUNTY MAINTAINED	0.39	B	9D1		LOCAL	5
N3369		HILLCREST DR	33018	SCENIC WY	N3370	GREENFIELD ST		B		0.14	NA	
33129		HILLDALE AVE	33130	MONTCLAIR DR	33131	OAKNOLL DR	0.04	B	9D1		LOCAL	5
33129	X	HILLSDALE AVE	33130	MONTCLAIR DR	33131	OAKNOLL DR	0.04	B	9D1		LOCAL	5
N2603		HILLSIDE	26003	CAREY AVE		END		D		0.10	NA	
33015		HILLSIDE AVE		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.24	B	9D1		LOCAL	5
N3308		HILLSIDE AVE	33044	PLATEAU DR		END		B		0.41	NA	
42027		HILLSIDE DR	42026	PLEASANT WY	N4212		0.06	B			NA	
N4212		HILLSIDE DR	42027	HILLSIDE DR		END		B		0.20	NA	
24185		HILLTOP CT	24094	HILLTOP RD		END OF COUNTY MAINTAINED	0.11	A	9D2		LOCAL	1
24094		HILLTOP RD	2405	SOQUEL SAN JOSE RD	24181	VALERA DR	0.19	A	9D2		SELECT LOCAL	1
24094		HILLTOP RD	24181	VALERA DR		END OF COUNTY MAINTAINED	0.10	A	9D2		SELECT LOCAL	1
33087		HILLVIEW DR	33075	EL SOLYO HTS		END OF COUNTY MAINTAINED	0.19	B	9D1		LOCAL	5
25134		HILLVIEW WAY	25135	OCEANVIEW DR		END OF COUNTY MAINTAINED	0.13	D	9D3		LOCAL	2
42035		HILTON DR	SH236	STATE HIGHWAY 236		END OF COUNTY MAINTAINED	1.10	B			NA	
42035		HILTON DR	END	END OF COUNTY MAINTAINED		STATE HIGHWAY 236	0.73	B			NA	
42035	X	EAST HILTON DR		STATE HIGHWAY 236		END OF COUNTY MAINTAINED	1.10	B	9D1		LOCAL	5
42035	X	WEST HILTON DR		END OF COUNTY MAINTAINED		STATE HIGHWAY 236	0.73	B	9D1		LOCAL	5
N3506		HINCKLEY CREEK RD	35002	BUZZARD LAGOON RD		END		D,C		4.10	NA	
25170		HOLIDAY DR	25134	HILLVIEW WAY		END OF COUNTY MAINTAINED	0.10	D	9D3		LOCAL	2
N2304		HOLLINS DR	N2303	PASATIEMPO DR	23005			B		1.09	NA	
2605		HOLOHAN RD	2604	GREEN VALLEY RD		STATE HIGHWAY 152	1.52	D	9D3		ARTERIAL	4
N3413		HOOVER RD	2405	SOQUEL SAN JOSE		END		C		0.34	NA	
N4315		HOPKINS GULCH RD	4301	BEAR CREEK RD		END		B		1.01	NA	

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24239		HOUTS DR	24216	PATTERSON LN	24238	FRANKY CT	0.11	A	9D2		LOCAL	1
24031		HOWE ST	24092	WINKLE AVE	24244	DOVER DR	0.14	A	9D2		LOCAL	1
33057		HUBBARD GULCH RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.87	B	9D1		LOCAL	5
43046		HUCKLEBERRY LN	4301	BEAR CREEK RD	43046	HUCKLEBERRY LN	0.45	B	9D1		LOCAL	5
N2614		HUGHES RD	2607	CASSERLY RD		END		D		0.65	NA	
25137		HUMES AVE	25140	LOS ALTOS DR	25139	LOCKE DR	0.21	C	9D2		LOCAL	2
25084		HUNTINGTON CT	25083	HUNTINGTON DR		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2
25083		HUNTINGTON DR	25087	VIEW CT	2503	VALENCIA RD	0.50	C	9D2		SELECT LOCAL	2
25083		HUNTINGTON DR	25115	MONROE AVE	25087	VIEW CT	0.87	C	9D2		SELECT LOCAL	2
44030		HUTCHINSON RD	44029	RIVA RIDGE		STATE HIGHWAY 35	0.21	B	9D2		LOCAL	5
26152		HYANNIS CT	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.08	C	9D2		LOCAL	2
32013		ICE CREAM GRADE	2301	EMPIRE GRADE	3201	PINE FLAT	2.63	A	9D1		COLLECTOR	3
33143		INDIAN SPRINGS DR	33094	HIHN RD		END OF COUNTY MAINTAINED	0.04	B	9D1		LOCAL	5
N2407		IRIS LN	24029	EL DORADO AV		END		A		0.06	NA	
43030		IRWIN WAY	43009	LOMOND ST		STATE HIGHWAY 9	1.26	B	9D1		LOCAL	5
43030	X	IRWIN WAY	43009	EAST LOMOND ST		STATE HIGHWAY 9	1.26	B	9D1		LOCAL	5
24047		IVY LN	24023	CHANTICLEER		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
24303		IZANT CT	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	1
33048		JACKSON WAY	33047	SAN LORENZO AV	33052	PROSPECT ST	0.08	B	9D1		LOCAL	5
N3323		JACKSON WAY	33052	PROSPECT		END		B		0.09	NA	
4201		JAMISON CREEK RD	2301	EMPIRE GRADE		STATE HIGHWAY 236	3.05	B	9D1		COLLECTOR	5
34004		JARVIS RD	33155	VINE HILL RD		END OF COUNTY MAINTAINED	1.87	A	9D2		LOCAL	1
25157		JENNIFER CT	25090	JENNIFER DR		END OF COUNTY MAINTAINED	0.04	C	9D2		LOCAL	2
25090		JENNIFER DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.44	C	9D2		LOCAL	2

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
N2462		JIGGER DR	N2461	N2461 PUTTER DR	24206	HARDIN WY		C		0.10	NA	
24032		JOHANS BEACH DR	2408	EAST CLIFF DR		END OF COUNTY MAINTAINED	0.09	A	9D2		LOCAL	1
26080		JOLON DR	26079	MESA VERDE DR	26133	ARROYO DR	0.34	D	9D3		LOCAL	4
24033		JOSE AVE	24044	RODRIGUEZ ST		END OF COUNTY MAINTAINED	0.39	A	9D2		COLLECTOR	1
24272		JUAN PABLO IN	24044	RODRIGUEZ ST		END OF COUNTY MAINTAINED	0.10	A	9D2		LOCAL	1
43024		JUANITA WOODS		STATE HIGHWAY 9	N4314	BROOK DR	0.16	B	9D1		LOCAL	5
43024	X	JUANITA RD		STATE HIGHWAY 9	N4314	BROOK DR	0.16	B	9D1		LOCAL	5
16002		JUDD RD		STATE HIGHWAY 129		END OF COUNTY MAINTAINED	0.51	D	9D3		LOCAL	4
43041		JUNCTION AVE	43040	MIDDLETON AVE	43009	LOMOND ST	0.09	B	9D1		LOCAL	5
43041	X	JUNCTION AVE	43040	MIDDLETON AVE	43009	EAST LOMOND ST	0.09	B	9D1		LOCAL	5
26085		KAREN DR	2608	AMESTI RD		END OF COUNTY MAINTAINED	0.17	D	9D3		LOCAL	2
24215		KATHERINE LN	24140	CABRILLO AVE		END OF COUNTY MAINTAINED	0.15	A	9D2		LOCAL	1
25056		KELP LN	25051	EL CAMINO DEL MAR	25050	SEA CLIFF DR	0.05	C	9D2		LOCAL	2
25171		KENNETH DR	25009	CLIFF DR	25012	TOWNSEND DR	0.11	C	9D2		LOCAL	2
N2512		KENNETH DR	25024	SEAVIEW DR	25009	CLIFF DR		C		0.06	NA	
24198		KENNY AVE	24143	THURBER	24092	WINKLE AVE	0.11	A	9D2		LOCAL	1
24199		KENNY CT	24092	WINKLE AVE		END OF COUNTY MAINTAINED	0.08	A	9D2		LOCAL	1
26038		KERR RD	2612	CARLTON RD		END OF COUNTY MAINTAINED	0.36	D	9D3		LOCAL	4
33138		KESSLER DR	34134	MARION AVE		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
33157		KIM WY	33094	HIHN RD	33156	BAHR DR	0.05	B	9D1		LOCAL	5
43026		KINGS CREEK RD		URBAN LIMIT		END OF COUNTY MAINTAINED	1.35	B	9D1		COLLECTOR	5
43026		KINGS CREEK RD		STATE HIGHWAY 9		URBAN LIMIT	2.23	B	9D1		COLLECTOR	5
42007		KINGS HIGHWAY		STATE HIGHWAY 236	N4207		0.47	B	9D1		LOCAL	5
N4207		KINGS HIGHWAY	42007	KINGS HIGHWAY		END		B		0.60	NA	

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25155		KINGSBURY DR	25063	MARTIN DR	25012	TOWNSEND DR	0.07	C	9D2		LOCAL	2
N2509		KINGSBURY DR	25063	MARTIN DR	N2507	FLORENCE DR		C		0.34	NA	
N2554		KINGSBURY DR	N2507	N2507 FLORENCE DR	2510	RIO DEL MAR BLVD		C		0.11	NA	
26107		KINGSTON DR	2603	LAKEVIEW RD		END OF COUNTY MAINTAINED	0.05	D	9D3		LOCAL	4
24034		KINSLEY ST	2403	17TH AVE	24220	DARLENE DR	0.41	A	9D2		SELECT LOCAL	1
33078		KIPLING AVE	33017	BROOKSIDE AVE		END OF COUNTY MAINTAINED	0.18	B	9D1		LOCAL	5
33005		KIRBY ST		STATE HIGHWAY 9	33004	GUSHEE ST	0.05	B	9D1		LOCAL	5
44028		KLINE CT	44024	SUMMIT WOODS		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
24195		KOOPMANS AVE		END OF COUNTY MAINTAINED	24044	RODRIGUEZ ST	0.21	A	9D2		LOCAL	1
24242		KRISTIE CT	24036	MATTISON LN		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
33101		LA CANADA WAY	33100	CRESS DR		END OF COUNTY MAINTAINED	0.42	B	9D1		LOCAL	1
33063		LA CUESTA DR		SCOTTS VALLEY CITY LIMITS	33081	CANEPA DR	0.57	B	9D1		LOCAL	5
25147		LA HONDA CT	25010	CLUB HOUSE DR		END OF COUNTY MAINTAINED	0.14	C	9D2		LOCAL	2
25146		LA HONDA DR	25010	CLUB HOUSE DR		END OF COUNTY MAINTAINED	0.25	C	9D2		LOCAL	2
N4306		LA LENA	N4305	COLEMAN AVE		END		B		0.09	NA	
2303		LA MADRONA DR	2304	EL RANCHO DR		SCOTTS VALLEY CITY LIMITS	2.10	B	9D1		LOCAL	1
25187		LA SELVA DR	2506	MAR MONTE AVE		END OF COUNTY MAINTAINED	0.54	C	9D2		COLLECTOR	2
24129		LAFAYETTE ST	2416	SOQUEL DR	24128	BELLEVUE ST	0.13	C	9D2		LOCAL	1
24006		LAGO LN	24005	LAKE AVE	24015	EATON ST	0.08	A	9D2		LOCAL	3
24254		LAGOON CT	24244	CORCORAN ST		END OF COUNTY MAINTAINED	0.03	A	9D2		LOCAL	1
N2454		LAGUNA DR	24088	GLEN HAVEN RD		END		C		1.00	NA	
22001		LAGUNA RD		STATE HIGHWAY 1		STATE HIGHWAY 1	0.37	A	9D1		LOCAL	3
26136		LAGUNITAS CT	26093	DOLPHIN DR		END OF COUNTY MAINTAINED	0.06	C	9D2		LOCAL	2
24005		LAKE AVE	24015	EATON ST	24008	5TH AVE	0.26	A	9D2		COLLECTOR	3

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
43022		LAKE BLVD	33031	LOMPICO RD	N3353	LAKE BLVD	0.82	B	9D1		LOCAL	5
N3352		LAKE BLVD	33031	LOMPICO RD		END		B		1.05	NA	
N3353		LAKE BLVD	N3352	N3352		END		B		1.02	NA	
25179		LAKE CT	25028	VENETIAN RD		END OF COUNTY MAINTAINED	0.14	C	9D2		LOCAL	2
42032		LAKE DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.22	B	9D1		LOCAL	5
N3327		LAKE SIDE DR	N3328	N3328 FERN AVE		END		B		1.54	NA	
26058		LAKEN CT	26057	LAKEN DR		END OF COUNTY MAINTAINED	0.01	D	9D3		LOCAL	4
26057		LAKEN DR	2605	HOLOHAN RD	2605	HOLOHAN RD	0.32	D	9D3		LOCAL	4
N3340		LAKESIDE	33039	PINE AVE	33153	CONFERENCE DR		B		0.21	NA	
N2429		LAKEVIEW DR	N2428	N2428 BAKER ST	N2430	PERALTA WY		A		0.07	NA	
2603		LAKEVIEW RD	2612	CARLTON RD		STATE HIGHWAY 129	2.40	D	9D1		COLLECTOR	5
33037		LAKEVIEW RD		STATE HIGHWAY 9	N3328	FERN AVE	0.77	B	9D3		ARTERIAL	4
33037	X	LAKEVIEW DR		STATE HIGHWAY 9	N3340	LAKESIDE DRIVE	0.77	B	9D1		COLLECTOR	4
25018		LAMANDA DR	25024	SEA VIEW DR	25012	TOWNSEND DR	0.15	C	9D2		LOCAL	2
26181		LAPIS DR	26033	PAULSEN RD	26181	AGATE DR	0.20	D	9D3		LOCAL	4
33092		LARITA DR	3307	ARBOR RD		END OF COUNTY MAINTAINED	0.45	B	9D1		LOCAL	5
33092	X	LARITA DR	3304	QUAIL HOLLOW RD		END OF COUNTY MAINTAINED	0.45	B	9D1		LOCAL	5
2505		LARKIN VALLEY RD	26060	MANFRE RD	1502	BUENA VISTA DR	0.85	D	9D2		COLLECTOR	2
2505		LARKIN VALLEY RD	1502	BUENA VISTA DR		STATE HIGHWAY 1	3.97	D	9D2		COLLECTOR	2
43018		LARKSPUR ST		STATE HIGHWAY 9	43070	RIVERSIDE RD	0.24	B	9D1		LOCAL	5
N2525		LARSEN RD	25031	TROUT GULCH RD		END		C		0.82	NA	
N2483		LAS OLAS	N2482	STATE PARK DR		END		C		0.53	NA	
24245		LAURA LN	24031	HOWE ST		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
24071		LAUREL AVE	24070	GLADYS AVE	2409	PORTOLA DR	0.09	C	9D2		LOCAL	1

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
33043		LAUREL DR	N3308	N3308 HILLSIDE AVE		STATE HIGHWAY 9	0.25	B	9D1		LOCAL	5
33156		LAUREL GLEN RD	3402	MT VIEW RD	2405	SOQUEL SAN JOSE	2.36	A	9D2		COLLECTOR	1
44003		LAUREL RD		STATE HIGHWAY 17	44004	REDWOOD LODGE RD	2.15	A	9D2		COLLECTOR	1
43008		LAUREL ST	43007	HARMON ST		STATE HIGHWAY 236	0.23	B	9D1		LOCAL	5
24113		LAVERNE AVE	25059	MAR VISTA DR	24118	MAR VISTA AVE	0.12	C	9D2		LOCAL	2
33083		LAZY WOODS RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.20	B	9D1		LOCAL	5
N4208		LEAFWOOD	42014	ACORN DR		END		B		0.14	NA	
25060		LEDYARD WAY	2416	SOQUEL DR	25061	MESA DR	0.20	C	9D2		COLLECTOR	2
25060		LEDYARD WAY	25061	MESA DR	2416	SOQUEL DR	0.24	C	9D2		COLLECTOR	2
16001	X	LEE RD		WATSONVILLE CITY LIMITS		STATE HIGHWAY 129	0.11	D	9D3		ARTERIAL	4
16001	DELETE	LEE RD		STATE HIGHWAY 129		END OF COUNTY MAINTAINED	0.34	D	9D3		ARTERIAL	2
16001		LEE RD	1602	HARKINS SLOUGH RD		WATSONVILLE CITY LIMITS	0.85	D	9D3		ARTERIAL	2
24271		LEILA CT	2411	CAPITOLA RD		END OF COUNTY MAINTAINED	0.09	A	9D2		LOCAL	1
26124		LESTER CT	26101	HATHAWAY AVE		END OF COUNTY MAINTAINED	0.05	D	9D3		LOCAL	4
24174		LIDO WAY	24173	EDDY LN		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
24167		LILLIAN WAY		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.14	A	9D2		LOCAL	1
33049		LINCOLN WAY	33051	OAK AVE	33047	LORENZO AVE	0.13	B	9D1		LOCAL	5
25112		LINDA CT	25111	BOWEN AVE		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	2
26020		LINDEN RD	2608	AMESTI RD	N2613	MTN VIEW RD	0.27	D	9D3		LOCAL	2
N3404		LION FIELD DR	34002	GRANITE CR		END		A		0.29	NA	
24221		LISA LN	24022	BROMMER ST	24034	KINSLEY ST	0.10	A	9D2		LOCAL	1
26027		LITCHFIELD LN	2604	GREEN VALLEY RD		END OF COUNTY MAINTAINED	0.15	D	9D3		LOCAL	2
42001		LITTLE BASIN RD		STATE HIGHWAY 236		END OF COUNTY MAINTAINED	2.50	B	9D1		LOCAL	3
N2606		LITTLE WAY	2604	GREEN VALLEY RD		END		D		0.16	NA	

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24121		LIVE OAK AVE	24022	BROMMER ST		END OF COUNTY MAINTAINED	0.17	A	9D2		LOCAL	1
33022		LIVE OAK AVE	3307	GLEN ARBOR RD	33017	BROOKSIDE AVE	0.16	B	9D1		LOCAL	5
25110		LLOYD CT	25108	SEARIDGE RD		END OF COUNTY MAINTAINED	0.04	C	9D2		LOCAL	2
26087		LOCARNO WAY	26086	LUCERNE AVE	26089	ZURICH AVE	0.06	D	9D3		LOCAL	2
25139		LOCK DR	25010	CLUB HOUSE DR	25010	CLUB HOUSE DR	0.21	C	9D2		LOCAL	2
33116	X	LOCKWOOD LN	2302	GRAHAM HILL RD		SCOTTS VALLEY CITY LIMITS	0.09	B	9D1		COLLECTOR	5
33028		LOCKHART GULCH		SCOTTS VALLEY CITY LIMITS	33029	NELSON RD	0.25	B	9D1		COLLECTOR	5
33028		LOCKHART GULCH	33029	NELSON RD		END OF COUNTY MAINTAINED	1.75	B	9D1		COLLECTOR	5
33088		LOCUST ST	3307	GLEN ARBOR RD	33019	MANZANITA AVE	0.05	B	9D1		LOCAL	5
24083		LODE ST	2413	26TH AVE	N2432	LODE ST	0.06	C	9D2		LOCAL	1
N2432		LODE ST	24083	LODE ST		END		C		0.07	NA	
42005		LODGE RD	N4202	N4202		STATE HIGHWAY 236	2.43	B	9D1		LOCAL	3
N4202		LODGE RD		STATE HIGHWAY 236	42005	LODGE RD		B		2.91	NA	
25077		LOMA AVE	25074	ALTIVO AVE	25074	ALTIVO AVE	0.23	C	9D2		LOCAL	2
25177		LOMA PL	25174	PARK DR	25050	SEACLIFF DR	0.05	C	9D2		LOCAL	2
N2521		LOMA PRIETA DR	25029	VISTA DEL MAR DR		END		C	9D2	0.10	NA	1
44006		LOMA PRIETA AVE	4402	SUMMIT RD	45001	MT BACHE RD	3.26	C			NA	1
45003	SPLIT	LOMA PRIETA WAY	45001	MT BACHE RD		END OF COUNTY MAINTAINED	5.32	C	9D2		NA	1
45003	X	LOMA PRIETA WAY	45001	MT BACHE RD		SUMMIT RD	2.92	C	9D2		NA	1
NUMBER	X	SUMMIT RD	45003	LOMA PRIETA WAY		END OF COUNTY MAINTAINED	2.40	D			NA	1
N4303		LOMITA AVE	43023	WEST DR		END		B		0.16	NA	
43009		LOMOND ST	43014	REDWOOD AVE	43030	IRWIN WY	0.50	B	9D1		LOCAL	5
43009	X	LOMOND ST	43014	REDWOOD AVE		END OF COUNTY MAINTAINED	0.06	B	9D1		LOCAL	5
43009	X	LOMOND ST	43008	LAUREL ST		STATE HIGHWAY 9	0.14	B	9D1		LOCAL	5

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43009	X	EAST LOMOND ST		STATE HIGHWAY 9	43030	IRWIN WY	0.20	B	9D1		LOCAL	5
33031		LOMPICO RD	3303	E. ZAYANTE RD	43022	LAKE BLVD	2.00	B	9D1		COLLECTOR	5
33031		LOMPICO RD	43022	LAKE BLVD		END OF COUNTY MAINTAINED	0.73	B	9D1		COLLECTOR	5
26009		LONE PINE AVE	26010	MEMORIAL AVE	1502	BUENA VISTA DR	0.13	D	9D3		LOCAL	2
33079		LONGFELLOW AVE	33078	KIPLING AVE		END OF COUNTY MAINTAINED	0.07	B	9D1		LOCAL	5
44015		LONGRIDGE RD	44007	STETSON RD		END OF COUNTY MAINTAINED	1.06	C	9D2		LOCAL	1
43003		LORENZO AVE		STATE HIGHWAY 9	43006	GROVE ST	0.32	B	9D1		LOCAL	5
43010		LORENZO ST		STATE HIGHWAY 9	43012	OAK ST	0.09	B	9D1		LOCAL	5
25140		LOS ALTOS DR	25010	CLUB HOUSE DR	26092	SUMNER AVE	0.55	C	9D2		LOCAL	2
24155		LOTMAN DR	2411	CAPITOLA RD		END OF COUNTY MAINTAINED	0.31	C	9D2		COLLECTOR	1
33011		LOVE CREEK RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	1.72	B	9D1		LOCAL	5
N4316		LOVERS LN	4301	BEAR CREEK RD		END		B		0.20	NA	
35004		LOWER HIGHLAND WAY	35003	EUREKA CYN RD		END OF COUNTY MAINTAINED	0.44	D	9D3		LOCAL	2
25142		LOYOLA DR	25140	LOS ALTOS DR	25145	DORIS AVE	0.19	C	9D2		LOCAL	2
26086		LUCERNE AVE	26060	MANFRE RD	26088	GENEVA WY	0.22	D	9D3		LOCAL	2
24257		LUCY WY	24095	CORNWELL RD		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
25086		LYLE CT	25085	WALLACE AVE		END OF COUNTY MAINTAINED	0.08	C	9D2		LOCAL	2
26095		LYNWOOD PL	26021	CALABASAS RD		END OF COUNTY MAINTAINED	0.09	D	9D3		LOCAL	2
24035		MACIEL AVE	2411	CAPITOLA	24036	MATTISON LN	0.33	A	9D2		COLLECTOR	1
24288		MADLINE DRIVE	2416	SOQUEL DR	25059	MAR VISTA DR	0.13	C	9D2		LOCAL	2
N3325		MADRONA AVE	33050	MCKINLEY WAY		END		B		0.08	NA	
N3312		MADRONA DR	33045	REDWOOD DR		END		B		0.13	NA	
42028		MADRONA RD		STATE HIGHWAY 9	42029	SEQUOIA RD	0.09	B	9D1		LOCAL	5
N3336		MADRONE	33039	PINE AVE		END		B		0.18	NA	

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42019		MADRONE AVE	43023	WEST DR	42020	VIRGINIA AVE	0.04	B	9D1		LOCAL	5
42019	X	MADRONE AVE	42023	WEST PARK AVE	42020	VIRGINIA AVE	0.04	B	9D1		LOCAL	
2406		MAIN ST	2422	PORTER ST	24097	CHERRYVALE AVE	1.13	C	9D2		COLLECTOR	1
33014		MAIN ST	33012	SUNNYSIDE AVE	3306	MILL ST	0.23	B	9D1		LOCAL	5
24169		MALIBU DR	24168	CATALINA DR	24155	LOTMAN DR	0.12	C	9D2		LOCAL	1
26060		MANFRE RD	2505	LARKIN VALLEY RD	1502	BUENA VISTA DR	1.14	D	9D3		LOCAL	2
26069		MANN AVE	2608	AMESTI RD		END OF COUNTY MAINTAINED	0.17	D	9D3		LOCAL	2
26130		MANRESA CT	26093	DOLPHIN DR		END OF COUNTY MAINTAINED	0.01	C	9D2		LOCAL	2
26138		MANRESA DR	26093	DOLPHIN DR		END OF COUNTY MAINTAINED	0.07	C	9D2		LOCAL	2
24246		MANSFIELD ST	2403	17TH AVE		END OF COUNTY MAINTAINED	0.09	A	9D2		LOCAL	1
33019		MANZANITA AVE	33021	WHITTIER AVE	33020	PINE ST	0.19	B	9D1		LOCAL	5
33019A		MANZANITA AVE	33088	LOCUST ST		END OF COUNTY MAINTAINED	0.13	B			NA	
N3360		MANZANITA AVE	33020	PINE ST	33088	LOCUST ST		B		0.12	NA	
25065		MAPLE ST	25050	SEA CLIFF DR	25066	POPLAR ST	0.17	C	9D2		LOCAL	2
24230		MAPLETHORPE LN		END OF COUNTY MAINTAINED	24229	MULBERRY DR	0.08	C	9D2		LOCAL	1
N2465		MAPLETHORPE LN	24229	MULBERRY DR		END		C		0.18	NA	
2506		MAR MONTE AVE		STATE HIGHWAY 1	1601	SAN ANDREAS RD	1.00	C	9D2		COLLECTOR	2
2506		MAR MONTE AVE	2505	LARKIN VALLEY RD		STATE HIGHWAY 1	0.62	D	9D2		COLLECTOR	2
	NEW	MAR SERENO DR	24052	HAAS DR		END OF COUNTY MAINTAINED	0.11	C			LOCAL	2
24118		MAR VISTA AVE	24119	HARRIET AVE	24193	MARGARET AVE	0.09	C	9D2		LOCAL	2
25059		MAR VISTA DR	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.29	C	9D2		COLLECTOR	2
25059		MAR VISTA DR	24177	MC GREGOR DR	25050	SEACLIFF DR	0.38	C	9D2		COLLECTOR	2
N2532		MAREA AVE	N2551	ANITA DR	1601	SAN ANDREAS RD		C		0.08	NA	
24193		MARGARET AVE	24118	MAR VISTA AVE	24177	MCGREGOR DR	0.08	C	9D2		LOCAL	2

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N2444		MARILYN AVE	24079	35TH AVE		CAPITOLA CITY LIMIT		C		0.04	NA	
24301		MARIANA CT	24003	JOSE AV		END OF COUNTY MAINTAINED	0.03	A	9D2		LOCAL	1
25020		MARINA AVE	25028	VENETIAN RD	25022	MOOSEHEAD DR	0.14	C	9D2		LOCAL	2
32006		MARINE VIEW AVE	32005	OCEAN ST	32007	SAN VINCENTE AVE	0.18	A	9D1		LOCAL	3
33134		MARION AVE	33106	EDUARDO AVE	3304	QUAIL HOLLOW RD	0.57	B	9D1		LOCAL	5
33135		MARION CT	33134	MARION AVE		END OF COUNTY MAINTAINED	0.02	B	9D1		LOCAL	5
26081		MARK AVE	26079	MESA VERDE DR		END OF COUNTY MAINTAINED	0.38	D	9D3		LOCAL	4
25063		MARTIN DR	2502	APOTOS BEACH DR	2510	RIO DEL MAR BLVD	0.17	C	9D2		LOCAL	2
25063		MARTIN DR	2510	RIO DEL MAR BLVD	25009	CLIFF DR	0.25	C	9D2		LOCAL	2
32012		MARTIN RD	3201	PINE FLAT RD	32013	ICE CREAM GRADE	1.73	A	9D1		COLLECTOR	3
26037		MASSEI AVE	26035	DE LANEY AVE		END OF COUNTY MAINTAINED	0.10	D	9D3		LOCAL	4
24036		MATTISON LN	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.32	A	9D2		COLLECTOR	1
24036		MATTISON LN	24023	CHANTICLEER AVE	2421	SOQUEL AVE	0.55	A	9D2		COLLECTOR	1
N2524		MATTISON LN	25033	CATHEDRAL		END		C		0.12	NA	
43063		MAYWOOD DR	43062	FOREST HILL DR		END OF COUNTY MAINTAINED	0.05	B	9D1		LOCAL	5
33034		MC ENERY RD	33027	WEST ZAYANTE RD		END OF COUNTY MAINTAINED	0.23	B	9D1		LOCAL	5
	NEW	MC GLENN CT	24268	MC GLENN DR		END OF COUNTY MAINTAINED	0.03	C			LOCAL	2
24268		MC GLENN DR	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.19	C	9D2		LOCAL	2
42034		MC GRANAHAH CT	42035	HILTON DR		END OF COUNTY MAINTAINED	0.08	B	9D1		LOCAL	5
42037		MC PHERSON CT	42035	HILTON DR		END OF COUNTY MAINTAINED	0.05	B	9D1		LOCAL	5
42034	X	MC GRANAHAH CT	42035	WEST HILTON DR		END OF COUNTY MAINTAINED	0.08	B	9D1		LOCAL	5
42037	X	MC PHERSON CT	42035	WEST HILTON DR		END OF COUNTY MAINTAINED	0.05	B	9D1		LOCAL	5
25044		MCDONALD RD	25075	DAY VALLEY RD	2504	FREEDOM BLVD	0.52	C	9D2		COLLECTOR	2
52001		MCGAFFIGAN MILL RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.07	B	9D1		LOCAL	5

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24177		MCGREGOR DR	25108	SEARIDGE RD		CAPITOLA CITY LIMIT	1.79	C	9D2		COLLECTOR	2
N3406		MCKENZIE CREEK	33030	BEAN CREEK RD		END		B		0.19	NA	
33050		MCKINLEY WAY	33052	PROSPECT ST	N3324	GOLD AVE	0.10	B	9D1		LOCAL	5
25192		MEADOW CT	25193	MEADOW RD		END OF COUNTY MAINTAINED	0.18	C	9D2		LOCAL	2
43067		MEADOW DR	43066	RIDGEWOOD DR		END OF COUNTY MAINTAINED	0.07	B	9D1		LOCAL	5
25193		MEADOW RD	25075	DAY VALLEY RD		END OF COUNTY MAINTAINED	0.77	C	9D2		LOCAL	2
25163		MEADOWLARK LN	25161	ROBIN DR	2510	RIO DEL MAR BLVD	0.16	C	9D2		LOCAL	2
26032		MEIDL AVE	26031	MINTO RD		END OF COUNTY MAINTAINED	0.21	D	9D3		LOCAL	4
26032	X	MEIDL AVE	26031	MINTO RD		BEHLER RD	0.21	D	9D3		LOCAL	4
24127		MELANIE PL	24112	TWENTY FOURTH A		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	1
24232		MELBA CT	24229	MULBERRY DR		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	1
N3356		MELIN AVE	N3354	AZALEA DR		END		B		0.20	NA	
N2403		MELLO LN	2402	7TH AVE		END		A		0.10	NA	
N2446		MELTON ST		CAPITOLA CITY LIMITS	24078	THIRTY EIGHTH		C		0.12	NA	
26010		MEMORIAL AVE	1502	BUENA VISTA DR	26009	LONE PINE AVE	0.17	D	9D3		LOCAL	2
42008		MEMORY LN	42006	CHINA GRADE		END OF COUNTY MAINTAINED	0.73	B	9D1		LOCAL	5
26028		MEREDITH WAY	2603	LAKEVIEW RD		END OF COUNTY MAINTAINED	0.08	D	9D3		LOCAL	4
26028	X	MEREDITH WAY	2603	LAKEVIEW RD	26170	PARKER DR	0.08	D	9D3		LOCAL	4
25114		MERIDETH CT	25111	BOWEN AVE		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	2
25069		MERK RD	2508	CORRALITOS RD		END OF COUNTY MAINTAINED	1.27	D	9D3		LOCAL	2
24235		MERLIN WAY	2405	SOQUEL SAN JOSE RD	24095	CORNWELL RD	0.15	A	9D2		LOCAL	1
24285		MERRILL RD	2416	SOQUEL DR		ASTER LN	0.07	C	9D2		LOCAL	2
24038		MERRILL ST	2403	SEVENTEENTH AVE	24037	FOURTEENTH AVE	0.23	A	9D2		COLLECTOR	1
25061		MESA DR	25060	LEDYARD WAY	25089	VIENNA DR	0.72	C	9D2		COLLECTOR	2

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N4318		MESA DR	43039	VIEW DR		END		B		0.41	NA	
26079		MESA VERDE DR	2604	GREEN VALLEY RD		END OF COUNTY MAINTAINED	0.27	D	9D3		LOCAL	2
33109		MEYER DR	33130	MONTCLAIR DR	2302	GRAHAM HILL RD	0.12	B	9D1		LOCAL	5
33077		MIDDLE RD	33071	CALIFORNIA DR	33072	RIVERSIDE DR	0.08	B	9D1		LOCAL	5
24132		MIDDLEFIELD DR	25050	SEACLIFF DR	25059	MAR VISTA DR	0.39	C	9D2		LOCAL	2
43040		MIDDLETON AVE		STATE HIGHWAY 9	43041	JUNCTION AVE	0.13	B	9D1		LOCAL	5
N4310		MIDDLETON AVE	43009	LOMOND ST	43041	JUNCTION AVE		B		0.07	NA	
24002		MILL RD	2401	GLEN CANYON RD	3401	BRANCIFORTE DR	0.28	A	9D2		LOCAL	1
3306		MILL ST		STATE HIGHWAY 9		STATE HIGHWAY 9	0.23	B	9D1		LOCAL	5
N2605		MILLER AVE	1502	BUNEA VISTA DR	2504	FREEDOM BLVD		D		0.22	NA	
44013		MILLER CUT OFF	2405	SOQUEL SAN JOSE RD	44010	MILLER RD	0.76	C	9D2		LOCAL	1
44010		MILLER RD	44008	SKYLAND RD	2405	SOQUEL SAN JOSE RD	1.00	C	9D2		LOCAL	1
26031		MINTO RD	2604	GREEN VALLEY RD		END OF COUNTY MAINTAINED	0.32	D	9D3		LOCAL	2
25021		MIRADA DR	25009	CLIFF DR	25012	TOWNSEND DR	0.08	C	9D2		LOCAL	2
33110		MIRAFLORES RD	33063	LA CUESTA DR		END OF COUNTY MAINTAINED	0.21	B	9D1		LOCAL	5
24039		MISSION DR	24025	COMMERICAL WY		END OF COUNTY MAINTAINED	0.40	A	9D2		SELECT LOCAL	1
N4209		MOHAGANY WY	42014	ACORN DR		END		B		0.08	NA	
25115		MONROE AVE	2416	SOQUEL DR	25083	HUNTINGTON DR	0.07	C	9D2		LOCAL	2
25115		MONROE AVE	25111	BOWEN AVE		END OF COUNTY MAINTAINED	0.01	C	9D2		LOCAL	2
N2547		MONROE AVE	25083	HUNTINGTON DR	25115	MONROE AVE		C		0.59	NA	
33130		MONTCLAIR DR	33100	CRESS DR	33140	TREETOP DR	0.43	B	9D1		LOCAL	1
25098		MONTE VISTA DR	25097	SIERRA VISTA DR		END OF COUNTY MAINTAINED	0.22	C	9D2		LOCAL	2
2420		MONTEREY AVE	2416	SOQUEL DR		CAPITOLA CITY LIMIT	0.25	C	9D2		LOCAL	1
25136		MONTEREY DR	25130	BONITA DR	25149	SANTA MARGUARITA DR	0.63	C	9D2		LOCAL	2

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
26011		MONUMENT AVE	1502	BUENA VISTA DR		END OF COUNTY MAINTAINED	0.14	D	9D3		LOCAL	2
N4211		MOON DR		STATE HIGHWAY 236		END		B		0.21	NA	
25197		MOONVALLEY RANCHR	2505	LARKIN VALLEY RD		END OF COUNTY MAINTAINED	0.13	D	9D2		LOCAL	2
25022		MOOSEHEAD DR	2501	SPRECKELS DR	2511	ESPLANADE	0.32	C	9D2		LOCAL	2
N2503		MOOSEHEAD DR	2501	SPRECKELS DR		END		C		0.13	NA	
26100		MORA ST	26081	MARK AVE		END OF COUNTY MAINTAINED	0.05	D	9D3		LOCAL	4
N2437		MORAN WAY	24107	PALISADES AVE	2408	EAST CLIFF DR		C		0.13	NA	
N4313		MORE DR	43031	BRIMBLECOM	43031	BRIMBLECOM		B		0.21	NA	
44005		MORRELL RD	2405	SOQUEL SAN JOSE RD	4402	SUMMIT RD	1.84	A	9D2		LOCAL	1
24256		MORRIS DR	24095	CORNWELL RD		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
33154		MOSSWOOD CT		END OF COUNTY MAINTAINED	2302	GRAHAM HILL RD	0.09	B	9D1		LOCAL	1
N3339		MOUND	33039	PINE AVE	33040	PROSPECT ST		B		0.13	NA	
45001		MOUNT BACHE RD	35005	HIGHLAND WY	44006	LOMA PRIETA RD	1.00	C	9D2		LOCAL	1
43011		MOUNTAIN ST		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.17	B	9D1		LOCAL	5
43011	X	MOUNTAIN ST		END OF COUNTY MAINTAINED		EAST ST	0.17	B	9D1		LOCAL	5
3402		MOUNTAIN VIEW RD	24045	RODEO GULCH RD	3401	BRANCIFORTE DR	0.84	A	9D2		COLLECTOR	1
3402	X	MOUNTAIN VIEW RD	24045	NORTH RODEO GULCH RD	3401	BRANCIFORTE DR	0.84	A	9D2		COLLECTOR	1
N2613		MOUNTAIN VIEW RD		END OF COUNTY MAINTAINED		END		D		0.45	NA	
44002		MT CHARLIE RD		SANTA CLARA COUNTY	34005	GLENWOOD DR	5.27	B	9D2		LOCAL	1
3302		MT HERMON RD	3303	EAST ZAYANTE RD	2302	GRAHAM HILL RD	0.68	B	9D1		ARTERIAL	5
3302		MT HERMON RD		URBAN LIMIT	3303	EAST ZAYANTE RD	1.24	B	9D1		ARTERIAL	5
3302		MT HERMON RD		SCOTTS VALLEY CITY LIMITS		URBAN LIMIT	0.38	B	9D1		ARTERIAL	5
26059		MT MADONNA RD	2607	CASSERLY RD		SANTA CLARA COUNTY	4.17	D	9D3		COLLECTOR	2
24229		MULBERRY DR	24230	MAPLETHORPE LN		END OF COUNTY MAINTAINED	0.19	C	9D2		LOCAL	1

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24157		MURIEL DR	24023	CHANTICLEER AVE		END OF COUNTY MAINTAINED	0.22	A	9D2		LOCAL	1
17002		MURPHY CROSSING		STATE HIGHWAY 129		MONTEREY COUNTY	0.63	D	9D3		LOCAL	4
25143		MURRAY AVE	25010	CLUB HOUSE RD	2510	RIO DEL MAR BLVD	0.07	C	9D2		LOCAL	2
N3401		MYSTERY SPOT RD	3401	BRANCIFORTE DR		END		A		0.69	NA	
N4203		N. ESCAPE RD		STATE HIGHWAY 236		END		B		1.31	NA	
N2489		N.B. STATE BEACH		CAPITOLA CITY LIMITS	N2489	N.B. STATE BEACH		C		0.87	NA	
N2490		N.B. STATE BEACH	N2489	N.B. STATE BEACH		END		C		0.10	NA	
N2491		N.B. STATE BEACH	N2489	N.B. STATE BEACH	N2489	N.B. STATE BEACH		C		0.27	NA	
26166		NANCY CT	26096	BRIARWOOD DR		END OF COUNTY MAINTAINED	0.05	D	9D3		LOCAL	2
33029		NELSON RD	33028	LOCKHART GULCH		END OF COUNTY MAINTAINED	1.40	B	9D1		LOCAL	5
33070		NEWELL CREEK RD	3307	GLEN ARBOR RD		END OF COUNTY MAINTAINED	0.70	B	9D1		LOCAL	5
24170		NEWPORT AVE	24169	MALIBU DR		END OF COUNTY MAINTAINED	0.08	C	9D2		LOCAL	1
24265		NICKER CT	24095	CORNWELL RD		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
26178		NIGUEL	26177	CALLE DEL RIO	26180	OSO MESA	0.08	D	9D3		LOCAL	4
43051		NINA CT	43050	NINA DR		END OF COUNTY MAINTAINED	0.18	B	9D1		LOCAL	5
43050		NINA DR	43047	FAIRMOUNT DR	43052	ELSIE MAE DR	0.44	B	9D1		LOCAL	5
N2546		NISENE MARKS	2416	SOQUEL DR		END		C		1.10	NA	
25194		NORMA CT	25193	MEADOW RD		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2
25058		NORTH AVE	N2442	N2442 EAST ST	25050	SEA CLIFF DR	0.19	C	9D2		LOCAL	2
25058	X	NORTH AVE	N2442	N2442 EAST ST	25051	EL CAMINO DEL MAR	0.19	C	9D2		LOCAL	2
33054		NORTH BIG TREES RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.84	B	9D1		LOCAL	5
33054	X	BIG TREES PARK RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.84	B	9D1		LOCAL	5
26054		NORTH DR	1502	BUENA VISTA DR		END OF COUNTY MAINTAINED	0.27	D	9D3		LOCAL	2
24281		NORTH POINTE CT	24280	CORTE CABRILLO		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2

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34017		NORTHRIDGE DR	34005	GLENWOOD DR		END OF COUNTY MAINTAINED	0.67	B	9D1		LOCAL	5
33111		NOTEWARE DR	33114	WEBSTER DR		END OF COUNTY MAINTAINED	0.26	B	9D1		LOCAL	5
24069		NOVA DR	2409	PORTOLA DR	2404	FORTY FIRST AVE	0.38	C	9D2		LOCAL	1
N2535		NUNES RD	25043	WHITE RD		END		D		0.71	NA	
33026		OAK AVE	33025	HERMOSA AVE		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
33051		OAK AVE		STATE HIGHWAY 9	33049	LINCOLN WAY	0.12	B	9D1		LOCAL	5
42021		OAK AVE	42023	WEST PARK AVE		STATE HIGHWAY 236	0.04	B	9D1		LOCAL	5
33131		OAK KNOLL DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.23	B	9D1		LOCAL	5
43058		OAK KNOLL CT		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.08	B	9D1		LOCAL	5
N2466		OAK RIDGE RD	24075	PORTER GULCH RD		END		C		0.70	NA	
43012		OAK ST	43010	LORENZO ST	43007	HARMON ST	0.29	B	9D1		LOCAL	5
25070		OAKDALE DR	25066	POPLAR ST	25050	SEA CLIFF DR	0.17	C	9D2		LOCAL	2
25070	X	OAKDALE DR	25066	POPLAR ST	25050	SEACLIFF DR	0.17	C	9D2		LOCAL	2
43065		OAKWOOD LN	43062	FOREST HILL DR		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
43065	X	OAKWOOD LN		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
34013		OAKWOOD PL	34017	NORTHRIDGE DR		END OF COUNTY MAINTAINED	0.02	B	9D1		LOCAL	5
23003		OCEAN ST		END OF COUNTY MAINTAINED		SANTA CRUZ CITY LIMITS	1.52	B	9D1		LOCAL	5
23003	X	OCEAN ST EXTENSION		END OF COUNTY MAINTAINED		SANTA CRUZ CITY LIMITS	1.52	B	9D1		LOCAL	5
32005		OCEAN ST	32045	COAST RD	32006	MARINE VIEW AVE	0.08	A	9D1		LOCAL	3
32005	X	OCEAN ST		STATE HIGHWAY 1	32006	MARINE VIEW AVE	0.08	A	9D1		LOCAL	3
25135		OCEANVIEW DR	1601	SAN ANDREAS RD		END OF COUNTY MAINTAINED	0.17	D	9D3		LOCAL	2
24293		ODYSSEY CT	24022	BROMMER ST		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
N2539		OLD ADOBE RD	1502	VISTA DR		URBAN LIMIT		D		0.43	NA	
N2539		OLD ADOBE RD		URBAN LIMIT		END		D		0.40	NA	

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43069		OLD BEAR CREEK RD	4301	BEAR CREEK RD		END OF COUNTY MAINTAINED	0.03	B	9D1		LOCAL	5
33056		OLD BIG TREES RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.20	B	9D1		LOCAL	5
17003		OLD CHITTENDEN RD		STATE HIGHWAY 129		END OF COUNTY MAINTAINED	0.58	D	9D3		LOCAL	4
43033		OLD COUNTY HWY	43032	POOL DR		STATE HIGHWAY 9	0.22	B	9D1		LOCAL	5
43033	X	OLD COUNTY HWY	43026	KINGS CREEK RD		RIVERVIEW DR	0.22	B	9D1		LOCAL	5
26036		OLD HAZEL DELL RD	2602	HAZEL DELL RD		END OF COUNTY MAINTAINED	0.46	D	9D3		COLLECTOR	2
26036	X	OLD HAZEL DELL RD	2602	HAZEL DELL RD	2602	HAZEL DELL RD	0.46	D	9D3		COLLECTOR	2
N3420		OLD SAN JOSE RD	2405	SOQUEL SAN JOSE RD	2405	SOQUEL SAN JOSE RD		A		0.34	NA	1
44016		OLD SANTA CRUZ HWY	4402	SUMMIT RD		STATE HIGHWAY 17	2.14	A	9D1		LOCAL	1
53002		OLD SUMMIT RD NO		STATE HIGHWAY 35		STATE HIGHWAY 35	0.74	B	9D1		LOCAL	5
53002	X	OLD SUMMIT RD		STATE HIGHWAY 35		STATE HIGHWAY 35	0.74	B	9D1		LOCAL	5
44017		OLD SUMMIT RD SO		SANTA CLARA COUNTY		SANTA CLARA COUNTY	0.83	A	9D1		LOCAL	1
44017	X	OLD SUMMIT RD		SUMMIT RD (Santa Clara Cnty)		SUMMIT RD (Santa Clara Cnty)	0.83	A	9D1		LOCAL	1
34007		OLIVE SPRINGS RD	2405	SOQUEL SAN JOSE RD		END OF COUNTY MAINTAINED	1.51	C	9D2		LOCAL	1
33069		OLYMPIA RD	3303	ZAYANTE RD		END OF COUNTY MAINTAINED	0.12	B	9D1		LOCAL	5
33069	X	OLYMPIA STATION RD	3303	EAST ZAYANTE RD		END OF COUNTY MAINTAINED	0.12	B	9D1		LOCAL	5
24258		ONEILL CT	24259	ONEILL LN		END OF COUNTY MAINTAINED	0.10	C	9D2		LOCAL	1
24259		ONEILL LN	2405	SOQUEL SAN JOSE RD	24130	PAPER MILL RD	0.04	C	9D2		LOCAL	1
26183		ONYX DR	26181	LAPIS DR		END OF COUNTY MAINTAINED	0.23	D	9D3		LOCAL	4
2410		OPAL CLIFF DR	2404	41ST AVE	2409	PORTOLA DR	0.72	C	9D2		COLLECTOR	1
2410	X	OPAL CLIFF DR	2404	41ST AVE		CAPITOLA CITY LIMITS	0.66	C	9D2		COLLECTOR	1
24233		ORCHARD CT	24068	ORCHARD ST		END OF COUNTY MAINTAINED	0.07	C	9D2		LOCAL	1
33089		ORCHARD DR	3305	SIMS RD		END OF COUNTY MAINTAINED	0.19	B	9D1		LOCAL	1
26065		ORCHARD PARK CT	26057	LAKEN DR		END OF COUNTY MAINTAINED	0.02	D	9D3		LOCAL	4

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24068		ORCHARD ST	2416	SOQUEL DR	24233	ORCHARD CT.	0.24	C	9D2		LOCAL	1
24119		ORD ST	24118	MAR VISTA AVE	24119	HARRIET AVE	0.06	C	9D2		LOCAL	2
N3504		ORMSBY CUTOFF	N3503	SUMMIT RD	35003	EUREKA CYN RD		D		2.25	NA	
26180		OSO MESA	26174	AMADOR	26179	CALLE CUESTA	0.09	D	9D3		LOCAL	4
26109		OXFORD DR	26108	CAMBRIDGE DR		END OF COUNTY MAINTAINED	0.03	D	9D3		LOCAL	4
43020		PACIFIC AVE	SH009	STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.15	B	9D1		LOCAL	5
43020	X	PACIFIC ST		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.15	B	9D1		LOCAL	5
N2412		PAGET AVE		END OF COUNTY MAINTAINED		END		A		0.22	NA	
26168		PAJARO LN	2601	AIRPORT BLVD		WATSONVILLE CITY LIMITS	0.06	D	9D3		LOCAL	4
24107		PALISADES AVE	2408	EAST CLIFF DR		END OF COUNTY MAINTAINED	0.28	C	9D2		LOCAL	1
N2435		PALISADES AVE S	2408	EAST CLIFF DR	2408	EAST CLIFF DR		C		0.15	NA	
25039		PALMA AVE	25040	PLAYA BLVD	25040	PLAYA BLVD	0.17	C	9D2		LOCAL	2
25023		PALMER AVE	2510	RIO DEL MAR BLVD	26092	SUMNER	0.42	C	9D2		LOCAL	2
25023	X	PALMER AVE	2510	RIO DEL MAR BLVD	25026	ARTHUR AVE	0.42	C	9D2		LOCAL	2
25101		PALO VERDI CT	25098	MONTE VISTA DR		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	2
25096		PALO VERDI DR	25095	SIESTA DR	25098	MONTE VISTA DR	0.05	C	9D2		LOCAL	2
26142		PANNELL CT	26133	ARROYO DR		END OF COUNTY MAINTAINED	0.07	D	9D3		LOCAL	4
43045		PAONE DR		STATE HIGHWAY 236	43057	ST FRANCIS DR	0.06	B	9D1		LOCAL	5
24130		PAPER MILL RD	2405	SOQUEL SAN JOSE RD		END OF COUNTY MAINTAINED	0.36	C	9D2		LOCAL	1
24211		PAR ST	24212	BALL DR	24206	HARDIN WY	0.03	C	9D2		LOCAL	1
24279		PARADISO CT	24094	HILLTOP RD		END OF COUNTY MAINTAINED	0.10	A	9D2		LOCAL	1
24082		PARK AVE	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.11	C	9D2		ARTERIAL	2
24082		PARK AVE	2416	SOQUEL DR		STATE HIGHWAY 1	0.36	C	9D2		ARTERIAL	2
25174		PARK DR	25176	COATES DR	25173	HILLCREST DR	0.17	C	9D2		LOCAL	2

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N3341		PARK WAY	3303	EAST ZAYANTE RD		END		B		0.64	NA	
26170		PARKER DR	2610	COLLEGE RD		END OF COUNTY MAINTAINED	0.15	D	9D3		LOCAL	4
N2420		PARKER ST	24092	WINKLE AVE		END		A		0.07	NA	
26076		PARKWOOD DR	2610	COLLEGE RD	2603	LAKEVIEW RD	0.18	D	9D3		LOCAL	4
N2303		PASATIEMPO DR	23005			END		B		1.27	NA	
N2302		PASATIEMPO ENT		STATE HIGHWAY 17	N2304	HOLLINS DR		B		0.07	NA	
24216		PATTERSON LN	24039	MISSION DR	24239	HOUTS DR	0.08	A	9D2		LOCAL	1
24040		PAUL MINNIE AVE	2421	SOQUEL AVE	24044	RODRIGUEZ ST	0.30	A	9D2		COLLECTOR	1
24041		PAUL SWEET RD	2416	SOQUEL DR	24099	BROOKWOOD DR	0.13	A	9D2		COLLECTOR	1
24041		PAUL SWEET RD	24099	BROOKWOOD DR		URBAN LIMITS	0.53	A	9D2		COLLECTOR	1
24041		PAUL SWEET RD		URBAN LIMITS		END OF COUNTY MAINTAINED	0.90	A	9D2		COLLECTOR	1
26171		PAULINE DR	26097	BRADFORD RD		END OF COUNTY MAINTAINED	0.09	D	9D3		LOCAL	2
26033		PAULSEN RD	2604	GREEN VALLEY RD	26070	WHITING RD	1.04	D	9D3		SELECT LOCAL	2
25123		PEBBLE BEACH CT	25117	PEBBLE BEACH DR		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	2
25117		PEBBLE BEACH DR		END OF COUNTY MAINTAINED	25124	THUNDERBIRD	0.52	C	9D2		LOCAL	2
25125		PEBBLE BEACH WAY	25117	PEBBLE BEACH DR	25094	PINEHURST DR	0.08	C	9D2		LOCAL	2
26024		PECKHAM RD	2612	CARLTON RD		END OF COUNTY MAINTAINED	1.10	D	9D3		LOCAL	4
33105		PEDRO AVE	33084	RANCHO RIO AVE		END OF COUNTY MAINTAINED	0.11	B	9D1		LOCAL	5
24225		PELLEGRINI ST	24043	FELT ST		END OF COUNTY MAINTAINED	0.18	A	9D2		LOCAL	1
26128		PENASQUITAS DR	26093	DOLPHIN DR		END OF COUNTY MAINTAINED	0.12	C	9D2		LOCAL	2
N2533		PENDERGAST LN	35003	EUREKA CYN RD		END		D		0.14	NA	2
26146	DELETE	PENNSYLVANIA DR		WATSONVILLE CITY LIMITS	2604	GREEN VALLEY RD	0.16	D			NA	
N2430		PERALTA WAY	24084	FRESNO ST		END		C		0.07	NA	
24291		PESCE WAY	24030	HARPER ST		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1

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24138		PESTANA AVE	24139	SERRELL AVE	24141	GERMAINE AVE	0.14	A	9D2		LOCAL	1
24138	X	PESTANA AVE	24137	HELEN AVE	24141	GERMAINE AVE	0.29	A	9D2		LOCAL	1
N2612		PHILLIPS RD	2608	AMESTI RD		END		D		0.14	NA	
N3326		PINE AVE	33037	LAKEVIEW RD		END		B		0.09	NA	
N3378		PINE AVE	N3380	CONFERENCE DR	N3337	RIDGE WAY		B		0.62	NA	
N3314		PINE DR	33045	REDWOOD DR		END		B		0.26	NA	
N3348		PINE DR	33027	ZAYANTE RD	N3348	PINE DR		B		0.38	NA	
3201		PINE FLAT RD	3202	BONNY DOON RD	2301	EMPIRE GRADE RD	3.82	A	9D1		COLLECTOR	3
25195		PINE FOREST DR	25196	POTTER RD	25191	DOWNING DR	0.24	C	9D2		LOCAL	2
25129		PINE ST	25059	MAR VISTA DR		END OF COUNTY MAINTAINED	0.15	C	9D2		LOCAL	2
33020		PINE ST	3307	GLEN ARBOR RD	33019	MANZANITA AVE	0.08	B	9D1		LOCAL	5
33020	X	PINE ST	33022	LIVE OAK AVE	33019	MANZANITA AVE	0.08	B	9D1		LOCAL	5
43013		PINE ST	43010	LORENZO ST	43007	HARMON ST	0.28	B	9D1		LOCAL	5
N2534		PINEHILL RD	N2533	PENDERGAST LN		END		D		0.18	NA	
25094		PINEHURST DR	25010	CLUB HOUSE RD		END OF COUNTY MAINTAINED	0.35	C	9D2		COLLECTOR	2
25094		PINEHURST DR		END OF COUNTY MAINTAINED	26093	DOLPHIN DR	0.03	C	9D2		COLLECTOR	2
25116		PINEHURST WAY	25094	PINEHURST DR	25117	PEBBLE BEACH DR	0.09	C	9D2		LOCAL	2
24278		PINEWOOD ST		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.10	A	9D2		LOCAL	1
26161		PINTO ST	26165	COWLES ST	2608	AMESTI RD	0.06	D	9D3		LOCAL	2
2606		PIONEER RD	2608	AMESTI RD	2604	GREEN VALLEY RD	1.32	D	9D3		COLLECTOR	2
24124		PLACER ST	2413	26TH AVE		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	1
33044		PLATEAU DR		STATE HIGHWAY 9	33045	REDWOOD DR	0.62	B	9D1		LOCAL	5
25040		PLAYA BLVD	1601	SAN ANDREAS RD	25041	VISTA DR	0.46	C	9D2		COLLECTOR	2
25046		PLEASANT VALLEY RD	2504	FREEDOM BLVD		END OF COUNTY MAINTAINED	2.14	D	9D3		LOCAL	2

ROAD NUMBER	UPDATED	ROAD NAME	FROM LIMITS		TO LIMITS		LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
42026		PLEASANT WAY		STATE HIGHWAY 9	42027	HILLSIDE DR	0.06	B	9D1		LOCAL	5
24101		PLEASURE POINT DR	24108	ROCKVIEW DR	2408		0.16	C	9D2		LOCAL	1
26169		PLUM HILL DR	26170	PARKER DR		END OF COUNTY MAINTAINED	0.06	D	9D3		LOCAL	4
23006		PLYMOUTH ST	23010	EMELINE AVE		STATE HIGHWAY 17	0.25	A	9D1		LOCAL	1
23006		PLYMOUTH ST	SCR	SANTA CRUZ CITY LIMITS	23010	EMELINE AVE	0.36	A	9D1		LOCAL	1
23006	X	NORTH PLYMOUTH ST	23010	EMELINE AVE	2304	EL RANCHO DR	0.32	A	9D1		LOCAL	1
23006	X	NORTH PLYMOUTH ST		SANTA CRUZ CITY LIMITS	23010	EMELINE AVE	0.22	A	9D1		LOCAL	1
25003		POLO DR & NORTH DR	2416	SOQUEL DR	25003	POLO DR, NORTH DR	0.16	C	9D2		LOCAL	2
25003		POLO DR & NORTH DR	25003	POLO DR, NORTH DR		END OF COUNTY MAINTAINED	0.22	C	9D2		LOCAL	2
25003	X	POLO DR	2416	SOQUEL DR		NORTH POLO DR	0.20	C	9D2		LOCAL	2
25003	X	NORTH POLO DR	25003	POLO DR		END OF COUNTY MAINTAINED	0.18	C	9D2		LOCAL	2
26099		PONDEROSA AVE	26080	JOLON DR		END OF COUNTY MAINTAINED	0.21	D	9D3		LOCAL	4
33151		PONDEROSA CT	33148	PONDEROSA DR		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	1
33148		PONDEROSA DR	33150	ROLLINGWOODS DR	33100	CRESS DR	0.29	B	9D1		LOCAL	1
43032		POOL DR		STATE HIGHWAY 9	43033	OLD COUNTY HWY	0.06	B	9D1		LOCAL	5
25128		POPLAR CT	25066	POPLAR ST		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	2
25066		POPLAR ST	25065	MAPLE ST	25059	MAR VISTA DR	0.31	C	9D2		LOCAL	2
25205		POPPY WAY	25204	HEATHER TERRACE		END OF COUNTY MAINTAINED	0.23	A	9D2		LOCAL	2
24075		PORTER GULCH RD	2416	SOQUEL DR		END OF COUNTY MAINTAINED	1.85	C	9D2		COLLECTOR	2
2422		PORTER ST		CAPITOLA CITY LIMITS	24130	PAPER MILL RD	0.47	C	9D2		ARTERIAL	1
2409		PORTOLA DR	2408	EAST CLIFF DR	N2425	24TH AVE	0.73	A	9D2		ARTERIAL	1
2409		PORTOLA DR	N2425	TWENTY FOURTH AVE	2404	41ST AVE	0.63	C	9D2		ARTERIAL	1
2409	X	PORTOLA DR	2404	41ST AVE		CAPITOLA CITY LIMIT	0.44	C	9D2		ARTERIAL	1
25196		POTTER RD	25192	MEADOW CT		END OF COUNTY MAINTAINED	0.37	C	9D2		LOCAL	2

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24253		POUND LN	24252	SILVANA LN		END OF COUNTY MAINTAINED	0.11	A	9D2		LOCAL	1
N2421		PRATHER LN	2416	SOQUEL DR		END		A		0.10	NA	
24098		PRESCOTT RD	24088	GLEN HAVEN RD		END OF COUNTY MAINTAINED	0.94	C	9D2		LOCAL	1
N4204		PRIMAVERA RD		STATE HIGHWAY 9		END		B		0.15	NA	
33052		PROSPECT AVE	33048	JACKSON WAY	33050	MCKINLEY WAY	0.12	B	9D1		LOCAL	5
24042		PROSPECT ST	2408	EAST CLIFF DR	24017	13TH AVE	0.10	A	9D2		LOCAL	1
N2411		PROSPECT ST	24017	13TH AVE	24037	14TH AVE		A		0.06	NA	
N3379		PROSPECT ST	N3377	FORREST RD	N3378	PINE AVE		B		0.16	NA	
26150		PROVINCETOWN CT	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.06	C	9D2		LOCAL	2
N2461		PUTTER DR	N2457	GOLF DR	N2458	HAZZARD ST		C		0.22	NA	
3304		QUAIL HOLLOW RD	3307	GLEN ARBOR RD	3303	EAST ZAYANTE RD	2.13	B	9D1		COLLECTOR	5
25199		QUAIL RUN RD	25031	TROUT GULCH RD		END OF COUNTY MAINTAINED	0.19	C	9D2		LOCAL	2
33115		QUAIL TERRACE	33114	WEBSTER DR		END OF COUNTY MAINTAINED	0.08	B	9D1		LOCAL	5
N2536		QUAIL WAY	25043	WHITE RD	2504	FREEDOM BLVD		D		0.35	NA	
24223		QUARTZ ST	2413	26TH AVE		END OF COUNTY MAINTAINED	0.08	C	9D2		LOCAL	1
26175		QUINTA	26174	AMADOR	26174	AMADOR	0.17	D	9D3		LOCAL	4
43042		RAILROAD AVE	43040	MIDDLETON AVE	43009	LOMOND ST	0.13	B	9D1		LOCAL	5
26091		RAINBOW LN	2608	AMESTI RD	26090	WEST PHILLIPS RD	0.15	D	9D3		LOCAL	2
26158		RAMADA LN	25044	MCDONALD RD		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	2
42046		RAMBLING RD	42045	CREEK DR		END OF COUNTY MAINTAINED	0.14	B	9D1		LOCAL	5
24182		RANCHERO DR	24181	VALERA DR		END OF COUNTY MAINTAINED	0.15	A	9D2		LOCAL	1
25067		RANCHO RD	1502	BUENA VISTA DR		END OF COUNTY MAINTAINED	1.02	D	9D3		LOCAL	2
33084		RANCHO RIO AVE	33070	NEWELL CREEK RD		END OF COUNTY MAINTAINED	0.36	B	9D1		LOCAL	5
33084	X	RANCHO RIO AVE	33070	NEWELL CREEK RD	33105	PEDRO AVE	0.36	B	9D1		LOCAL	5

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25182		RANPORT RD	1502	BUENA VISTA DR		WATSONVILLE CITY LIMITS	0.70	D	9D3		LOCAL	2
43053		REBECCA DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.50	B	9D1		LOCAL	5
43014		REDWOOD AVE		STATE HIGHWAY 236	43009	LOMOND ST	0.18	B	9D1		LOCAL	5
33067		REDWOOD CIR	3303	EAST ZAYANTE RD	33067	REDWOOD CIR	0.10	B	9D1		LOCAL	5
33045		REDWOOD DR	SH009	STATE HIGHWAY 9	N3313	REDWOOD CIR	0.91	B	9D1		LOCAL	5
33045	X	REDWOOD DR		STATE HIGHWAY 9	33062	EATON DR	0.91	B	9D1		LOCAL	5
34001		REDWOOD DR	2401	GLEN CANYON RD		END OF COUNTY MAINTAINED	1.92	A	9D2		LOCAL	1
42010		REDWOOD DR	42012	TEIHL DR	N4205		0.16	B	9D1		LOCAL	5
42016		REDWOOD DR	42025	BOULDER BROOK DR		STATE HIGHWAY 236	0.16	B	9D1		LOCAL	5
N3313		REDWOOD DR	33045	REDWOOD DR	32018	QUARRY BEND		B		2.00	NA	
N4304		REDWOOD DR	43023	WEST DR		END		B		0.15	NA	
44004		REDWOOD LODGE RD	2405	SOQUEL SAN JOSE RD	44014	SCHULTIES RD	2.31	A	9D2		COLLECTOR	1
34011		REDWOOD PL	34017	NORTHRIDGE DR		END OF COUNTY MAINTAINED	0.06	B	9D1		LOCAL	5
36001		REDWOOD RD	2602	BROWN VALLEY RD		END OF COUNTY MAINTAINED	1.08	D	9D3		LOCAL	2
24162		REINELT AVE	24163	BYER RD		END OF COUNTY MAINTAINED	0.16	A	9D2		LOCAL	1
24218		RENWICK WY	2417	THIRTIETH AVE		END OF COUNTY MAINTAINED	0.08	C	9D2		LOCAL	1
24248		RESEARCH PARK DR	2416	SOQUEL DR	24110	RODEO GULCH RD	0.32	C	9D2		LOCAL	1
24248	X	RESEARCH PARK DR	2416	SOQUEL DR	24110	SOUTH RODEO GULCH RD	0.32	C	9D2		LOCAL	1
24241		REY CT	24061	BULB AVE		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	1
N4206		REYNOLDS DR	42013	FERN DR	42013	FERN DR		B		0.30	NA	
25113		RICHARD CT	25111	BOWEN AVE		END OF COUNTY MAINTAINED	0.02	C	9D2		LOCAL	2
24136		RICHMOND DR	2409	PORTOLA DR	2409	PORTOLA DR	0.29	A	9D2		LOCAL	1
24136	X	RICHMOND DR	24019	24TH AVE		END OF COUNTY MAINTAINED	0.29	A	9D2		LOCAL	1
25202		RICKARDS RD	25033	CATHEDRAL DR		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2

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35001		RIDER RD	35003	EUREKA CYN RD		END OF COUNTY MAINTAINED	2.56	D	9D3		LOCAL	2
42022		RIDGE DR	42020	VIRGINIA AVE		STATE HIGHWAY 236	0.11	B	9D1		LOCAL	5
25185		RIDGE WAY	2505	LARKIN VALLEY RD		END OF COUNTY MAINTAINED	0.23	D	9D3		LOCAL	2
N3337		RIDGE WAY	N3336	MADRONE WAY		END		B		0.50	NA	
33149		RIDGEVIEW CT	33148	PONDEROSA DR		END OF COUNTY MAINTAINED	0.04	B	9D1		LOCAL	1
43066		RIDGEWOOD DR	43062	FOREST HILL DR		END OF COUNTY MAINTAINED	0.07	B	9D1		LOCAL	5
33099		RINCON CT	33101	LA CANADA WAY		END OF COUNTY MAINTAINED	0.05	B	9D1		LOCAL	5
2510		RIO DEL MAR BLVD	2502	APTOS BEACH DR	2416	SOQUEL DR	1.37	C	9D2		ARTERIAL	2
24228		RISSO CT	24021	ALICE ST		END OF COUNTY MAINTAINED	0.06	A	9D2		LOCAL	1
44029		RIVA RIDGE RD	44002	MT CHARLIE RD	44030	HUTCHINSON RD	0.63	B	9D2		LOCAL	5
44054		RIVER DR	44027	HILLSIDE DR	N4210	RIVER DR	0.58	B	9D1		LOCAL	5
44054	X	RIVER DR	42026	PLEASANT WAY	N4210	RIVER DR	0.58	B	9D1		LOCAL	5
N4210		RIVER DR	44024	RIVER DR		END		B		0.14	NA	
N4214		RIVER DR	44024	RIVER DR		END		B		0.14	NA	
43015		RIVER ST		STATE HIGHWAY 9	43003	LORENZO AVE	0.10	B	9D1		LOCAL	5
N4323		RIVER ST	43003	LORENZO AVE		END		B		0.06	NA	
33023		RIVERSIDE AVE	3307	GLEN ARBOR RD	N3365	WENTE ST	0.34	B	9D1		LOCAL	5
33023	X	RIVERSIDE AVE	33017	BROOKSIDE AVE	N3365	WENTE ST	0.34	B	9D1		LOCAL	5
16003		RIVERSIDE DR		END OF COUNTY MAINTAINED		WATSONVILLE CITY LIMITS	0.15	D	9D3		LOCAL	4
16003	X	WEST RIVERSIDE DR		END OF COUNTY MAINTAINED, HARVEST DR		WATSONVILLE CITY LIMITS	0.15	D	9D3		LOCAL	4
33072		RIVERSIDE DR	33071	CALIFORNIA DR	33077	MIDDLE RD	0.20	B	9D1		LOCAL	5
N3373		RIVERSIDE DR	33077	MIDDLE RD		STATE HIGHWAY 9		B		0.22	NA	
33061		RIVERSIDE PARK DR	3307	GLEN ARBOR RD		END OF COUNTY MAINTAINED	0.23	B	9D1		LOCAL	5
33061	X	RIVERSIDE PARK DR		MADRONE AVE		END OF COUNTY MAINTAINED	0.23	B	9D1		LOCAL	5

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43070		RIVERSIDE RD	43018	LARKSPUR ST	13071	FERN ST	0.12	B	9D1		LOCAL	5
N3414		RIVERVALE DR	2405	SOQUEL SAN JOSE RD		END		C		0.18	NA	
25120		RIVIERA DR	25119	CHERYL WY	25121	WILSHIRE DR	0.06	C	9D2		LOCAL	2
N2602		ROACHE RD		WATSONVILLE CITY LIMITS		END		D		0.41	NA	
33041		ROARING CAMP RD	33153	CONFERENCE DR	2302	GRAHAM HILL RD	0.15	B	9D1		LOCAL	5
N2540		ROBAK DR	2506	MAR MONTE AVE	2506	MAR MONTE AVE		C		0.46	NA	
26134		ROBERTA DR	26081	MARK AVE	26133	ARROYO DR	0.17	D	9D3		LOCAL	4
N3367		ROBERTS RD	33011	LOVE CREEK RD		END		B		0.31	NA	
24066		ROBERTSON ST	24080	SOQUEL WHARF RD	2416	SOQUEL DR	0.33	C	9D2		COLLECTOR	1
25161		ROBIN DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.15	C	9D2		LOCAL	2
N3204		ROBLES DR	N3202	VICK DR		END		A		0.40	NA	
24108		ROCKVIEW DR	2408	EAST CLIFF DR		END OF COUNTY MAINTAINED	0.12	C	9D2		LOCAL	1
24045		RODEO GULCH RD N		URBAN BDY	2416	SOQUEL DR	3.72	A	9D2		COLLECTOR	1
24045		RODEO GULCH RD N	3402	MOUNTAIN VIEW RD		URBAN BDY	1.90	A	9D2		COLLECTOR	1
24110		RODEO GULCH RD S	24091	GROSS RD	2421	SOQUEL AVE	0.12	C	9D2		LOCAL	1
24110		RODEO GULCH RD S		END OF COUNTY MAINTAINED	2416	SOQUEL DR	0.28	C	9D2		LOCAL	1
24045	X	NORTH RODEO GULCH RD		URBAN BDY	2416	SOQUEL DR	3.72	A	9D2		COLLECTOR	1
24045	X	NORTH RODEO GULCH RD	3402	MOUNTAIN VIEW RD		URBAN BDY	1.90	A	9D2		COLLECTOR	1
24110	X	SOUTH RODEO GULCH RD	24091	GROSS RD	2421	SOQUEL AVE	0.12	C	9D2		LOCAL	1
24110	X	SOUTH RODEO GULCH RD		END OF COUNTY MAINTAINED	2416	SOQUEL DR	0.28	C	9D2		LOCAL	1
24044		RODRIGUEZ ST	24131	CAPITOL RD EXT	24023	CHANTICLEER AVE	0.79	A	9D2		COLLECTOR	1
26113	DELETE	RODRIGUEZ ST	26006	LOMA PRIETA AV	26103	ROACHE RD		D			NA	4
26116		ROE AVE	N2606	LITTLE WY	26115	DUTCHMAN RD	0.05	D	9D3		LOCAL	4
26116	X	ROE AVE	N2606	LITTLEWAY LN	26115	DUTCHMAN RD	0.05	D	9D3		LOCAL	4

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1701		ROGGE LN		STATE HIGHWAY 129		MONTEREY COUNTY	0.77	D	9D3		LOCAL	4
24109		ROLAND DR	2417	30TH AVE		CAPITOLA CITY LIMIT	0.21	C	9D2		LOCAL	1
33150		ROLLING WOODS DR	2302	GRAHAM HILL RD		END OF COUNTY MAINTAINED	0.08	B	9D1		LOCAL	1
43064		ROLLINGWOOD DR	43062	FOREST HILL DR		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
24122		ROSEDALE AVE	2416	SOQUEL DR		CAPITOLA CITY LIMIT	0.23	C	9D2		LOCAL	1
42040		ROSITA DR	42008	MEMORY LN		END OF COUNTY MAINTAINED	0.02	B	9D1		LOCAL	5
33161		ROYAL OAK CT	33160	HIDDEN GLEN		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
33002		RUSSELL AVE		STATE HIGHWAY 9	33046	VALLEY DR	0.10	B	9D1		LOCAL	5
N2423		SALISBURY DR	24041	PAUL SWEET RD	24041	PAUL SWEET RD		A		0.18	NA	
24289		SAMUEL PL	2417	THIRTIETH AVE		END OF COUNTY MAINTAINED	0.07	C	9D2		LOCAL	1
1601		SAN ANDREAS RD		STATE HIGHWAY 1	25189	BYERS LN	0.32	C	9D2		ARTERIAL	2
1601		SAN ANDREAS RD	25189	BYERS LN	26094	SEASCAPE BLVD	0.42	C	9D2		ARTERIAL	2
1601		SAN ANDREAS RD	26094	SEASCAPE BLVD		RR OVERPASS	1.52	C	9D2		ARTERIAL	2
1601		SAN ANDREAS RD		RR OVERPASS	4504	BEACH RD	5.08	D	9D2		ARTERIAL	2
1601	X	SAN ANDREAS RD		RR OVERPASS	1501	WEST BEACH RD	5.08	D	9D2		ARTERIAL	2
25052		SAN BENITO AVE	25050	SEA CLIFF DR	25050	SEA CLIFF DR	0.13	C	9D2		LOCAL	2
33047		SAN LORENZO AVE	SH009	STATE HIGHWAY 9	33045	REDWOOD DR	0.68	B	9D1		LOCAL	5
33007		SAN LORENZO WAY	SH009	STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.30	B	9D1		COLLECTOR	5
N3357		SAN LORENZO WAY	3307	GLEN ARBOR RD		END		B		0.26	NA	
26125		SAN SIMEON DR	26101	HATHAWAY AVE		END OF COUNTY MAINTAINED	0.07	D	9D3		LOCAL	4
32007		SAN VICENTE AVE	32015	COAST RD		END OF COUNTY MAINTAINED	0.52	A	9D1		LOCAL	3
32007	X	SAN VICENTE ST	32015	OLD COAST RD		END OF COUNTY MAINTAINED	0.52	A	9D1		LOCAL	3
16014		SAND DOLLAR DR.	1601	SAN ANDREAS RD		END OF COUNTY MAINTAINED	0.50	D	9D3		COLLECTOR	2
25158		SANDALWOOD DR	25163	MEADOWLARK LN		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	2

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25159		SANDPIPER LN	25160	BEACH PINES DR		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2
25055		SANTA CLARA AVE	25050	SEA CLIFF DR	25057	CENTER ST	0.17	C	9D2		LOCAL	2
25053		SANTA CRUZ AVE	25050	CENTER ST	2407	STATE PARK DR	0.36	C	9D2		LOCAL	2
25053	X	SANTA CRUZ AVE	25050	SEACLIFF DR	2407	STATE PARK DR	0.36	C	9D2		LOCAL	2
24286		SANTA FE CT	2417	30TH AVE		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	1
25149		SANTA MARGUARITA D	25001	ALTA DR	25010	CLUB HOUSE DR	0.41	C	9D2		LOCAL	2
52003	DELETE	SARATOGA TOLL RD	SH009	STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.93	B			NA	
23001		SCARONI RD		STATE HIGHWAY 1		STATE HIGHWAY 1	0.41	A	9D1		LOCAL	3
N3329		SCENIC DR	N3328	FERN AVE		END		B		1.22	NA	
33018		SCENIC WAY		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.99	B	9D1		LOCAL	5
N2413		SCHOLL LN	24037	FOURTEENTH AVE		END		A		0.09	NA	
24255		SCHOONER CT	2411	CAPITOLA RD		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
44014		SCHULTIES RD	44003	LAUREL RD	44016	OLD SANTA CRUZ HWY	3.32	A	9D2		LOCAL	1
24056		SCRIVER ST	24107	PALISADES AVE	N2444	THIRTY THIRD AVE	0.15	C	9D2		LOCAL	1
24056	X	SCRIVER ST	24107	PALISADES AVE		END OF COUNTY MAINTAINED	0.15	C	9D2		LOCAL	1
26025		SCURICH RD	2612	CARLTON RD		END OF COUNTY MAINTAINED	0.38	D	9D3		LOCAL	4
25050		SEA CLIFF DR	2501	SPRECKELS DR	25054	EL CAMINO DEL	0.20	C	9D2		COLLECTOR	2
25050	X	SEACLIFF DR	2501	SPRECKELS DR	25051	EL CAMINO DEL MAR	0.20	C	9D2		COLLECTOR	2
25050	X	SEACLIFF DR	25051	EL CAMINO DEL MAR	24085	BROADWAY	0.67	C	9D2		COLLECTOR	2
25050	X	SEACLIFF DR	25057	CENTER AVE	25059	MAR VISTA DR	0.24	C	9D2		COLLECTOR	2
25050	X	SEACLIFF DR	25059	MAR VISTA DR		END OF COUNTY MAINTAINED	0.95	C	9D2		COLLECTOR	2
25050	X	SEACLIFF DR	25057	CENTER AVE		END OF COUNTY MAINTAINED	0.02	C	9D2		COLLECTOR	2
16016		SEA HORSE DR	16014	SAND DOLLAR DR	16014	SAND DOLLAR DR	0.10	D	9D3		LOCAL	2
25093		SEA TERRACE WAY	25050	SEA CLIFF DR	25050	SEA CLIFF DR	0.10	C	9D2		LOCAL	2

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
25024		SEA VIEW DR	25009	CLIFF DR	25018	LAMANDA DR	0.28	C	9D2		LOCAL	2
25127		SEABREEZE PL	26092	SUMNER AVE		END OF COUNTY MAINTAINED	0.03	C	9D2		LOCAL	2
25109		SEARIDGE CT	25108	SEARIDGE DR		END OF COUNTY MAINTAINED	0.08	C	9D2		LOCAL	2
25108		SEARIDGE RD	25059	MAR VISTA DR	2407	STATE PARK DR	0.28	C	9D2		COLLECTOR	2
26094		SEASCAPE BLVD	26092	SUMNER AVE	1601	SAN ANDREAS RD	0.78	C	9D2		ARTERIAL	2
N2531		SELLS DR	1601	SAN ANDREAS RD		END		C		0.13	NA	
25138		SEMPLE AVE	25137	HUMES AVE	25138	SEMPLE AVE	0.22	C	9D2		LOCAL	2
24166		SEQUOIA DR	24143	THURBER LN	24092	WINKLE AVE	0.21	A	9D2		LOCAL	1
42029		SEQUOIA RD	42028	MADRONA RD—		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
42029	X	SEQUOIA RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
24139		SERRELL AVE	24142	CHIRCO AVE		END OF COUNTY MAINTAINED	0.11	A	9D2		LOCAL	1
24151		SEVILLA DR	2406	MAIN ST	24158	VIA GATOS	0.14	C	9D2		LOCAL	1
34012		SHAKE TREE LN	34017	NORTHRIDGE DR		END OF COUNTY MAINTAINED	0.10	B	9D1		LOCAL	5
26098		SHAMROCK PL	26096	BRIARWOOD DR		END OF COUNTY MAINTAINED	0.03	D	9D3		LOCAL	2
24247		SHAUNA CT	2405	SOQUEL SAN JOSE		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
15001		SHELL DR	1501	BEACH RD—	N1505		0.69	D	9D3		LOCAL	2
15001	X	SHELL DR	1501	WEST BEACH RD	N1505		0.69	D	9D3		LOCAL	2
25079		SHOREVIEW DR	2502	APTOS BEACH DR		END OF COUNTY MAINTAINED	0.24	C	9D2		LOCAL	2
25102		SIERRA VISTA CT	25097	SIERRA VISTA DR		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	2
25097		SIERRA VISTA DR	25095	SIESTA DR	25103	CORONADA DR	0.13	C	9D2		LOCAL	2
25099		SIESTA CT	25095	SIESTA DR		END OF COUNTY MAINTAINED	0.04	C	9D2		LOCAL	2
25095		SIESTA DR	2503	VALENCIA RD		END OF COUNTY MAINTAINED	0.46	C	9D2		LOCAL	2
17001		SILLIMAN RD		STATE HIGHWAY 129		END OF COUNTY MAINTAINED	1.33	D	9D3		LOCAL	4
24252		SILVANA LN	2403	17TH AVE	24023	CHANTICLEER AV	0.17	A	9D2		LOCAL	1

ROAD NUMBER	UPDATED	ROAD NAME	FROM LIMITS		TO LIMITS		LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
3305		SIMS RD	2302	GRAHAM HILL RD	2303	LA MADRONA DR	0.59	B	9D1		COLLECTOR	1
44008		SKYLAND RD	4402	SUMMIT RD	44015	LONGRIDGE RD	2.94	C	9D2		LOCAL	1
44025		SKYVIEW CT	44022	SKYVIEW TER		END OF COUNTY MAINTAINED	0.04	A	9D2		LOCAL	1
44022		SKYVIEW TER	44020	EVERGREEN LN		END OF COUNTY MAINTAINED	1.42	A	9D2		LOCAL	1
32014		SMITH GRADE	2301	EMPIRE GRADE	3202	BONNY DOON RD	5.62	A	9D1		COLLECTOR	3
26067		SMITH RD	2607	CASSERLY RD		END OF COUNTY MAINTAINED	1.15	D	9D3		LOCAL	4
N2542		SOLANO AVE	25041	VISTA DR		END		C		0.11	NA	
26176		SOMBRA	26174	AMADOR		END OF COUNTY MAINTAINED	0.13	D	9D3		LOCAL	4
24175		SOMMERFELD AVE		CAPITOLA CITY LIMITS	24156	AXFORD RD	0.09	C	9D2		LOCAL	1
2421		SOQUEL AVE		SANTA CRUZ CITY LIMITS	2416	SOQUEL DR	0.51	A	9D2		ARTERIAL	1
2421		SOQUEL AVE	2416	SOQUEL DR	2403	17TH AVE	0.32	A	9D2		ARTERIAL	1
2421		SOQUEL AVE	2403	17TH AVE		RODEO CREEK	0.58	A	9D2		ARTERIAL	1
2421		SOQUEL AVE		RODEO CREEK	24091	GROSS RD	0.38	C	9D2		ARTERIAL	1
2416		SOQUEL DR		END OF COUNTY MAINTAINED	2504	FREEDOM BLVD	0.25	D	9D2		ARTERIAL	2
2416		SOQUEL DR	2504	FREEDOM BLVD	2407	STATE PARK DR	2.30	C	9D2		ARTERIAL	2
2416		SOQUEL DR	2407	STATE PARK DR		RODEO CREEK	3.80	C	9D2		ARTERIAL	2
2416		SOQUEL DR		RODEO CREEK		STATE HIGHWAY 1	0.88	A	9D2		ARTERIAL	2
2416		SOQUEL DR		STATE HIGHWAY 1	2421	SOQUEL AVE	0.10	A	9D2		ARTERIAL	2
2405		SOQUEL SAN JOSE RD	24130	PAPER MILL RD		URBAN LIMITS	1.55	A	9D2		ARTERIAL	2
2405		SOQUEL SAN JOSE RD		URBAN LIMITS	4402	SUMMIT RD	9.71	A	9D2		ARTERIAL	1
24080		SOQUEL WHARF RD	2422	PORTER ST		CAPITOLA CITY LIMIT	0.22	C	9D2		COLLECTOR	1
N2308		SOUTH CIRCLE	N2304	HOLLINS DR	N2304	HOLLINS DR		B		0.44	NA	
25133	DELETE	SOUTH DR	25003	POLO DR, NORTH DR		END OF COUNTY MAINTAINED		C	9D3		LOCAL	2
26078		SOUTH DR	1502	BUENA VISTA DR	26022	BOWKER RD	0.13	D			NA	

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
43016		SOUTH ST	43004	EAST ST	43002	BOULDER ST	0.14	B	9D1		LOCAL	5
N4325		SOUTH ST	43002	BOULDER ST		END		B		0.04	NA	
45002		SPANISH RANCH RD	35005	HIGHLAND WAY		END OF COUNTY MAINTAINED	1.59	C	9D2		LOCAL	1
33159		SPREADING OAK DR	33160	HIDDEN GLEN		END OF COUNTY MAINTAINED	0.70	B	9D1		LOCAL	5
2501		SPRECKELS DR	2416	SOQUEL DR	2509	TREASURE ISLAND DR	0.27	C	9D2		COLLECTOR	2
2501		SPRECKELS DR	2509	TREASURE ISLAND DR	2502	APTOS BEACH DR	0.21	C	9D2		COLLECTOR	2
25042		SPRING VALLEY RD	1601	SAN ANDREAS RD		END OF COUNTY MAINTAINED	0.74	D	9D3		LOCAL	2
N2471		SPRUCE ST	25059	MAR VISTA DR		END		C		0.22	NA	
25081		ST ANDREWS DR	25010	CLUB HOUSE DR	25081	ST ANDREWS DR	0.69	C	9D2		LOCAL	2
25088		ST ANDREWS WAY	25081	ST. ANDREWS DR	25080	BALTUSROL DR	0.08	C	9D2		LOCAL	2
24053		ST DEYNS ST	24050	THIRTY FIFTH AVE	24048	THIRTY FOURTH AV	0.04	C	9D2		LOCAL	1
43057		ST FRANCIS DR	43055	DAVIDSON WY	43045	PAONE DR	0.25	B	9D1		LOCAL	5
44027		STAGECOACH RD		STATE HIGHWAY 35		END OF COUNTY MAINTAINED	0.31	B	9D2		LOCAL	5
N2404		STAGGS LN	2402	SEVENTH AVE		END		A		0.12	NA	
33147		STANFORD DR	33094	HIHN RD		END OF COUNTY MAINTAINED	0.08	B	9D1		LOCAL	5
24046		STANLEY AVE	2416	SOQUEL DR	24031	HOWE ST	0.16	A	9D2		LOCAL	1
2407		STATE PARK DR	2416	SOQUEL DR	N2482		0.48	C	9D2		ARTERIAL	2
N2482		STATE PARK DR	2407	STATE PARK DR		END		C		0.48	NA	
25025		STEPHEN RD	25022	MOOSEHEAD DR	25028	VENETIAN RD	0.18	C	9D2		LOCAL	2
44007		STETSON RD	44015	LONGRIDGE RD	2405	SOQUEL SAN JOSE RD	2.68	C	9D2		LOCAL	1
26005		STEWART AVE		WATSONVILLE CITY LIMITS		END OF COUNTY MAINTAINED	0.12	D	9D3	0.12	LOCAL	4
42011		STEWART ST	N4205	N4205	42045	CREEK DR	0.21	B	9D1		LOCAL	5
26127		STRATFORD DR	26108	CAMBRIDGE DR		END OF COUNTY MAINTAINED	0.02	D	9D3		LOCAL	4
33033		SUMMIT AVE	2302	GRAHAM HILL RD	N3376	SUMMIT AVE	0.01	B	9D1		LOCAL	5

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
N3376		SUMMIT AVE	33033	SUMMIT AVE	N3377	FORREST RD		B		0.18	NA	
N4320		SUMMIT AVE	43043	BLUE RIDGE DR		END		B		0.40	NA	
4402		SUMMIT RD	44016	OLD SANTA CRUZ	2405	SOQUEL SAN JOSE RD	2.75	A			NA	
4402		SUMMIT RD	2405	SOQUEL SAN JOSE RD	35005	HIGHLAND WY	0.12	C	9D2		ARTERIAL	1
N3503		SUMMIT RD	5004	SANTA CLARA CO	44006	LOMA PRIETA RD		D	9D2	5.59	ARTERIAL	
44024		SUMMIT WOODS DR	2405	SOQUEL SAN JOSE R		END OF COUNTY MAINTAINED	0.58	A	9D2		LOCAL	1
26092		SUMNER AVE	2510	RIO DEL MAR BLVD	26094	SEASCAPE BLVD	1.73	C	9D2		ARTERIAL	2
26092		SUMNER AVE	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.58	C	9D2		ARTERIAL	2
24089		SUNNY COVE DR	2408	EAST CLIFF DR		END OF COUNTY MAINTAINED	0.09	A	9D2		LOCAL	1
N3375		SUNNYCROFT		STATE HIGHWAY 9		END		B		0.20	NA	
33012		SUNNYSIDE AVE	33011	LOVE CREEK RD	33152	FAIRVIEW AVE	0.17	B	9D1		LOCAL	5
N3303		SUNNYVALE DR		END OF COUNTY MAINTAINED		END		B		0.18	NA	
N1503		SUNSET BEACH RD	15001	SHELL DR	1601	SAN ANDREAS RD		D		2.75	NA	
44018		SUNSET DR		SANTA CLARA COUNTY		END OF COUNTY MAINTAINED	0.56	A	9D2		LOCAL	1
44018	X	SUNSET DR	4402	SUMMIT RD		END OF COUNTY MAINTAINED	0.56	A	9D2		LOCAL	1
N3416		SUNSET LN	33156	LAUREL GLEN RD		END		A		0.47	NA	
24135		SUSAN LN	24120	DOUGMAR DR		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
32001		SWANTON RD		STATE HIGHWAY 1		STATE HIGHWAY 1	6.88	A	9D1		LOCAL	3
52002		SYLVAN AVE		STATE HIGHWAY 9	N5201		0.36	B	9D1		LOCAL	5
43044		SYLVAN WAY	43043	BLUE RIDGE DR		END OF COUNTY MAINTAINED	0.23	B	9D1		LOCAL	5
24227		SYLVANER CIR	24103	32ND AVE		END OF COUNTY MAINTAINED	0.08	C	9D2		LOCAL	1
26137		TAMALPAIS CT	26093	DOLPHIN DR		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2
25118		TAMARACK DR	25116	PINEHURST WY		END OF COUNTY MAINTAINED	0.15	C	9D2		LOCAL	2
	NEW	TANBARK CT	24004	RODRIGUEZ ST		END OF COUNTY MAINTAINED	0.06	A	9D2		LOCAL	1

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			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
24302		TANNER CT	2402	7TH AVE		END OF COUNTY MAINTAINED	0.08	A	9D2		LOCAL	1
N2610		TAYLOR RD	2610	COLLEGE RD		END		D		0.10	NA	
24207		TEE ST	24206	HARDIN WY		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	1
42012		TEILH DR		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.37	B	9D1		LOCAL	5
24237		TERRA LN	24235	MERLIN WAY		END OF COUNTY MAINTAINED	0.07	A	9D2		LOCAL	1
25200		TERRACE DR	2416	SOQUEL DR	N2487	TERRACE DR	0.05	C	9D2		LOCAL	2
N2487		TERRACE DR	25200	TERRACE DR	25061	MESA DR		C		0.01	NA	
32011		THAYER RD	3202	BONNY DOON RD		END OF COUNTY MAINTAINED	0.50	A	9D1		LOCAL	3
32011	X	THAYER RD	3202	BONNY DOON RD		END OF COUNTY MAINTAINED	0.50	A	9D1		LOCAL	3
24164		THOMAS AVE	24023	CHANTICLEER AVE	24162	REINELT AVE	0.05	A	9D2		LOCAL	1
24077		THOMPSON AVE	24022	BROMMER ST		END OF COUNTY MAINTAINED	0.15	C	9D2		SELECT LOCAL	1
24077		THOMPSON AVE		CAPITOLA CITY LIMITS	24022	BROMMER ST	0.20	C	9D2		SELECT LOCAL	1
26039		THOMPSON RD	SH129	STATE HIGHWAY 129	2612	CARLTON RD	0.50	D	9D3		LOCAL	4
26039		THOMPSON RD	2612	CARLTON RD	2612	CARLTON RD	1.27	D	9D3		LOCAL	4
25164		THUNDERBIRD CT	25117	PEBBLE BEACH DR		END OF COUNTY MAINTAINED	0.04	C	9D2		LOCAL	2
25124		THUNDERBIRD DR	25094	PINEHURST	25117	PEBBLE BEACH DR	0.18	C	9D2		LOCAL	2
24143		THURBER LN	24092	WINKLE AVE		END OF COUNTY MAINTAINED	0.22	A	9D2		COLLECTOR	1
24143		THURBER LN	2416	SOQUEL DR	24092B	WINKLE AVE	1.00	A	9D2		COLLECTOR	1
1603		THURWACHTER RD	1501	BEACH RD		MONTEREY COUNTY	0.34	D	9D3		LOCAL	2
1603	X	THURWACHTER RD	1501	WEST BEACH RD		MONTEREY COUNTY	0.34	D	9D3		LOCAL	2
26132		TIBURON CT	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.07	C	9D2		LOCAL	2
24251		TIFFANI CT	24266	BENSON AVE		END OF COUNTY MAINTAINED	0.13	A	9D2		LOCAL	1
24194		TIMBER VIEW DR	24088	GLEN HAVEN RD		END OF COUNTY MAINTAINED	0.10	C	9D2		LOCAL	1
25150		TOLEDO DR	25012	TOWNSEND DR	25004	BAY VIEW DR	0.14	C	9D2		LOCAL	2

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25012		TOWNSEND DR	2510	RIO DEL MAR BLVD	25150	TOLEDO	0.69	C	9D2		COLLECTOR	2
25184		TRABING RD		END OF COUNTY MAINTAINED	1502	BUENA VISTA DR	1.19	D	9D3		LOCAL	2
25184		TRABING RD	1502	BUENA VISTA DR		END OF COUNTY MAINTAINED	0.14	D	9D3		LOCAL	2
42052		TRADEWINDS DR	42050	CROWS NEST DR		END OF COUNTY MAINTAINED	0.12	B	9D1		LOCAL	5
24270		TRANQUILITY CT	24078	38TH AVE		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	1
2509		TREASURE ISLAND AV	2501	SPRECKELS DR	2502	APTOS BEACH	0.14	C	9D2		COLLECTOR	2
2509	X	TREASURE ISLAND AV	2501	SPRECKELS DR	2502	APTOS BEACH DR	0.14	C	9D2		COLLECTOR	2
33140		TREETOP DR	2302	GRAHAM HILL RD	33162	BROOK KNOLL DR	0.21	B	9D1		SELECT LOCAL	5
26104		TREMBLY LN	2604	GREEN VALLEY RD	26105	CUNNINGHAM WY	0.25	D	9D3		LOCAL	4
26104	X	TREMBLEY LN	2604	GREEN VALLEY RD	26105	CUNNINGHAM WY	0.25	D	9D3		LOCAL	4
24260		TREMONT DR	2403	17TH AVE		END OF COUNTY MAINTAINED	0.08	A	9D2		LOCAL	1
26141		TRINITY AVE	26081	MARK AVE	26080	JOLON DR	0.13	D	9D3		LOCAL	4
25031		TROUT GULCH RD	2416	SOQUEL DR	25131	APTOS BYPASS	0.19	C	9D2		COLLECTOR	2
25031		TROUT GULCH RD	25131	APTOS BYPASS	2503	VALENCIA RD	0.25	C	9D2		COLLECTOR	2
25031		TROUT GULCH RD	2503	VALENCIA RD		URBAN LIMIT	1.75	C	9D2		COLLECTOR	2
25031		TROUT GULCH RD		URBAN LIMIT	N3501		1.41	C	9D2		COLLECTOR	2
44026	DELETE	TROY RD	44022	SKYVIEW TER		END OF COUNTY MAINTAINED	0.05	A			NA	
25206		TULIP LN	25204	HEATHER TERRACE	25205	POPPY WY	0.04	A	9D2		LOCAL	2
N2538		TULSA LN	25067	RANCHO RD		END		D		0.30	NA	
24165		TWIN HILLS DR	24143	THURBER LN	24167	LILLIAN WY	0.16	A	9D2		LOCAL	1
N3417		TWIN VIEW LN	N3416	N3416 SUNSET LN		END		A		0.18	NA	
43025		TWO BAR RD		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	3.41	B	9D1		COLLECTOR	5
44012		UPPER E ZAYANTE RD		STATE HIGHWAY 35	3303	EAST ZAYANTE RD	3.92	B	9D1		LOCAL	5
N3505		UPPER HIGHLAND PK	35003	EUREKA CYN RD		END		D		0.38	NA	

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43038		UPPER RD		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.09	B	9D1		LOCAL	5
25054		VALENCIA AVE	24086	EAST ST	25050	SEA CLIFF DR	0.23	C	9D2		LOCAL	2
2503		VALENCIA RD	25031	TROUT GULCH RD	2504	FREEDOM BLVD	3.86	C	9D2		COLLECTOR	2
25032		VALENCIA SCHOOL RD	25031	TROUT GULCH RD	2503	VALENCIA RD	1.58	C	9D2		SELECT LOCAL	2
25035		VALENCIA ST	25072	BERNAL ST	25031	TROUT GULCH RD	0.09	C	9D2		LOCAL	2
24181		VALERA DR	24094	HILLTOP RD	24182	RANCHERO DR	0.16	A	9D2		LOCAL	1
33046		VALLEY DR	33045	REDWOOD DR	33044	PLATEAU DR	0.37	B	9D1		LOCAL	5
33032		VALLEY VIEW AVE	3303	EAST ZAYANTE RD	3303	EAST ZAYANTE RD	0.44	B	9D1		LOCAL	5
N2615		VALLEY VIEW DR	26059	MT MADONNA RD		END		D		0.25	NA	4
N2615	X	VALLEY VIEW RD	26059	MT MADONNA RD		END		D		0.25	NA	4
2611		VARNI RD	2508	CORRALITOS	2608	AMESTI RD	0.88	D	9D3		COLLECTOR	2
26017		VELASQUEZ ST	26016	HATTON AVE	26014	BOWEN AVE	0.05	D	9D3		LOCAL	2
25028		VENETIAN RD	2502	APTOS BEACH RD	2502	APTOS BEACH RD	0.28	C	9D2		LOCAL	2
25028	X	VENETIAN RD	2502	APTOS BEACH DR	2502	APTOS BEACH DR	0.28	C	9D2		LOCAL	2
24217		VENICE DR	24023	CHANTICLEER AV		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
24154		VIA FLORES	24158	VIA GATOS		END OF COUNTY MAINTAINED	0.11	C	9D2		LOCAL	1
24298		VIA GARGANO	24091	GROSS RD		END OF COUNTY MAINTAINED	0.09	A	9D2		LOCAL	
24158		VIA GATOS	24151	SEVILLA DR		END OF COUNTY MAINTAINED	0.10	C	9D2		LOCAL	1
26155		VIA LANTANA	26092	SUMNER AVE	26093	DOLPHIN DR	0.24	C	9D2		LOCAL	2
25152		VIA MALIBU	25153	VIA TORNASOL	25154	VIA VERDE	0.17	C	9D2		LOCAL	2
26154		VIA MEDICI	26092	SUMNER AVE	26139	CALYPSO DR	0.14	C	9D2		LOCAL	2
26167		VIA NICOLA	26021	CALABASAS RD		END OF COUNTY MAINTAINED	0.10	D	9D3		LOCAL	2
26157		VIA NOVELLA	26092	SUMNER AVE	26093	DOLPHIN DR	0.23	C	9D2		LOCAL	2
26172		VIA PACIFICA	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.22	C	9D2		LOCAL	2

ROAD NUMBER	UPDATED	ROAD NAME	FROM LIMITS		TO LIMITS		LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
26172	X	VIA PACIFICA		CAMINO PACIFICO		END OF COUNTY MAINTAINED	0.22	C	9D2		LOCAL	
25151		VIA PALO ALTO		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.49	C	9D2		LOCAL	2
25151	X	VIA PALO ALTO		END OF COUNTY MAINTAINED	25152	VIA MALIBU	0.49	C	9D2		LOCAL	
26148		VIA SODERINI	26092	SUMNER AVE	26092	SUMNER AVE	0.16	C	9D2		LOCAL	2
25153		VIA TORNASOL	25010	CLUB HOUSE DR		END OF COUNTY MAINTAINED	0.19	C	9D2		LOCAL	2
26156		VIA TRINITA	26092	SUMNER AVE	26093	DOLPHIN DR	0.24	C	9D2		LOCAL	2
25154		VIA VERDE	25151	VIA PALO ALTO	25153	VIA TORNASOL	0.07	C	9D2		LOCAL	2
N3202		VICK DR	2301	EMPIRE GRADE		END		A		0.51	NA	
N2464		VICTORY LN	2416	SOQUEL DR		END		C		0.35	NA	
25089		VIENNA DR	2416	SOQUEL DR	25090	JENNIFER DR	0.57	C	9D2		COLLECTOR	2
25089		VIENNA DR	25090	JENNIFER DR	25121	WILSHIRE DR	0.25	C	9D2		COLLECTOR	2
25087		VIEW CT	25083	HUNTINGTON DR		END OF COUNTY MAINTAINED	0.11	C	9D2		LOCAL	2
43039		VIEW DR	4301	BEAR CREEK RD	N4318	MESA DR	0.02	B	9D1		LOCAL	5
N2485		VIEWPOINT RD	25061	MESA DR		END		C		0.55	NA	
34019		VILLA GLEN DR	34005	GLENWOOD DR		END OF COUNTY MAINTAINED	0.14	B	9D1		LOCAL	1
33155		VINE HILL RD	3402	MT VIEW RD		STATE HIGHWAY 17	2.18	A	9D1		COLLECTOR	1
26151		VINEYARD CT	26094	SEASCAPE BLVD		END OF COUNTY MAINTAINED	0.04	C	9D2		LOCAL	2
42020		VIRGINIA AVE	42019	MADRONE AVE	42022	RIDGE DR	0.15	B	9D1		LOCAL	5
25029		VISTA DEL MAR DR		END OF COUNTY MAINTAINED	25130	BONITA DR	1.42	C	9D2		LOCAL	2
24189		VISTA DR	24094	HILLTOP RD	24182	RANCHERO DR	0.19	A	9D2		LOCAL	1
25041		VISTA DR	25040	PLAYA BLVD	25040	PLAYA BLVD	0.48	C	9D2		LOCAL	2
N2405		VOLZ LN	2402	7TH AVE		END		A		0.12	NA	
24065		W WALNUT ST	24066	ROBERTSON ST	2422	PORTER ST	0.17	C	9D2		LOCAL	1
N4302		W. HILL RD	3303	EAST ZAYANTE RD		END		B		0.31	NA	

ROAD NUMBER	UPDATED	ROAD NAME	FROM LIMITS		TO LIMITS		LENGTH MILES	ROAD DIST (Old)	ROAD DIST. (New)	NON-CNTY	FUNCTIONAL CLASS	SUPV DISTRICT
			ROAD #	ROAD NAME	ROAD #	ROAD NAME						
25085		WALLACE AVE	25083	HUNTINGTON DR		END OF COUNTY MAINTAINED	0.51	C	9D2		LOCAL	2
24081		WARREN ST	2413	TWENTY SIXTH AVE		END OF COUNTY MAINTAINED	0.16	C	9D2		LOCAL	1
33053		WASHINGTON WAY	33047	SAN LORENZO AV	33051	OAK AVE	0.12	B	9D1		LOCAL	5
24214		WAUGH AVE	24143	THURBER LN		END OF COUNTY MAINTAINED	0.29	A	9D2		LOCAL	1
24219		WAUGH PL	24214	WAUGH AVE		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
24214	X	WAUGH AVE	24214	WAUGH AVE		END OF COUNTY MAINTAINED	0.05	A	9D2		LOCAL	1
26026		WEBB RD	2607	CASSERLY RD		END OF COUNTY MAINTAINED	1.37	D	9D3		LOCAL	4
33114		WEBSTER DR	33112	WOODVIEW DR		END OF COUNTY MAINTAINED	0.25	B	9D1		NA	5
24020		WEBSTER ST	24033	JOSE AVE	24018	SIXTEENTH AVE	0.31	A	9D2		COLLECTOR	1
N3365		WENTE ST	33023	RIVERSIDE		END		B		0.21	NA	
25186		WEST BEL MAR DR	2506	MAR MONTE AVE		END OF COUNTY MAINTAINED	0.25	D	9D3		LOCAL	2
43023		WEST DR	33031	LOMPICO RD		END OF COUNTY MAINTAINED	1.00	B	9D1		LOCAL	5
42023		WEST PARK AVE		STATE HIGHWAY 9	42021	OAK AVE	1.47	B	9D1		LOCAL	5
26090		WEST PHILLIPS RD	2608	AMESTI RD	26091	RAINBOW LN	0.18	D	9D3		LOCAL	2
3403		WEST VINE HILL RD		STATE HIGHWAY 17	33155	VINE HILL RD	0.22	A	9D2		LOCAL	1
33027		WEST ZAYANTE RD	3303	EAST ZAYANTE RD	3304	QUAIL HOLLOW RD	1.22	B	9D1		LOCAL	5
43019		WESTERN AVE		STATE HIGHWAY 9		END OF COUNTY MAINTAINED	0.41	B	9D1		LOCAL	5
N2301		WESTWOOD RD	2302	GRAHAM HILL RD	N2303	PASATIEMPO DR		B		0.24	NA	
26029		WHEELLOCK RD	2604	GREEN VALLEY RD	2607	CASSERLY RD	1.21	D	9D3		LOCAL	4
25043		WHITE RD	2505	LARKIN VALLEY RD	2504	FREEDOM BLVD	2.57	D	9D3		COLLECTOR	2
26018		WHITEMAN AVE	26015	CROW AVE		END OF COUNTY MAINTAINED	0.12	D	9D3		LOCAL	2
26070		WHITING RD	2607	CASSERLY RD	26033	PAULSEN RD	1.01	D	9D3		LOCAL	4
33021		WHITTIER AVE	33017	BROOKSIDE AVE	33019	MANZANITA AVE	0.07	B	9D1		LOCAL	5
N3351		WILD IRIS LN	2301	EMPIRE GRADE		END		A		0.65	NA	

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24202		WILDER DR	2415	CAPITOLA AVE		END OF COUNTY MAINTAINED	0.27	C	9D2		LOCAL	1
24295		WILLA WAY	N2419	N2419 ENCINA DR		END OF COUNTY MAINTAINED	0.12	A	9D2		LOCAL	1
24250		WILLOWBROOK LN	2416	SOQUEL DR	24076	CABRILLO COLLEGE DRIVE	0.39	C	9D2		SELECT LOCAL	2
25121		WILSHIRE DR	25092	DANUBE DR		END OF COUNTY MAINTAINED	0.19	C	9D2		LOCAL	2
25030		WINFIELD WAY	2509	TREASURE ISLAND DR	25022	MOOSEHEAD DR	0.09	C	9D2		LOCAL	2
25168		WINGFOOT CT	25104	WINGFOOT WAY		END OF COUNTY MAINTAINED	0.05	C	9D2		LOCAL	2
25105		WINGFOOT DR		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.09	C	9D2		LOCAL	2
25104		WINGFOOT WAY	25081	ST. ANDREWS DR	25105	WINGFOOT DR	0.08	C	9D2		LOCAL	2
24092A		WINKLE AVE	2416	SOQUEL DR		END OF COUNTY MAINTAINED	0.37	A			NA	
24092A	X	WINKLE AVE	2416	SOQUEL DR	24266	BENSON AVE	0.37	A			NA	
24092B		WINKLE AVE		END OF COUNTY MAINTAINED		END OF COUNTY MAINTAINED	0.73	A			NA	
25166		WIXON AVE	2502	APTOS BEACH DR		END OF COUNTY MAINTAINED	0.16	C	9D2		LOCAL	2
N3412		WOODLAND WAY	33011	LOVE CREEK RD		END		B		0.30	NA	
34018		WOODLANDER PL	34017	NORTHRIDGE DR		END OF COUNTY MAINTAINED	0.05	B	9D1		LOCAL	5
33055		WOODMILL LANE	33067	REDWOOD CIR	33068	OLD ZAYANTE RD	0.14	B	9D1		LOCAL	5
24274		WOODROSE AVE	2411	CAPITOLA AVE	24275	AMBER AVE	0.05	A	9D2		LOCAL	1
33112		WOODVIEW DR	33113	HIDDEN VALLEY DR		END OF COUNTY MAINTAINED	0.13	B	9D1		LOCAL	5
24161		WOOLPERT WAY	24160	HALTERMAN AVE	24162	REINELT AVE	0.05	A	9D2		LOCAL	1
33003		WRIGHT ST	3301	FELTON EMPIRE RD	33102	BLAIR ST	0.06	B	9D1		LOCAL	5
33003	X	WRIGHT ST		END OF COUNTY MAINTAINED	33102	BLAIR ST	0.06	B	9D1		LOCAL	5
25188		XANTHUS DR	2505	LARKIN VALLEY RD		END OF COUNTY MAINTAINED	0.20	D	9D2		LOCAL	2
24057		YUCCA DR	24048	34TH AVE	24059	36TH AVE	0.09	C	9D2		LOCAL	1
N3342		ZAYANTE DR	3303	EAST ZAYANTE RD		END		B		0.24	NA	
16013		ZILS RD	1601	ANDREAS RD	N1501	ZILS RD	0.76	D	9D3		LOCAL	2

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16013	X	ZILS RD	1601	SAN ANDREAS RD	N1501	ZILS RD	0.76	D	9D3		LOCAL	2
N1501		ZILS RD	16013	ZILS RD		END		D		0.28	NA	
26089		ZURICH AVE	26088	GENEVA WY		END OF COUNTY MAINTAINED	0.10	D	9D3		LOCAL	2



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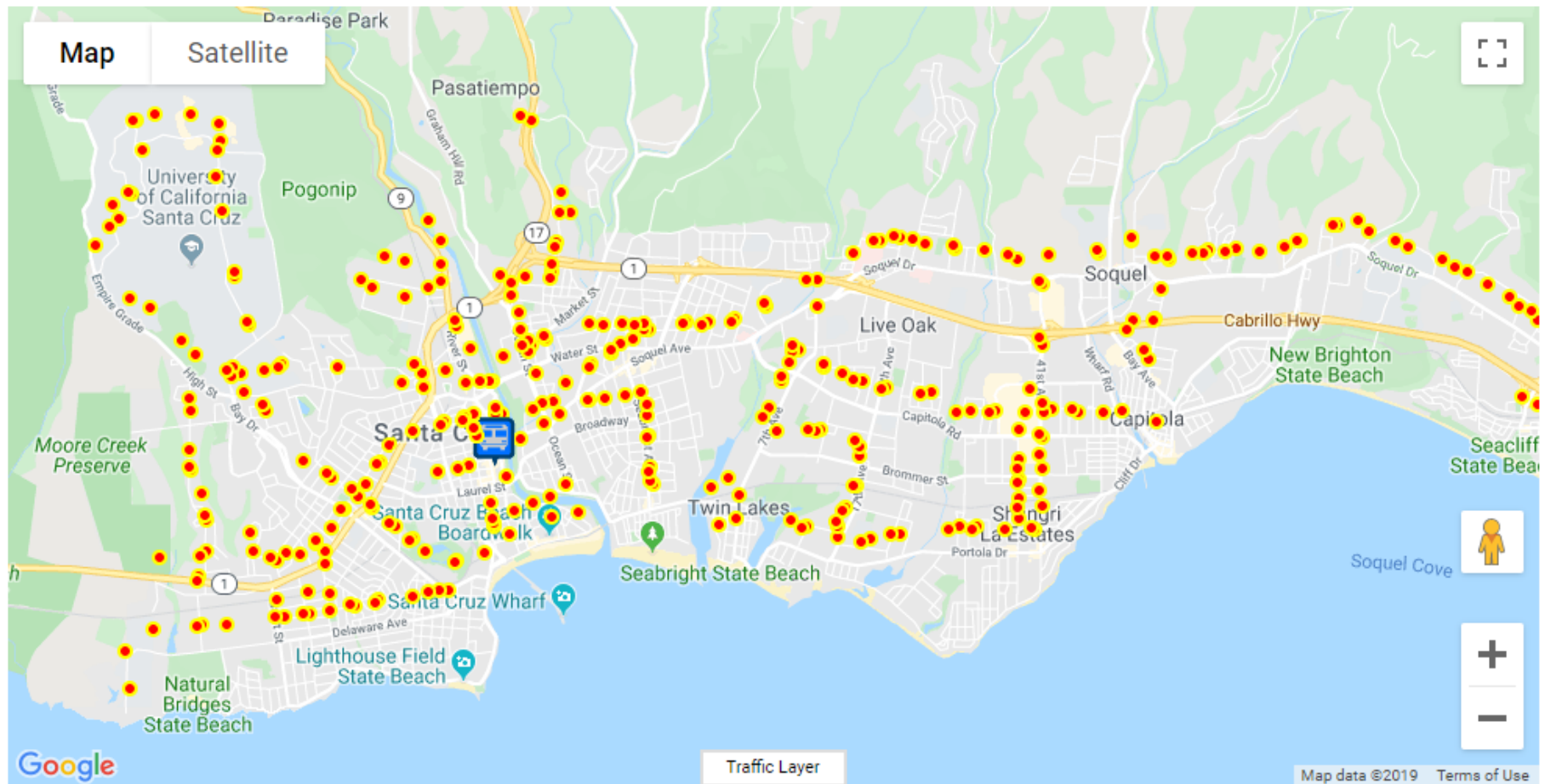
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