FINAL

755 S Bernardo Avenue Child Care Facility Transportation Operations Analysis

Prepared for:

City of Sunnyvale

Prepared by:

AECOM

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1.0 EXECUTIVE SUMMARY

This report presents the results of a Traffic Operation Analysis (TOA) conducted for the proposed conversion of a currently vacant medical building to a childcare/preschool located at 755 S Bernardo Avenue in the City of Sunnyvale, California.

The project involves conversion of an empty building to a childcare/preschool for up to 120 children with 24 teachers and staff. The site will provide 32 parking spots that include two ADA compliant stalls, one Electrical Vehicle (EV) charging stall and two rideshare stalls. Twelve of the stalls are designated for pick-up/drop-off parking.

The impacts of the proposed project were evaluated following the guidelines of the City of Sunnyvale and the Santa Clara Valley Transportation Authority (VTA) which is the Congestion Management Agency for Santa Clara County. Roadway system operations were evaluated under the following study scenarios:

- Existing Conditions
- Existing plus Project Conditions
- Background Conditions
- Background plus Project Conditions

Pedestrian, bicycle and transit facilities were also evaluated.

1.1 Project Trip Generation

Project generated trips were estimated using vehicle trip rates published by the Institute of Transportation Engineers (ITE, 10th Edition). The proposed project is estimated to generate 94 AM peak hour vehicle trips (50 inbound trips and 44 outbound trips) and 95 PM peak hour vehicle trips (45 inbound trips and 50 outbound trips).

1.2 Project Impacts

This analysis identifies potentially significant adverse impacts of the proposed project if any, on the surrounding transportation system and recommends measures to mitigate significant impacts. The project is not expected to create a significant impact.

1.2.1 Existing Plus Project Conditions

Intersection Analysis

Under this scenario, all the study intersections are expected to operate within acceptable Levels of Service (LOS) during both peak hours. Therefore, the proposed development is not expected to create a significant impact and no mitigation measures are recommended at the study intersections.

Queuing Analysis

The anticipated queues for through-movement traffic do not spill back to the upstream intersections. All left-turn pockets have sufficient capacity to store the anticipated queue during both peak hours except for the eastbound left-turn at S Bernardo Avenue and W El Camino Real (W ECR) which is near capacity during the PM peak hour. However, the project was found to add less than one car to the queues for all

study intersections during the AM and PM peak hours. As such, the project is not expected to adversely impact the existing queuing conditions.

1.2.2 Background Plus Project Conditions

Intersection Analysis

Under this scenario, all the study intersections are expected to operate at acceptable LOS during both peak hours. Therefore, the proposed development is not expected to create a significant impact and no mitigation measures are recommended at the study intersections.

Queuing Analysis

The anticipated queues for through-movement traffic do not spill back to the upstream intersections and all left-turn pockets have sufficient capacity to store the anticipated queue during both peak hours except the eastbound left-turn at S Bernardo Avenue and W ECR. It is near capacity during the PM peak hour but the project was found to add less than one car to the queues for all study intersections during the AM and PM peak hours. As such, the project is not expected to adversely impact the queuing conditions under the Background conditions.

1.2.3 Pedestrian, Bicycle and Transit Analysis

The proposed project does not conflict with existing and planned pedestrian facilities. In addition, the existing pedestrian facilities in the project vicinity are expected to have the capacity to accommodate future demand based on the observations of current usage. The project would provide minor improvements to the sidewalks adjacent to the project accesses to comply with city standards.

The proposed project does not conflict with existing and planned bicycle facilities and would not adversely impact the safety of the cyclists as there are no hazardous design features impeding the use of bicycles. Therefore, the project is expected to have a less-than-significant impact on cyclists.

The proposed project is not expected to conflict with planned transit facilities. The existing or planned pedestrians and bicycle access to transit routes and stops are expected to accommodate the project usage. The added project trips could increase the transit vehicle delay at some study intersections by 1.5 seconds but the overall impact is still less than significant.

Therefore, the project is not expected to adversely impact the pedestrian, bicycle and transit facilities in the vicinity of the project site.

1.2.4 Site Access and On-site Circulation

The project will provide an emergency vehicle access along S Bernardo Avenue that is closed off to regular traffic through the use of removable bollards. The main access will be along Brookfield Avenue. The design for both accesses is adequate, meeting city standards and emergency vehicle requirements. The internal roadway width is also adequate for parking maneuvers as well as emergency vehicle access. The project is also conveniently located, accessible via ECR from the regional freeways and Central Expressway.

It is recommended that the project applicant implement the following improvements:

- The proposed 2-way segment of the internal roadway in front of the school building entrance be converted to 1-way, to make it safer for drop-off and pick-up.
- Shorten the crosswalk at the Brookfield Avenue intersection by removing the pork chop island and extending the northwest corner of the intersection to further enhance safety adjacent the project site.

1.2.5 Parking

The project proposes to provide 32 parking spaces to the meet city's requirement of 30 parking spaces. The proposed number of spaces will include two ADA compliant stalls, one EV charging stall and two rideshare stalls. These provisions satisfy city standards. Twelve of the stalls are marked for pick-up/drop-off parking. Currently, no parking issues have been observed. The project is therefore not expected to significantly impact the parking situation in the vicinity. It is recommended that the project applicant implement the following improvements:

- Parking/loading be prohibited on both sides of the proposed project driveway along Brookfield Avenue (north side), from the intersection with S Bernardo Avenue to the adjacent apartment complex driveway, to ensure sufficient sight distance for vehicles.
- Landscaping features must not obstruct the view of the driveway.
- Parking/loading be prohibited on the west side of Bernardo Avenue along the project frontage.

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2.0 INTRODUCTION

This report presents the results of a Transportation Operations Analysis (TOA) conducted for the proposed conversion of a one-story medical office building to a preschool/daycare facility located at 755 S Bernardo Avenue in the City of Sunnyvale, California.

The purpose of this TOA is to evaluate the potential transportation impacts, identify short-term roadway circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed. The scope of work was prepared in consultation with the City of Sunnyvale staff.

2.1 Project Description

Existing Site

The site is located at 755 S Bernardo Avenue near W El Camino Real (W ECR) and the existing building is currently vacant. The site currently has three driveways; two on S Bernardo Avenue and one along Brookfield Avenue.

Proposed Site

The project proposes to convert the one-story building to a child care/preschool that can accommodate up to 120 children and 24 teachers. The site will provide 32 parking spaces with ADA and electric vehicle provisions. **Figure 2-1** shows the Project site plan. The main access to the site will be provided along Brookfield Avenue and an emergency vehicle access will be provided along S Bernardo Avenue.

2.2 Study Area

The study area is bounded by W ECR to the north, S Bernardo Avenue to the east, W Knickerbocker Drive to the south and S Knickerbocker to the west.

The roadway impacts of the proposed Project were evaluated by measuring the effect project traffic would have on intersection operations. A total of six intersections, as shown on **Figure 2-2** and listed below, were selected as study locations in consultation with the City of Sunnyvale staff. The study intersections have a standard Level of Service (LOS) at level D as they are all operated by the City of Sunnyvale.

1. S Knickerbocker Dr / Brookfield Ave*
2. S Bernardo Ave / W ECR
3. S Bernardo Ave / Blair Ave*
4. S Bernardo Ave / Brookfield Ave*
5. S Bernardo Ave / Heatherstone Way
6. S Bernardo Ave / W Knickerbocker Dr*

*unsignalized intersection

2.3 Study Scope and Approach

The following four scenarios were evaluated to identify the potential transportation impacts of the project on the study intersections:

1. Existing Conditions - Existing intersection volumes based on traffic counts collected by AECOM in May 2018.
2. Existing plus Project Conditions – Existing volumes plus the trips from this proposed project.

3. Background Conditions – Existing volumes plus trips from approved but not completed projects. This is defined as the Background without project conditions.
4. Background plus Project Conditions – Background volumes from *Scenario 3* plus the trips from this proposed project.

Intersection LOS was analyzed for the weekday AM peak hour and PM peak hour.

2.4 Analysis Methodology

The level of service method approved by Santa Clara County Valley Transportation Authority (VTA) and adopted by the City of Sunnyvale for signalized intersections is the method described in Chapter 16 of the 2000 Highway Capacity Manual (HCM) (Special Report 209, Transportation Research Board) with adjusted saturation flow rates to reflect conditions in Santa Clara County. This method bases signalized intersection operations on the average control vehicular delay.

Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay. The average control delay for signalized intersections is calculated using TRAFFIX analysis software and is correlated to a LOS designation as shown in **Table 2-1**.

In order to ensure that the existing conditions use for analysis reflects the reality, a SYNCHRO model was set up and calibrated to match the field observed queueing conditions for signalized study intersections. The TRAFFIX model, with which the project effects are being analyzed, was calibrated to match the existing intersection delays generated by SYNCHRO. With this, the existing conditions from the TRAFFIX model was set to be used for analyzing the 'background' and 'with project' scenarios. A comparison of the intersection delays between the SYNCHRO and TRAFFIX models is provided in **Appendix A**.

Levels of service at an intersection range from A, free flow or excellent conditions with insignificant delays, to F, congested or over-saturated conditions with unacceptable delays. **Table 2-1** shows the level of service thresholds for signalized intersections.

Table 2-1 Level of Service Thresholds for Signalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)
A	delay ≤ 10.0
B+	10.0 < delay ≤ 12.0
B	12.0 < delay ≤ 18.0
B-	18.0 < delay ≤ 20.0
C+	20.0 < delay ≤ 23.0
C	23.0 < delay ≤ 32.0
C-	32.0 < delay ≤ 35.0
D+	35.0 < delay ≤ 39.0
D	39.0 < delay ≤ 51.0
D-	51.0 < delay ≤ 55.0
E+	55.0 < delay ≤ 60.0
E	60.0 < delay ≤ 75.0
E-	75.0 < delay ≤ 80.0
F	delay > 80.0

Source: Traffic Level of Service Analysis Guidelines, VTA, June 2003 and HCM 2000.

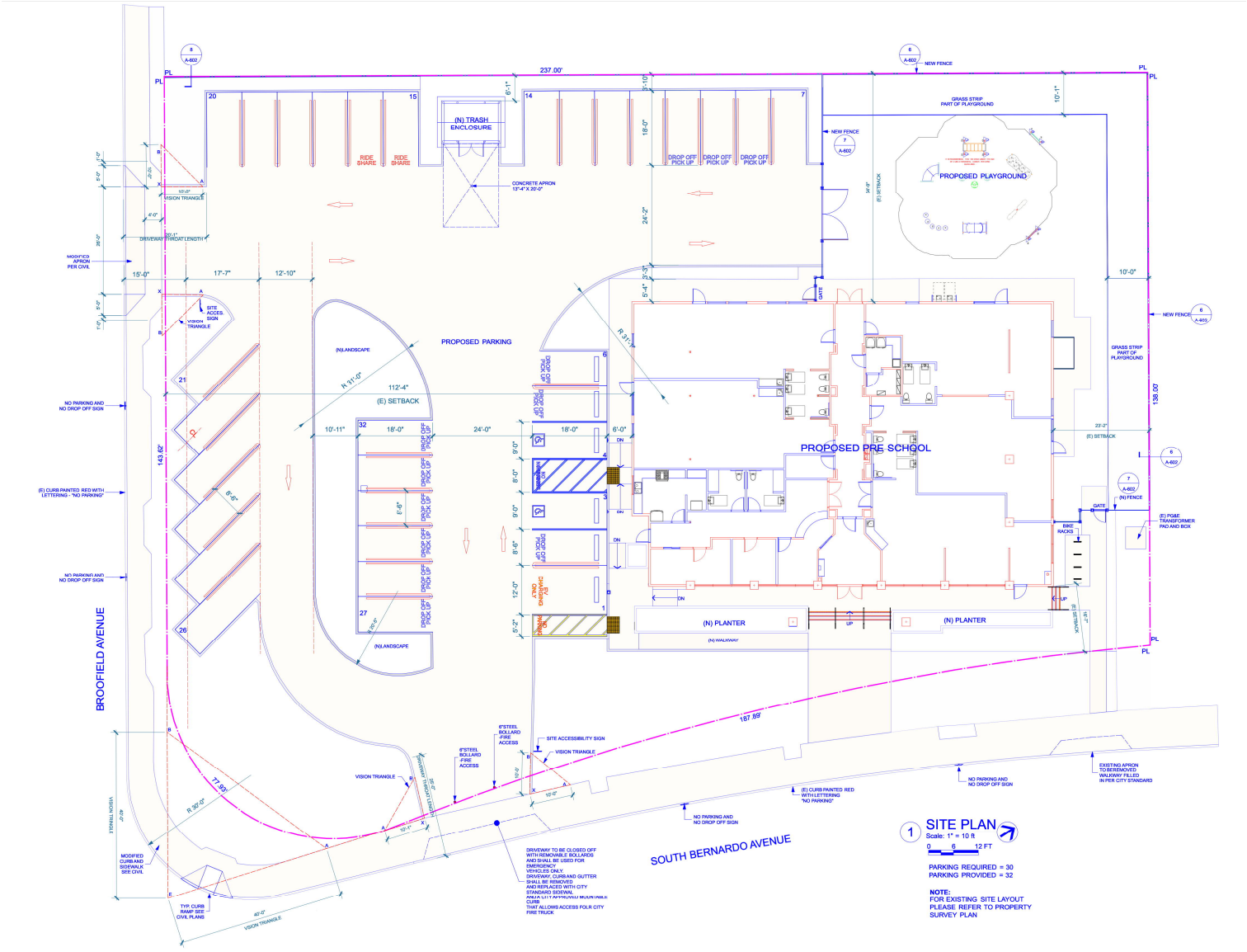

Figure 2-1 Project Site Plan

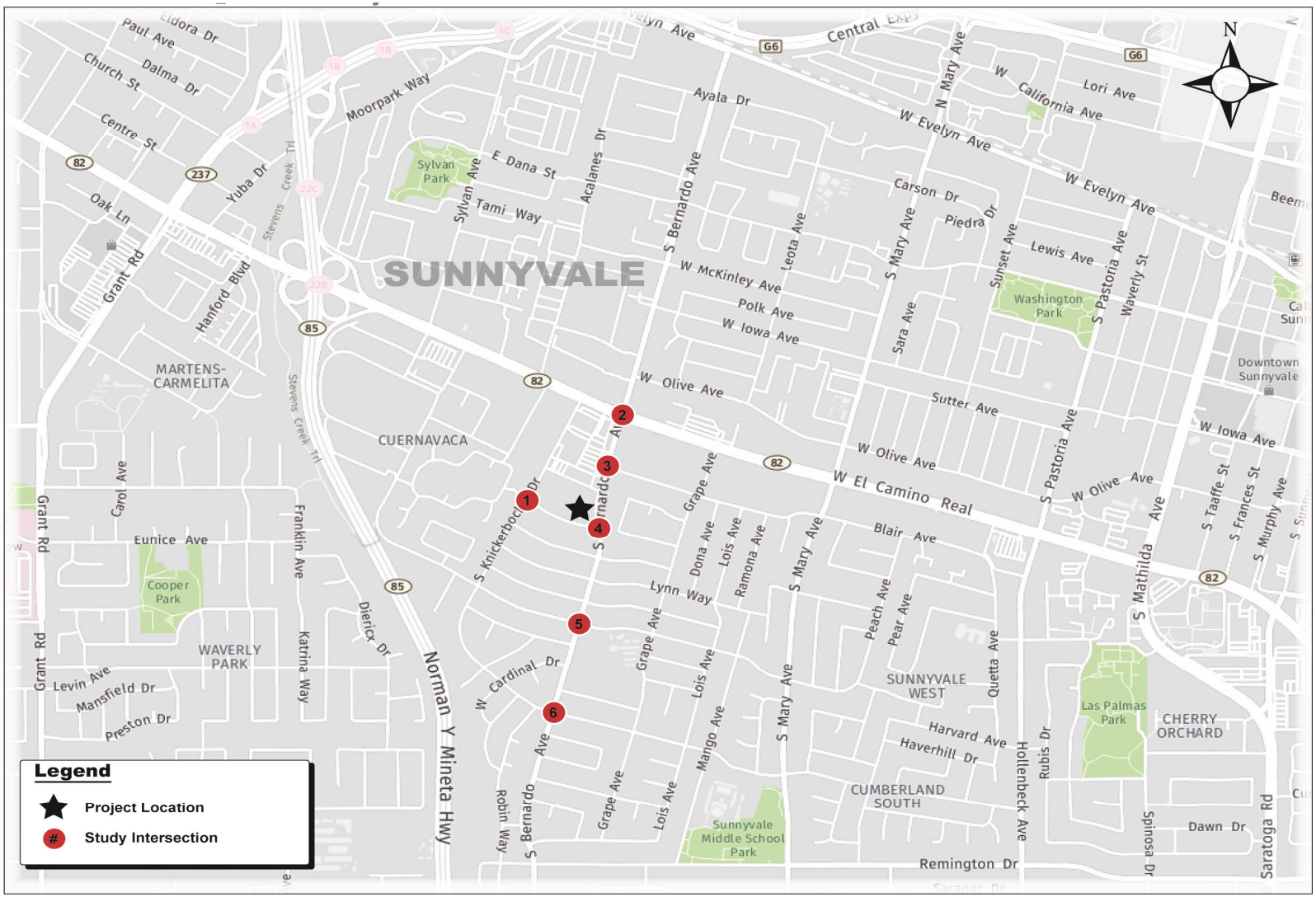

Figure 2-2 Project Vicinity and Intersections

LOS rating for unsignalized intersection is based on the weighted average control delay expressed in seconds per vehicle for all approaches. Control delay includes initial deceleration delay, queue move-up time, stopped delay and final acceleration. For single lane approaches, the control delay is computed as the average of all movements in that lane. At two-way or side-street controlled intersections, the average control delay is calculated for each stopped movement and not for the intersection as a whole.

For this report purpose, the 2000 Highway Capacity Manual (HCM) methodology for unsignalized intersection (supported by TRAFFIX software) was used for the unsignalized intersection LOS calculations. **Table 2-2** shows the thresholds for the different LOS conditions at unsignalized intersections. In addition, the City of Sunnyvale uses the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD) peak hour volume signal warrant to evaluate operations at unsignalized intersections.

Table 2-2 Unsignalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay (seconds/vehicle)
A	Little or no delay	delay ≤ 10.0
B	Short traffic delays	10.0 < delay ≤ 15.0
C	Average traffic delays	15.0 < delay ≤ 25.0
D	Long traffic delays	25.0 < delay ≤ 35.0
E	Very long traffic delays	35.0 < delay ≤ 50.0
F	Extreme traffic delays with intersection capacity exceeded	delay > 50.0

Source: HCM 2000.

2.5 Significance Criteria

The LOS standard for the City of Sunnyvale signalized intersections is LOS D or better. As such, for this report, a traffic impact would be considered significant if the project results will:

- cause a local (City of Sunnyvale) signalized intersection to deteriorate below Level of Service (LOS) D; or
- cause the average control delay for the critical movements of a local signalized intersection already operating at LOS E or F to deteriorate by four seconds or more, and the critical V/C ratio value to increase by 0.01 or more.

For unsignalized intersections, the City's LOS standard is also level D. Significant impacts are defined to occur when the addition of project traffic causes the LOS of an unsignalized intersection to degrade to LOS E or worse. Project impacts are also considered significant if the intersection satisfies the peak hour traffic signal warrant from the CA MUTCD. For an all-way stop intersection already operating at LOS E or F without the project, significant impacts are deemed to have occurred if the average intersection delay increases by four seconds or more and the V/C ratio value increases by 0.01 or more. For a side-street stop controlled intersection already operating at LOS E or F without the project, project impacts will be considered significant if the worst movement delay increases by four seconds or more and the critical V/C value increases by 0.01 or more.

For the purpose of this study, a peak hour signal warrant analysis will be conducted for any unsignalized intersections if the existing LOS is at D or worse.

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3.0 EXISTING AND BACKGROUND CONDITIONS

This section describes the existing conditions in the vicinity of the project in terms of the existing roadways, traffic operations, transit, pedestrian and bicycle facilities.

3.1 Major Roadways in Study Area

Local access to the Project site is provided by W ECR, S Bernardo Avenue, W Knickerbocker Drive and Brookfield Avenue. Direct access to the project site is from S Bernardo Avenue (for emergency vehicle use) and Brookfield Avenue. These roadways are described below.

W El Camino Real (W ECR) is a six-lane divided east-west arterial with a posted speed of 40 mph in the project vicinity. It is classified as a Class I Arterial in the City. Sidewalks are provided on both sides of the street with driveways that provide direct access to businesses and residential developments on both sides of the road. There is a pair of bus stops along W ECR next to the intersection with S Bernardo Avenue. The bus-stops serve VTA Line 22 and Line 522.

S Bernardo Avenue is classified as a residential collector in the City, providing direct access to development adjacent to the road. It is a two-lane undivided roadway immediately abutting the project site, but widens to four lanes between Blair Avenue and W ECR. Sidewalks and Class II bike lanes are provided along both directions of the street. There are three pairs of bus-stops along S Bernardo Avenue between W ECR and W Knickerbocker Drive serving VTA Line 53. In general, on-street parking is allowed along S Bernardo Avenue in the project vicinity. The project will have an emergency access along this road.

W Knickerbocker - S Knickerbocker Drive is a 25 mph undivided two-lane residential collector. It provides direct access to residential and commercial developments on both sides of the street. Sidewalks and Class II bike lanes are provided along both sides of W and S Knickerbocker Drive and W Knickerbocker Drive intersects with W ECR with a 'right-in/right-out' configuration.

Brookfield Avenue is a 25 mph undivided two-lane street where the main ingress/egress of the project will be provided. This street provides connection between S Bernardo Avenue to the east and S Knickerbocker Drive to the west. Parking is allowed on both sides of the street and sidewalks are available.

3.2 Field Observations

Traffic conditions in the field were observed in May 2018, two weeks before the Memorial Day holiday weekend, to validate the existing intersection level of service. Traffic conditions along the roads surrounding the project site were generally between light to moderate, except for W ECR.

The prevailing traffic direction along W ECR in the AM peak is westbound and in the PM peak is eastbound. Though traffic volumes along W ECR were high during the peak hours, the conditions were well managed. Most vehicles encountering the red phase at the S Bernardo Avenue intersection could clear within the first cycle. In addition, the rightmost lane for both approaches (along W ECR) was wide enough for right-turning vehicles to turn exclusively. Vehicles did not block the intersection as there was sufficient capacity downstream in all approaches to receive them. Left-turn pockets along W ECR have sufficient capacity to accommodate left-turning vehicles and no spill-backs obstructing through traffic were observed during both peak hours. Occasional conflicts were observed at the bus-stop along eastbound W ECR in the evening peak when a bus stopped at the bus stop and right-turn vehicles were

trying to inch out from the stop-controlled intersection of S Knickerbocker Drive. However, this problem is not frequent due to the low right-turn volume.

Light traffic and parking conditions were observed along S Bernardo Avenue, Brookfield Avenue and S Knickerbocker Drive during both peak hours. Vehicles encountering the red phase at the intersection of S Bernardo and Heatherstone Way during both the AM and PM peak hours could clear within one cycle. Some queuing was observed at the all-way stop controlled intersection of S Bernardo Avenue and W Knickerbocker Avenue. The longest queue was observed in the AM peak, for the northbound direction (along S Bernardo Avenue); up to ten cars were seen in line of the moving queue. In the PM peak, slightly shorter queues in the southbound direction were observed; up to seven cars were seen to be in line of the moving queue.

No parking issues were observed in the project vicinity during both the AM and PM peak hours. Very few cars were observed to be parking along Brookfield Avenue, in particular, that will provide direct access to the project site. The apartments surrounding the project site apparently have sufficient parking to accommodate their residents and visitors such that there was limited spill over to the surrounding streets. Marked parking spaces were provided along S Knickerbocker Drive, between Brookfield Avenue and W ECR. It was observed that less than 30% were occupied during the AM peak hour and the PM peak hour occupancy was observed to be about 65%.

3.3 Existing Intersection Operations

Existing traffic counts for the six study intersections were conducted during the weekday morning (7:00-10:00 AM) and evening (4:00-7:00 PM) peak periods in May 2018. Detailed traffic counts are provided in **Appendix B**. **Figure 3-1** and **Figure 3-2** show the intersection geometry and existing traffic volumes respectively. The performance of each intersection is presented in **Table 3-1**. The results of the LOS calculations indicate that all of the study intersections operate at acceptable levels of service.

Since all unsignalized intersections perform better than the standard LOS of D, no separate signal warrant analysis was conducted. The signal warrant analysis results from TRAFFIX indicate that the unsignalized study intersections do not warrant a traffic signal during both the peak hours. Details of the intersection analysis are presented in **Appendix C**.

Table 3-1 Intersection Performance – Existing Conditions

Intersection		Peak Hour	LOS Standard	LOS	Average Delay (sec)	Critical V/C
1	S Knickerbocker Dr / Brookfield Ave*	AM	D	A	9.00	0.023
		PM		B	10.00	0.022
2	S Bernardo Ave / W ECR	AM	D	D	45.80	0.720
		PM		D	45.80	0.664
3	S Bernardo Ave / Blair Ave*	AM	D	B	12.00	0.055
		PM		B	11.70	0.039
4	S Bernardo Ave / Brookfield Ave*	AM	D	B	12.10	0.047
		PM		B	13.90	0.054
5	S Bernardo Ave / Heatherstone Way	AM	D	A	8.40	0.357
		PM		A	5.30	0.400

Intersection		Peak Hour	LOS Standard	LOS	Average Delay (sec)	Critical V/C
6	S Bernardo Ave / W Knickerbocker Dr**	AM	D	B	12.80	0.625
		PM		C	16.40	0.752

*LOS and delay reported for worst movement for 2-way stop controlled intersections
**Overall delay reported for AWS controlled intersection
Source: AECOM 2018

3.4 Existing Transit Facilities

The proposed project is about one-third of a mile walking distance from the nearest transit stops along W ECR which serve VTA Lines 22 and 522. Line 22 is a regular VTA service and Line 522 is the 'limited-stop' version of Line 22. Another pair of transit stops are about 300 feet from the project site along S Bernardo Avenue that serves VTA Line 53. **Table 3-2** describes the span of services and frequency of service during the average weekday.

Table 3-2 Existing Transit Details

Route	From	To	Weekdays		Weekends	
			Operating Hours	Peak Hour Headway (Minutes)	Operating Hours	Peak Hour Headway (Minutes)
22	Palo Alto Transit Center	Eastridge Transit Center	24 hours	15	24 hours	15
522	Palo Alto Transit Center	Eastridge Transit Center	4:42 AM – 11:45 PM	12	6:02 AM – 11:37 PM	15
53	West valley College	Sunnyvale Transit Center	6.55 AM – 7:06 PM	varies	N/A	N/A

Source: AECOM 2018

Caltrain is a commuter rail service between San Francisco and Gilroy. The nearest station to the project is approximately two and a half miles away at the Sunnyvale Caltrain Station, located along Evelyn Avenue, northeast of the project site. VTA Line 53 connects the project site to the Sunnyvale Caltrain Station directly. **Figure 3-3** presents the transit facilities in the vicinity of the project site.

3.5 Existing Pedestrian and Bicycle Facilities

Sidewalks are provided along all the streets surrounding the project site. W ECR, S Bernardo Avenue, Brookfield Avenue and S Knickerbocker Drive all have sidewalks on both sides of the street which provide for safe and convenient access to the nearby bus stops. In addition, the intersection of W ECR and S Bernardo Avenue is signalized with crosswalks on all four approaches, providing safe access for pedestrians in the area.

The existing bicycle network consists of three classifications of facilities:

- Class I (bike path) provides an exclusive right-of-way for bicyclists and pedestrians, with cross flows of motorists minimized.

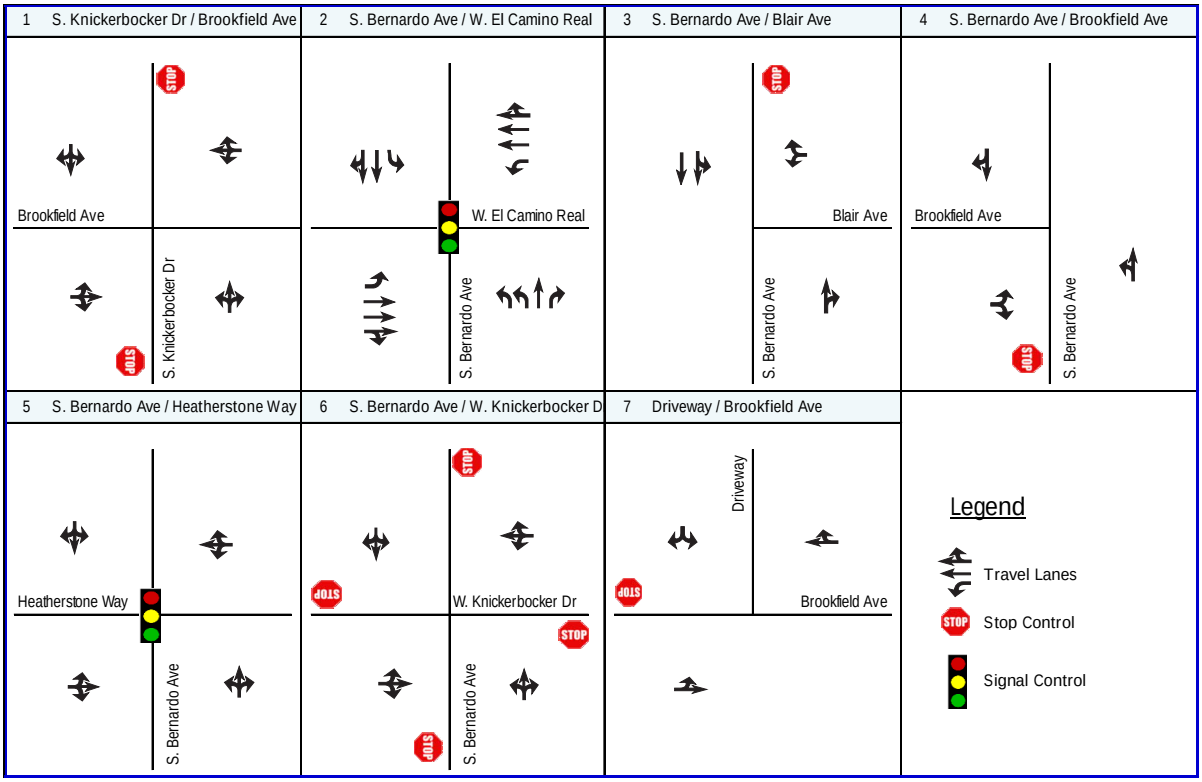

Figure 3-1 Intersection Geometry

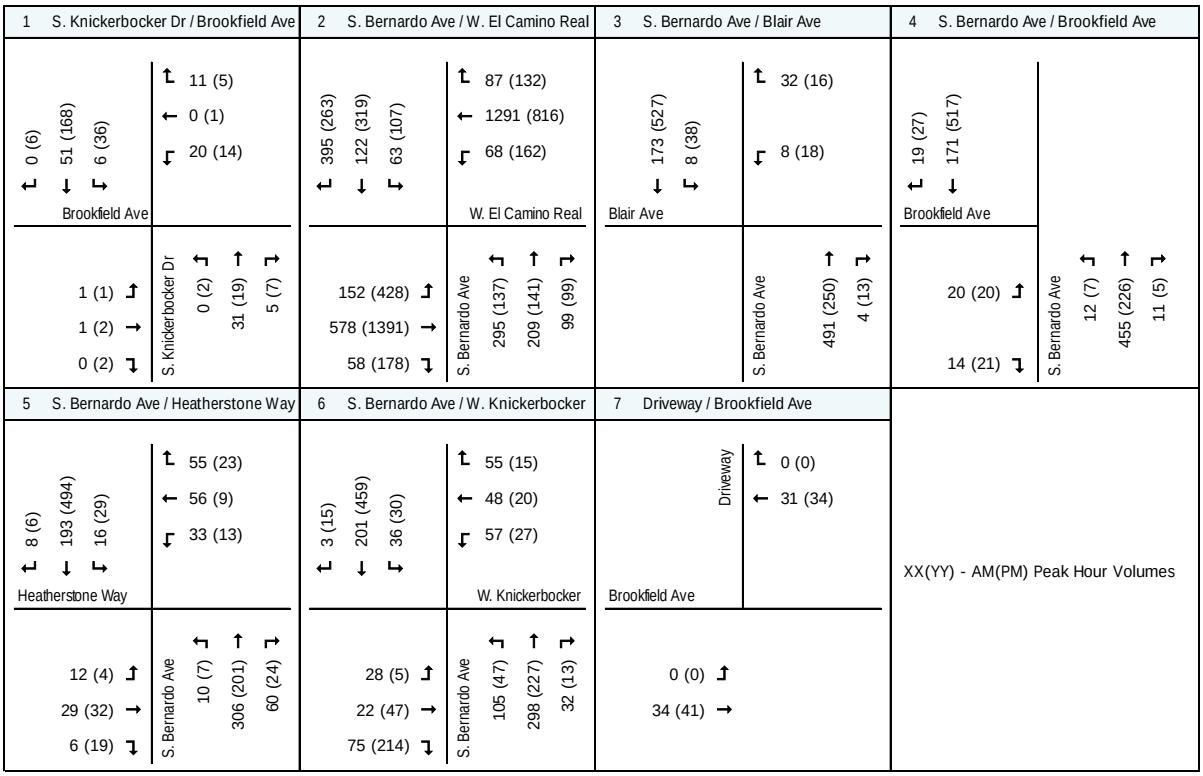

Figure 3-2 Existing Traffic Volumes

- Class II (bike lane) provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted.
- Class III (bike route) provides a right-of-way designated by signs or permanent markings indicating the roadway is shared by pedestrians and motorists.

Bicycles are allowed on all streets in the City of Sunnyvale except freeways. The nearest Class I bike path is provided along Stevens Creek Trail, west of the project site. Class II bike lanes are provided along S Bernardo Avenue and S Knickerbocker Drive. A Bike Boulevard is also provided in the vicinity of the project, on part of Heatherstone Way, continuing to The Americana and Sylvan Avenue, to encourage cycling. Bike Boulevards are streets prioritized for bicycle use through advisory warning to motorists, traffic calming measures and guidance to encourage bicycle use over less attractive routes.

Existing bicycle facilities in the vicinity of the project site are illustrated in **Figure 3-4.**

3.6 Approved Projects

Approved projects (as obtained from the City of Sunnyvale) within a one-mile radius of the proposed project having more than 20 residential units or greater than 10,000 square feet office / commercial will be included in the Background traffic conditions. Only one project, satisfying the above criteria, was identified. It is a mixed use development at 803 W ECR, consisting of 49 residential units, almost 6000 square feet of commercial space and 51-room expansion of the Grand Hotel. Construction for this project is currently underway.

Background condition traffic volumes were developed by adding the trips generated by the above project to the existing traffic volumes. **Appendix D** presents the approved project trips. Only one study intersection, S Bernardo Avenue / W ECR (#2), carries trips from this approved project. All other study intersections remain unchanged from the existing conditions. Background condition traffic volumes for the AM and PM peak hours for study intersection #2 are presented in **Figure 3-5**.

3.7 Background Conditions

Based on the existing traffic volumes and approved project trips presented earlier, intersection analysis was performed at all the study intersections for the Background conditions. Lane geometries for this scenario are same as that of the existing condition. **Table 3-3** presents the analysis results and the analysis details are presented in **Appendix E**. Note that the results for all intersections are similar to the existing conditions except for the intersection of S Bernardo Avenue / W ECR (#2) which sees a slight increase in the V/C ratio due to the additional trips from the approved project on W ECR described above.

Since all unsignalized intersections perform better than the standard LOS D, no separate signal warrant analysis was conducted. The signal warrant analysis results from TRAFFIX indicate that the unsignalized study intersections do not warrant a traffic signal during both of the peak hours.

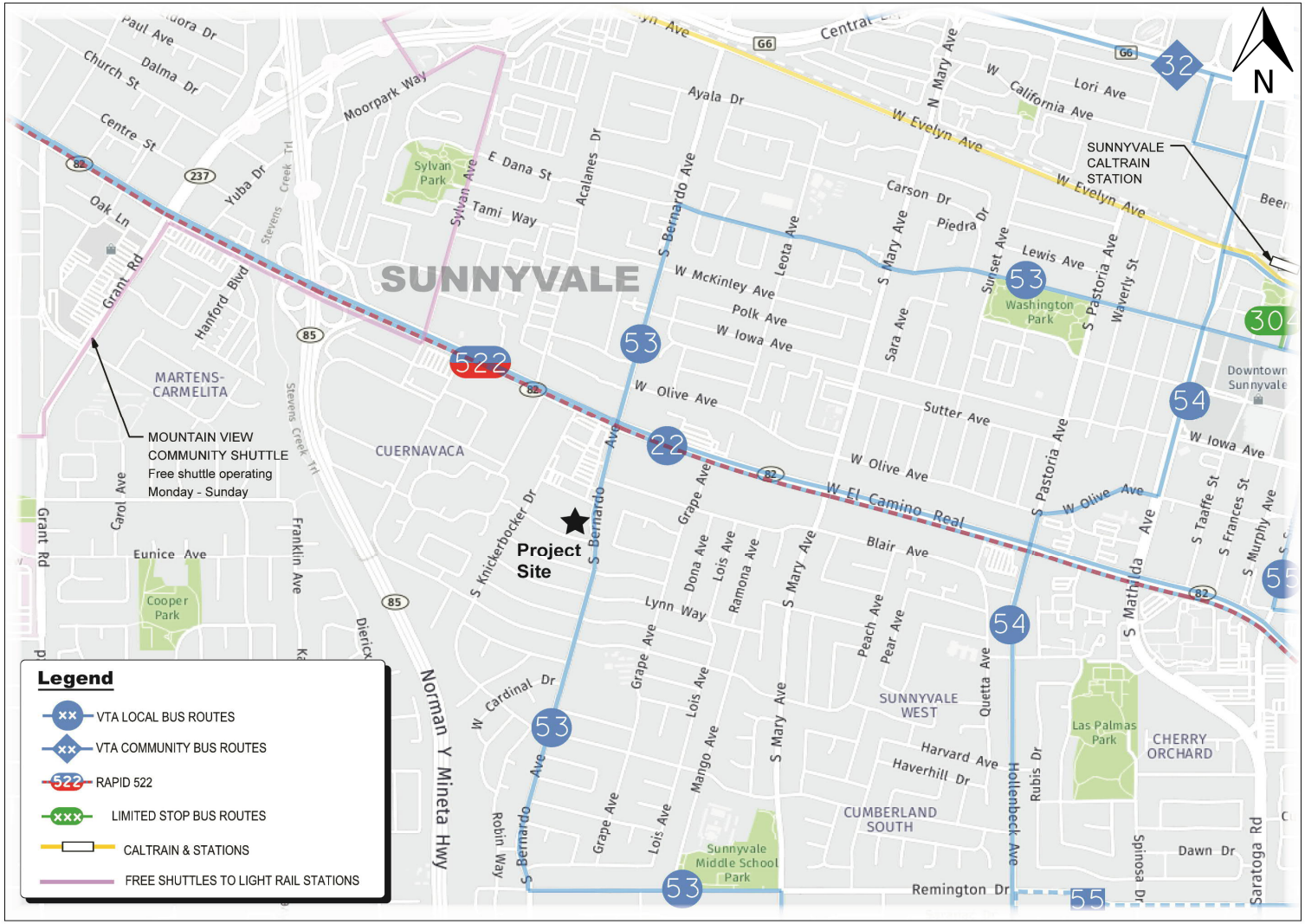

Figure 3-3 Existing Transit Facilities

Figure 3-4 Existing Bicycle Facilities

Table 3-3 Intersection Performance – Background Conditions

Intersection		Peak Hour	LOS Standard	LOS	Average Delay (sec)	Critical V/C
1	S Knickerbocker Dr / Brookfield Ave*	AM	D	A	9.00	0.023
		PM		B	10.00	0.022
2	S Bernardo Ave / W ECR	AM	D	D	45.8	0.723
		PM		D	45.8	0.667
3	S Bernardo Ave / Blair Ave*	AM	D	B	12.00	0.055
		PM		B	11.70	0.039
4	S Bernardo Ave / Brookfield Ave*	AM	D	B	12.10	0.047
		PM		B	13.90	0.054
5	S Bernardo Ave / Heatherstone Way	AM	D	A	8.40	0.357
		PM		A	5.30	0.400
6	S Bernardo Ave / W Knickerbocker Dr**	AM	D	B	12.8	0.625
		PM		C	16.4	0.752

*LOS and delay reported for worst movement for 2-way stop controlled intersections
**Overall delay reported for AWS controlled intersection
Source: AECOM 2018

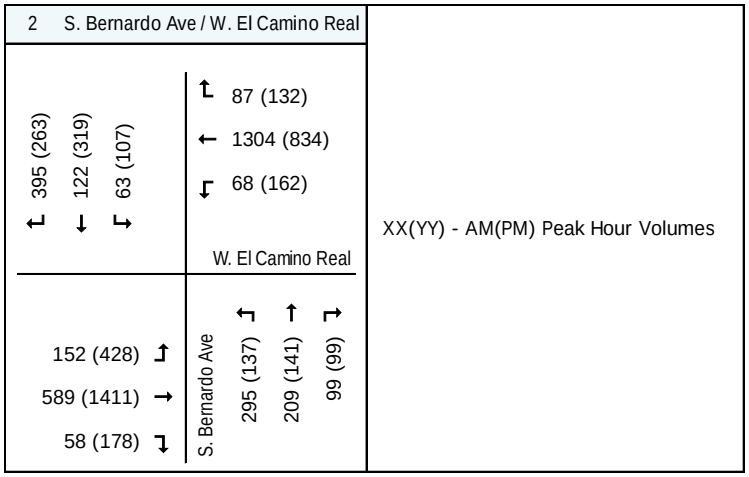

Figure 3-5 Background Intersection Traffic Volumes

4.0 PLUS PROJECT CONDITIONS

This chapter looks at the future transportation conditions in the study area as a result of the proposed project. Trips generated by the proposed development are added to the 'no project' scenarios discussed in the earlier chapter to determine the effects of this project. Any mitigation measures necessary to alleviate potential impacts will also be discussed.

4.1 Trip Generation, Trip Distribution and Project-Only Trip Assignment

This section presents the number of trips generated by the proposed development. Trip generation rates from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* (10th Edition, 2017) were used for determining the number of trips of the future land use. Trip generation rates and estimates are summarized in **Table 4-1**. Since the medical building is currently vacant, there are no 'existing' trips. The proposed project is estimated to generate 94 AM peak hour vehicle trips (50 inbound trips and 44 outbound trips) and 95 PM peak hour vehicle trips (45 inbound trips and 50 outbound trips). These will be the net new trips to be generated at this site and will be considered 'project trips'.

Table 4-1 Trip Generation for Proposed Project

Land Use	Size	Unit	AM Peak Hour						PM Peak Hour					
			Rate	In%	In	Out %	Out	Total	Rate	In%	In	Out %	Out	Total
Existing														
Medical Office[1]			Currently vacant						Currently vacant					
Proposed														
Day Care center[1]	120	Students	0.78	53%	50	47%	44	94	0.79	47%	45	53%	50	95
Net New Trips					**50**		**44**	**94**			**45**		**50**	**95**

Notes:
All rates are from Institute of Transportation Engineers, Trip Generation, 10th Edition
1. Land Use Code 565: Day Care Center (average rates, expressed in trips per student)
This project is not eligible for trip reductions based on VTA TIA Guidelines.

Trip distribution is defined as the direction of approach and departure that vehicles would use to arrive at and depart from the site. The trip distribution pattern of the traffic generated by the project onto the roadway system was based on knowledge of the area, prevailing traffic patterns and the site access locations. The project trips were distributed and assigned to the study intersections for traffic impact determination based on the trip distribution percentages shown in **Figure 4-1.** The resulting project only volumes at each of the study intersections are presented in **Figure 4-2.**

4.2 Existing plus Project Traffic Conditions – Intersection Operations

A Project impact is determined by comparing the operating conditions of 'plus project' and the 'no project' scenarios. The comparison table is shown in **Table 4-2**. The total 'plus project' traffic volumes for all the study intersections under the Existing Conditions are presented in **Figure 4-3**. The main project driveway at Brookfield Avenue is also being analyzed as an unsignalized intersection (#7).

The results show that all study intersections are expected to operate within acceptable LOS with the proposed project during both peak hours.

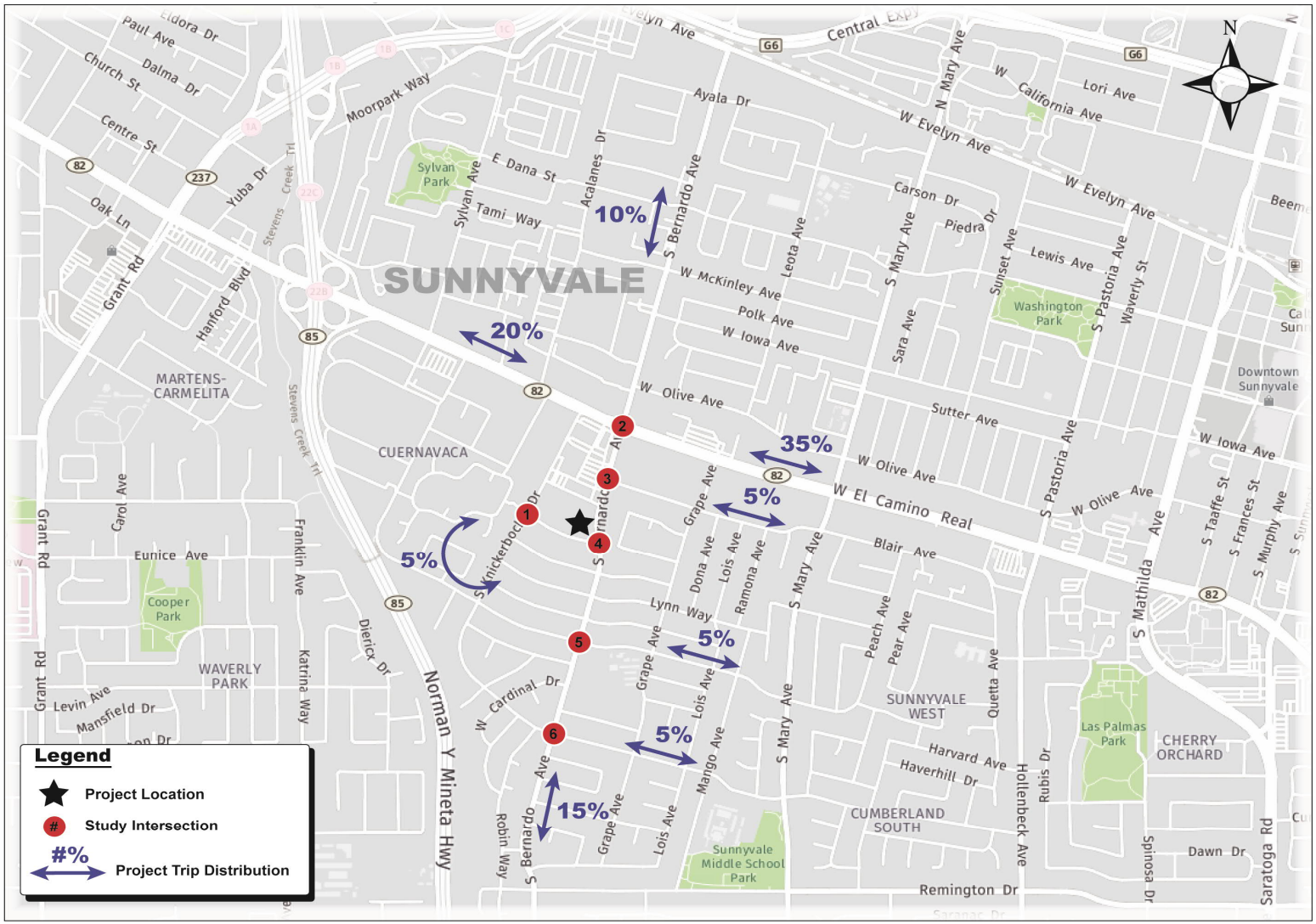

Figure 4-1 Project Trip Distribution

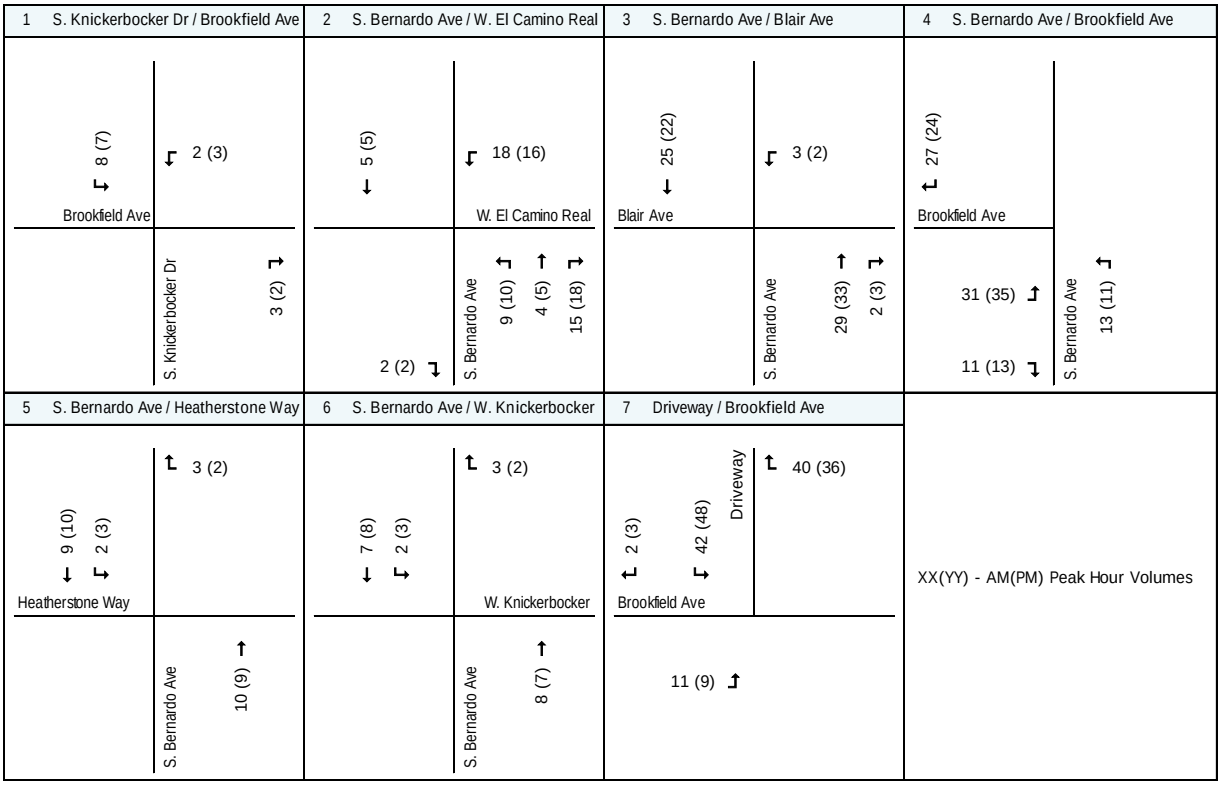

Figure 4-2 Project Only Traffic Volumes

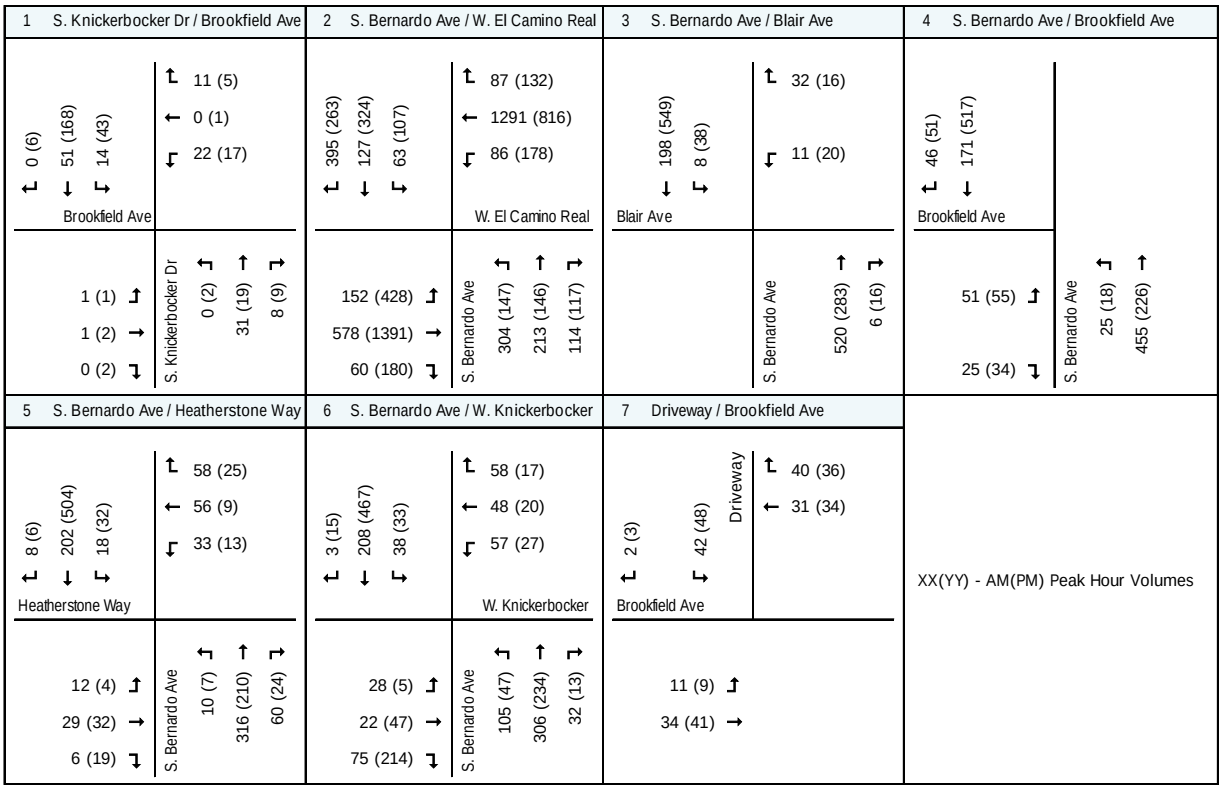

Figure 4-3 Existing + Project Traffic Volumes

Table 4-2 Comparison of Study Intersections LOS – Existing plus Project Conditions

	Intersection	Peak Hour	Existing Conditions				Existing + Project Conditions				Δ Delay	Δ Crit V/C	Δ Avg Crit delay	Impact ? Y / N
			LOS	Delay (sec)	Critical V/C	Avg Crit Delay (sec)	LOS	Delay (sec)	Critical V/C	Avg Crit Delay (sec)				
1	S Knickerbocker Dr / Brookfield Ave*	AM	A	9.00	0.023	2.7	A	9.10	0.026	3.0	0.1	0.003	0.3	N
		PM	B	10.00	0.022	2.0	B	10.2	0.027	2.2	0.2	0.005	0.2	N
2	S Bernardo Ave / W ECR	AM	D	45.8	0.720	49.0	D	45.9	0.723	49.2	0.1	0.003	0.2	N
		PM	D	45.8	0.664	54.2	D	46.4	0.669	54.3	0.6	0.005	0.1	N
3	S Bernardo Ave / Blair Ave*	AM	B	12.00	0.055	0.8	B	12.5	0.057	0.8	0.5	0.002	0.0	N
		PM	B	11.70	0.039	0.8	B	12.2	0.046	0.8	0.5	0.007	0.0	N
4	S Bernardo Ave / Brookfield Ave*	AM	B	12.10	0.047	0.7	B	13.7	0.126	1.6	1.6	0.079	0.9	N
		PM	B	13.90	0.054	0.8	C	16.4	0.157	1.8	2.5	0.103	1.0	N
5	S Bernardo Ave / Heatherstone Way	AM	A	8.4	0.357	9.0	A	8.4	0.365	9.1	0.0	0.008	0.1	N
		PM	A	5.3	0.400	5.1	A	5.3	0.409	5.1	0.0	0.009	0.0	N
6	S Bernardo Ave / W Knickerbocker Dr*	AM	B	12.8	0.625	12.8	B	13.2	0.640	13.2	0.4	0.015	0.4	N
		PM	C	16.4	0.752	16.4	C	17.2	0.772	17.2	0.8	0.020	0.8	N
7	Project Driveway / Brookfield Ave**	AM	N/A				A	9.2	0.050	3.0	9.20	0.050	3.0	N
		PM					A	9.3	0.050	3.2	9.30	0.050	3.2	N

*LOS and delay reported for worst movement for 2-way stop controlled intersections
**Overall delay reported for AWS controlled intersection
Source: AECOM, 2018

In addition, the 'plus project' scenario would not bring about significant changes in both delay and critical V/C ratio to be considered an impact. As such, the proposed project would not adversely affect the existing conditions. No separate peak hour signal warrant analysis was performed for the unsignalized intersections as they are expected to operate within acceptable LOS. Moreover, the signal warrant analysis results from TRAFFIX show that the warrants are not met and signalization is not needed for all unsignalized intersections. Details of this analysis are presented in **Appendix F**.

4.3 Existing plus Project Traffic Conditions - Transit Facilities Impacts

The existing transit facilities in the project vicinity are expected to support the project usage under the 'plus project' conditions. Based on current observation, the bus service would continue to serve the project vicinity and the proposed project is not expected to adversely affect public transit services. Since this is a childcare/preschool development, many of the students and their parents are not expected to use public transit. Teachers and other staff members may be public transit users, but their number is expected to be small. The delay due to the proposed project, during both peak hours, along W ECR (in both directions) on which VTA Line 22 and Line 522 run, is no more than 1.4 seconds at intersection #2. VTA Line 53, which runs along S Bernardo Avenue, is expected to experience no more than 1.4 seconds of delay due to the project trips at any of the study intersection. **Table 4-3** summarizes the movement delays through the intersections along the routes of lines 22, 522 and 53 within the study area. In addition, the project is not expected to conflict with the planned transit facilities and the existing pedestrian and bicycle facilities are adequate for users to access transit stops.

Table 4-3 Transit Impact Analysis - Existing plus Project Conditions

VTA Line	Intersection		Direction/ Movement	Existing Delay (sec)		Existing plus Project Delay (sec)		Δ Delay (sec)	
				AM	PM	AM	PM	AM	PM
22 & 522	2	S Bernardo Ave / W ECR	EBT	45.0	35.1	45.1	36.5	0.1	1.4
			WBT	44.0	56.6	44.2	56.7	0.2	0.1
53	2	S Bernardo Ave / W ECR**	NBT	47.2	58.1	46.9	58.2	-0.3	0.1
			SBT	35.3	55.3	35.6	55.2	0.3	-0.1
	3	S Bernardo Ave / Blair Ave*	NBT	0.0	0.0	0.0	0.0	0	0
			SBT	0.0	0.0	0.0	0.0	0	0
	4	S Bernardo Ave / Brookfield Ave*	NBT	0.0	0.0	0.0	0.0	0	0
			SBT	0.0	0.0	0.0	0.0	0	0
	5	S Bernardo Ave / Heatherstone Way	NBT	5.6	2.5	5.7	2.5	0.1	0
			SBT	5.0	3.2	5.0	3.3	0	0.1
	6	S Bernardo Ave / W Knickerbocker Dr*	NBT	15.5	12.9	16.0	13.2	0.5	0.3
			SBT	11.1	21.4	11.4	22.8	0.3	1.4

*unsignalized intersection
**Average delay decreases with project as more green time was apportioned to the NBT and SBT movements in the AM and PM respectively. This is because of the actuated & coordinated settings, where demand and gap out time changes between existing and plus project conditions.
Source: AECOM, 2018

4.4 Existing plus Project Traffic Conditions - Pedestrian and Bicycle Facilities Impacts

The project will provide minor improvements to the existing sidewalks surrounding the project site. The current curb ramp for the egress along S Bernardo Avenue, at the northeast corner of the parcel, will be removed and the sidewalk will be filled in as part of the project, according to City standards. Similarly, the curb ramp for the proposed emergency access along S Bernardo Avenue and for the main access along Brookfield Avenue will also be improved to meet city standards as part of the project. As mentioned earlier, due to the nature of the proposed use, this project is not expected to generate a high pedestrian number since the age of the students at this facility will be under 5 years old. While some children may walk from the nearby residential neighborhoods with their caregivers to the project site, the number is expected to be very small. Similarly, only a small number of teachers or other staff members are expected to walk to the project site. Therefore, based on observation of the current situation, the existing sidewalks and crosswalks in the project vicinity, including the crosswalk nearest to the project (at intersection #1), are expected to accommodate the usage under the 'plus project' conditions.

Similarly, this project would not generate a high number of cyclists due to the nature of the facility proposed. Therefore, based on the observations of current conditions, the existing bicycle facilities in the project vicinity presented earlier would be sufficient to meet the expected demand of the proposed project. The proposed project would not adversely impact the safety of the cyclists as there are no hazardous design features impeding the use of bicycles. Therefore, the project is expected to have a less-than-significant impact on pedestrians and cyclists.

4.5 Existing plus Project Traffic Conditions - Queuing Impacts

The queuing conditions at the study intersections under the Existing plus Project Traffic conditions were compared with the existing conditions to identify if there is any queue that spills back to the upstream intersections or out of the turn pockets. A typical vehicle length of 25 feet was used for the queuing analysis. An operational deficiency is assumed to occur if the queue increases by one or more vehicles and if the queue exceeds the turn pocket length or extends close to the upstream intersection. Summary of the queueing results is provided in **Appendix G.**

Table 4-4 summarizes the queues under the existing plus project conditions for the two signalized study intersections (#2 & #5) as well as the all-way-stop control intersection (#6). The average queue length is being reported. The 95 percentile queues calculated by TRAFFIX for the 3 two-way stop controlled intersections are less than 1 vehicle under both with and without the project scenarios. They are therefore not presented in the Table 4-4. Based on visual observation of the existing traffic condition, the westbound (prevailing AM) left-turn pocket for the S Bernardo Avenue / W ECR intersection (#2) has sufficient capacity to accommodate the turning vehicles. The project is only expected to add less than one vehicle to this movement and can therefore still be accommodated. In the PM peak, the eastbound (prevailing) left-turn pocket can accommodate existing left-turn vehicles most of the time although it was observed that occasionally, the number of left-turn vehicles exceeded the storage capacity. The average eastbound left-turn queue is almost at the capacity of the storage length as a result. The project is expected to add less than one vehicle eastbound left-turn vehicles to this movement and can therefore be accommodated.

Table 4-4 Queuing Analysis – Existing plus Project Conditions

Intersection		Storage Length (ft)	Movement	Existing*		Existing plus Project*	
				AM Peak Hour (ft)	PM Peak Hour (ft)	AM Peak Hour (ft)	PM Peak Hour (ft)
2	S Bernardo Ave / W ECR	510	NBL	180	90	195	100
		510	NBT	180	145	190	150
		140	SBL	60	125	60	125
		345	SBT	95	335	100	340
		480	EBL	210	465	210	465
		2190	EBT	180	415	180	425
		490	WBL	70	205	90	225
		960	WBT	430	315	430	315
5	S Bernardo Ave / Heatherstone Way	980	NBLTR	40	10	60	10
		2365	SBLTR	25	95	30	100
		1115	EBLTR	20	30	20	30
		725	WB	55	25	55	25
6	S Bernardo Ave / W Knickerbocker Dr	1745	NBLTR	40	20	20	20
		975	SBLTR	15	65	15	70
		4320	EBLTR	10	20	10	20
		810	WBLTR	10	5	10	5

*Average queue length rounded up to nearest 5 feet
Source: AECOM, 2018

4.6 Parking, Site Access and Circulation Analysis

Table 4-5 presents the parking evaluation for the proposed project. Based on the Sunnyvale Municipal Code Chapter 19.46, Table 19.46.100(c), a Child Care Center would need to provide at least 0.25 parking spots per child. As such, in order to meet the city requirement, the minimum number of parking spaces to be provided by the project would 30. The project will satisfy this by providing 32 parking stalls which include two ADA accessible stalls and, one electrical vehicle parking stall. There are no bicycle parking requirements for this facility.

Table 4-5 Parking Provision

Land Use	Size	Project Supply	City requirement	
			Min	
Child Care	120 students		0.25 /student	30
Total		32		30

Out of the 29 regular parking stalls, 12 stalls are reserved for pick-up/drop-off parking and two stalls are reserved for ride-sharing vehicles. There are currently no observed parking issues surrounding the project site. However, project parking should not be allowed on S Bernardo Avenue along the frontage. In addition, as there are no crosswalk and center median along S Bernardo Avenue adjacent to the project, visitors (to the project site) risk having to cross several lanes of traffic; it would be even more dangerous

when they are with young children. Therefore, parking on the west side of Bernardo Avenue is discouraged. As for parking along Brookfield Avenue, though the current observed number of vehicles parking along this road is low, it is recommended that parking be prohibited adjacent to the project driveway on the north side of Brookfield Avenue. As the access is fairly close (approximately 105 feet; 4-car length) to the S Bernardo Avenue / Brookfield Avenue intersection (#4), vehicles parked between the intersection and project driveway would conflict with turning vehicles as well as would obstruct the driveway sight distance. Parking along this section should therefore be prohibited. Similarly the project driveway is also very close to the driveway of the adjacent apartment complex (approximately 75 feet; 3-car length). Vehicles parked between the two driveways will obstruct the sight distance for both developments. As such, parking should also be prohibited. Along the south side of Brookfield Avenue fronting the project, no additional or new parking restrictions are being recommended. However, the project applicant should discourage project parking along the section as sufficient parking is being provided on site. It should also remind its visitors to be cautious when crossing the road and make use of the available crosswalk, especially when with young children. The above proposed parking restrictions would not lead to parking deficiency in the area as the current on-street parking usage is low and the project is expected to accommodate its parking needs on-site.

There are currently 3 driveways for the project site. One is an egress at the northeast corner of the parcel along S Bernardo Avenue, the second one is a full movement driveway located along S Bernardo Avenue and the third one is a full movement driveway located along Brookfield Avenue. The project proposes to close the egress and convert the full movement driveway along S Bernardo Avenue for emergency vehicle use only. The emergency access along S Bernardo Avenue will be closed off to regular traffic using two removable 6-inch steel bollards. The emergency access design is adequate for fire truck access.

The main access for the site will therefore be the full movement driveway along Brookfield Avenue. It will be 26 feet wide which is sufficient to accommodate two vehicles; one entering and one exiting at the same time. Landscaping features adjacent to the access, not available at the time of this report preparation, should not include tall plants or large trees that would obstruct the view of the access.

The daycare/preschool hours are from 8:30AM to 6:30PM, on Mondays to Fridays. Traffic and parking in the immediate vicinity around the project site (along S Bernardo Avenue, Brookfield Avenue and S Knickerbocker Drive) was observed to be relatively light at about 8:30AM and between 6:00-6:30PM under existing conditions. The expected pick-up/drop-off movements due to the project therefore would not adversely impact the traffic conditions on a typical weekday. The project is proposing to stagger the evening pick-up, with the younger children (up to 3 years old) being picked up by 6PM and the older group (4-5 years old) being picked up at around 6:30PM. This is a good way to spread out the pick-up activities and avoiding a large congregation of parents and children over a short period of time.

The proposed internal circulation of the parking area allows for 2–way traffic fronting the main entrance to the school building. All the parking spots in the area are for pick-up and drop-off except for the 2 ADA compliant spots and 1 EV charging station. High pedestrian movements, involving young children, are therefore expected in this area. AECOM recommends that the 1-way circulation from the access be continued to the pick-up/drop-off area in front of the school building (instead of 2-way) to reduce vehicular and pedestrian conflict in this area. This is to make it safer, especially for parents with young children, to navigate around the pick-up/drop-off area. The internal road way widths (13’ for the one-way segment and 24’ for the 2-way segment) are adequate for parking maneuver as well as emergency vehicle access.

The intersection of S Bernardo and Brookfield Avenue (#4) is expected to carry most of the foot traffic to the proposed child care/preschool. This unsignalized intersection, which has adequate sight-distance, provides a marked cross-walk across Brookfield Avenue which is stop-controlled. Even though the foot traffic generated by the project is not expected to increase significantly, it is recommended that the project applicant implement some improvements to further enhance the safety, especially for the expected young children. The distance of the crosswalk can be reduced by removing the pork chop island and extending the northwest corner of the intersection. The southbound right-turn into westbound Brookfield Avenue from S Bernardo Avenue will be at a right-angle. AECOM performed an AUTOTURN analysis demonstrating that a 48-foot trailer truck will still be able to negotiate the intersection under the proposed improvement. In that case, the crosswalk distance will be reduced by approximately 22 feet and the crossing time will be shortened by about 7 seconds. **Appendix H** presents the proposed layout of the modifications and the truck dimension details used in the analysis.

4.7 Background plus Project Traffic Conditions – Intersection Operations

The Background plus Project conditions do not differ from the Existing plus Project conditions except for the intersection of S Bernardo Avenue and W ECR (#2). **Table 4-6** compares the intersection performance with and without project under the Background Conditions. There are no changes in the results for all other study intersections except for intersection #2. **Figure 4-4** presents only the volumes for intersection #2. Intersection #2 is expected to operate without significant change in delay and V/C ratio even with the proposed project. As such, the project therefore has no significant impact on all the study intersections under this scenario and signalization is not warranted for any of the unsignalized intersections under the 'plus project' scenario. The details are presented in **Appendix I**.

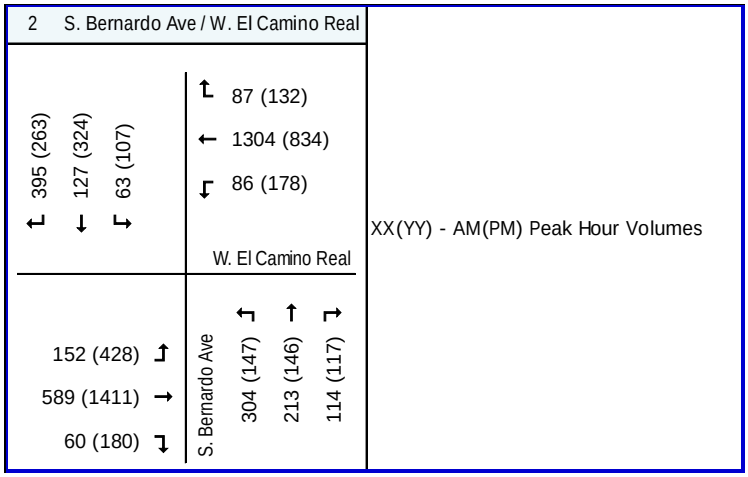

Figure 4-4 Background plus Project Traffic Volumes

Table 4-6 Comparison of Study Intersections LOS – Background plus Project Conditions

	Intersection	Peak Hour	Background Conditions				Background + Project Conditions				Δ Delay	Δ Crit V/C	Δ Avg Crit delay	Impact ? Y/ N
			LOS	Delay (sec)	Critical V/C	Avg Crit Delay (sec)	LOS	Delay (sec)	Critical V/C	Avg Crit Delay (sec)				
1	S Knickerbocker Dr / Brookfield Ave*	AM	A	9.00	0.023	2.7	A	9.10	0.026	3.0	0.1	0.003	0.3	N
		PM	B	10.00	0.022	2.0	B	10.2	0.027	2.2	0.2	0.005	0.2	N
2	S Bernardo Ave / W ECR	AM	D	45.8	0.723	49.0	D	45.9	0.726	49.2	0.1	0.003	0.2	N
		PM	D	45.8	0.667	54.2	D	46.4	0.673	54.4	0.6	0.006	0.2	N
3	S Bernardo Ave / Blair Ave*	AM	B	12.00	0.055	0.8	B	12.5	0.057	0.8	0.5	0.002	0.0	N
		PM	B	11.70	0.039	0.8	B	12.2	0.046	0.8	0.5	0.007	0.0	N
4	S Bernardo Ave / Brookfield Ave*	AM	B	12.10	0.047	0.7	B	13.7	0.126	1.6	1.6	0.079	0.9	N
		PM	B	13.90	0.054	0.8	C	16.4	0.157	1.8	2.5	0.103	1.0	N
5	S Bernardo Ave / Heatherstone Way	AM	A	8.40	0.357	9.0	A	8.4	0.365	9.1	0.0	0.008	0.1	N
		PM	A	5.30	0.400	5.1	A	5.3	0.409	5.1	0.0	0.009	0.0	N
6	S Bernardo Ave / W Knickerbocker Dr*	AM	B	12.8	0.625	12.8	B	13.20	0.640	13.2	0.4	0.015	0.4	N
		PM	C	16.4	0.752	16.4	C	17.20	0.772	17.2	0.8	0.020	0.8	N
7	Project Driveway / Brookfield Ave*	AM	N/A				A	9.20	0.050	3.0	9.20	0.050	3.0	N
		PM					A	9.30	0.050	3.2	9.30	0.050	3.2	N

*LOS and delay reported for worst movement for 2-way stop controlled intersections
**Overall delay reported for AWS controlled intersection
Source: AECOM, 2018

4.8 Background plus Project Traffic Conditions – Queuing Analysis

Queuing analysis was conducted for the study intersections under the Background plus Project Traffic conditions using the Traffix software, which is based on the HCM 2000 Methodology. The length was compared with the 'no project' storage lengths to identify if there is any queue that spills back out of the turn pockets. A typical vehicle length of 25 feet was used for the queuing analysis. An operational deficiency is assumed to occur if the queue increases by one or more vehicles and if the queue exceeds the turn pocket length. Summary of the queueing results is provided in the **Appendix G.**

Table 4-7 summarizes the queues under the Background plus Project conditions for the two signalized study intersections (#2 & #5) as well as the all-way-stop control intersection (#6). The average queue length is being reported. The 95 percentile queues calculated by TRAFFIX for the three two-way stop-controlled intersections are less than one vehicle with and without the project. They are therefore not presented in the Table 4-4. Under the Background without project scenario, all queues can be accommodated within the storage capacity. The project is only expected to add less than one vehicle to this movement and can therefore still be accommodated. As such, the project would not have adverse impact on the queuing situations of the study intersections.

Table 4-7 Queuing Analysis – Background plus Project Conditions

Intersection		Storage Length (ft)	Movement	Background*		Background plus Project*	
				AM Peak Hour (ft)	PM Peak Hour (ft)	AM Peak Hour (ft)	PM Peak Hour (ft)
2	S Bernardo Ave / W ECR	510	NBL	190	90	195	100
		510	NBT	190	145	190	150
		140	SBL	60	125	60	125
		345	SBT	95	335	100	340
		480	EBL	210	470	210	470
		2190	EBT	180	420	180	430
		490	WBL	70	205	85	225
		960	WBT	435	320	435	320
5	S Bernardo Ave / Heatherstone Way	980	NB	60	10	60	10
		2365	SB	25	95	30	100
		1115	EB	20	30	20	30
		725	WB	55	25	55	25
6	S Bernardo Ave / W Knickerbocker Dr	1745	NB	40	20	40	20
		975	SB	15	65	15	70
		4320	EB	10	20	10	20
		810	WB	10	5	10	5

*Average queue length rounded up to nearest 5 feet
Source: AECOM, 2018

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5.0 CONCLUSIONS

This project is located at 755 S Bernardo Avenue in the City of Sunnyvale, California. The proposed project is to transform a currently vacant medical building into a childcare/preschool facility for up to 120 children. Having evaluated the current and with project traffic conditions in the vicinity of the project, the study concludes that this proposed project would not lead to any significant traffic impacts overall and provides recommendations for the City's consideration..

For the six study intersections, they are expected to perform at LOS D or better with the project. LOS D is the standard for City of Sunnyvale. The expected project trips would also not aggravate the queuing conditions at the study intersections; they are expected to add less than one car to the queues during the peak hours.

In addition, the project is not expected to negatively impact any bicycle and pedestrian facilities in the vicinity as the expected number of pedestrians and cyclists would be low. The project is proposing to upgrade portions of the sidewalk adjacent to the site driveways along S Bernardo Avenue and Brookfield Avenue to meet city standards. It is also not expected to cause any significant impacts on the transit services in the project area; the project trips could increase the delay of VTA Services along W ECR and S Bernardo Avenue by up to 1.4 seconds at some study intersections during the peak hours. The number of parking spots and access designs proposed by the project are deemed adequate to meet City standards, including emergency vehicle requirements.

The study recommends the applicant to implement the following improvements:

- To convert part of the proposed internal circulation to one-way to enhance safety during the pick-up and drop-off of young children;
- To shorten the crosswalk distance at the intersection of S Bernardo Avenue and Brookfield Avenue by removing the pork chop island and extending the northwest corner of the intersection to enhance safety in the area;
- Landscaping adjacent to the Brookfield Avenue driveway should not include tall plants or large trees that would obstruct the view of the access; and
- To prohibit parking/loading on both sides of the project driveway along the north side of Brookfield Avenue; extending from the S Bernardo Avenue / Brookfield Avenue intersection (#4) to the access of the adjacent apartment complex, so as to avoid conflicting with turning vehicles at the intersection and to ensure sufficient sight distance for vehicles using the project driveway.
- To prohibit parking/loading on the west side of Bernardo Avenue along the project frontage.

APPENDICES

Appendix A
SYNCHRO vs TRAFFIX Comparison

Comparison of Delay - SYNCHRO vs TRAFFIX

Synchro

		AM		PM	
ID	Intersection	Delay (s/veh)	LOS	Delay (s/veh)	LOS
2	El Camino/Bernardo	39.7	D	46.6	D
5	Heatherstone/Bernardo	7.5	A	5.3	A

Traffix

		AM		PM	
ID	Intersection	Delay (s/veh)	LOS	Delay (s/veh)	LOS
2	El Camino/Bernardo	45.8	D	45.8	D
5	Heatherstone/Bernardo	8.4	A	5.3	A

Comparison of Queues - SYNCHRO vs TRAFFIX

Synchro

Intersection		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
#2	AM	135	143	0	46	277	6	135	184	0	54	106
	PM	401	356	60	153	234	43	66	123	0	103	226

		EBT	WBT	NBT	SBT
#5	AM	8	18	33	18
	PM	10	6	16	49

Traffix

		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
#2	AM	206	176	42	66	429	48	187	187	66	60	93
	PM	464	413	118	204	311	108	89	143	85	123	334

		EBT	WBT	NBT	SBT
#5	AM	18	51	56	24
	PM	30	24	6	93

Queues

2:

06/13/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	152	578	58	68	1291	87	295	209	99	63	517
v/c Ratio	0.71	0.28	0.09	0.16	0.50	0.11	0.77	0.64	0.27	0.36	0.77
Control Delay	76.2	31.8	4.8	39.9	25.1	6.9	74.5	63.3	7.7	65.0	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.2	31.8	4.8	39.9	25.1	6.9	74.5	63.3	7.7	65.0	32.2
Queue Length 50th (ft)	135	143	0	46	277	6	135	184	0	54	106
Queue Length 95th (ft)	204	189	23	88	386	42	#189	259	39	104	162
Internal Link Dist (ft)		1743			941			1199			405
Turn Bay Length (ft)	460		100	490		100	125		105	145	
Base Capacity (vph)	255	2276	731	424	2570	804	397	585	562	177	1109
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.25	0.08	0.16	0.50	0.11	0.74	0.36	0.18	0.36	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
2: 06/13/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	578	58	68	1291	87	295	209	99	63	122	395
Future Volume (vph)	152	578	58	68	1291	87	295	209	99	63	122	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1544	1770	5085	1520	3433	1863	1539	1770	3008	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1544	1770	5085	1520	3433	1863	1539	1770	3008	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	152	578	58	68	1291	87	295	209	99	63	122	395
RTOR Reduction (vph)	0	0	35	0	0	37	0	0	81	0	251	0
Lane Group Flow (vph)	152	578	23	68	1291	50	295	209	18	63	266	0
Confl. Peds. (#/hr)	9		10	10		9	37		10	10		37
Confl. Bikes (#/hr)			1			2			5			3
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	17.0	55.8	55.8	31.2	70.0	70.0	15.6	24.8	24.8	11.2	20.4	
Effective Green, g (s)	17.0	55.8	55.8	31.2	70.0	70.0	15.6	24.8	24.8	11.2	20.4	
Actuated g/C Ratio	0.12	0.40	0.40	0.22	0.50	0.50	0.11	0.18	0.18	0.08	0.15	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	3.0	3.0	2.5	2.5	
Lane Grp Cap (vph)	214	2026	615	394	2542	760	382	330	272	141	438	
v/s Ratio Prot	c0.09	0.11		0.04	c0.25		c0.09	c0.11		0.04	0.09	
v/s Ratio Perm			0.01			0.03			0.01			
v/c Ratio	0.71	0.29	0.04	0.17	0.51	0.07	0.77	0.63	0.06	0.45	0.61	
Uniform Delay, d1	59.1	28.6	25.7	44.0	23.5	18.1	60.5	53.4	47.9	61.4	56.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.9	0.4	0.1	0.2	0.7	0.2	9.0	3.9	0.1	1.6	2.0	
Delay (s)	69.0	28.9	25.8	44.1	24.2	18.3	69.5	57.3	48.0	63.1	58.1	
Level of Service	E	C	C	D	C	B	E	E	D	E	E	
Approach Delay (s)		36.4			24.8			61.7			58.6	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Queues
5:

06/13/2018

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	47	144	376	217
v/c Ratio	0.15	0.45	0.31	0.18
Control Delay	13.8	15.0	5.2	4.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.8	15.0	5.2	4.7
Queue Length 50th (ft)	8	18	33	18
Queue Length 95th (ft)	27	53	85	50
Internal Link Dist (ft)	1105	729	432	1138
Turn Bay Length (ft)				
Base Capacity (vph)	735	694	1222	1217
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.06	0.21	0.31	0.18

Intersection Summary

HCM Signalized Intersection Capacity Analysis
5: 06/13/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	29	6	33	56	55	10	306	60	16	193	8
Future Volume (vph)	12	29	6	33	56	55	10	306	60	16	193	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.98			0.97			0.99			1.00	
Flpb, ped/bikes		0.99			0.96			1.00			1.00	
Frt		0.98			0.95			0.98			1.00	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1746			1626			1797			1836	
Flt Permitted		0.93			0.91			0.99			0.97	
Satd. Flow (perm)		1650			1499			1787			1785	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	29	6	33	56	55	10	306	60	16	193	8
RTOR Reduction (vph)	0	5	0	0	46	0	0	8	0	0	2	0
Lane Group Flow (vph)	0	42	0	0	98	0	0	368	0	0	215	0
Confl. Peds. (#/hr)	47		178	178		47	89		51	51		89
Confl. Bikes (#/hr)			1			8			1			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		7.1			7.1			29.6			29.6	
Effective Green, g (s)		7.1			7.1			29.6			29.6	
Actuated g/C Ratio		0.16			0.16			0.65			0.65	
Clearance Time (s)		4.0			4.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		256			232			1157			1156	
v/s Ratio Prot												
v/s Ratio Perm		0.03			c0.07			c0.21			0.12	
v/c Ratio		0.16			0.42			0.32			0.19	
Uniform Delay, d1		16.7			17.4			3.6			3.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.3			1.2			0.7			0.4	
Delay (s)		17.0			18.7			4.3			3.6	
Level of Service		B			B			A			A	
Approach Delay (s)		17.0			18.7			4.3			3.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	45.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Queues
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06/13/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	428	1391	178	162	816	132	137	141	99	107	582
v/c Ratio	0.88	0.60	0.24	0.59	0.48	0.26	0.43	0.41	0.27	0.63	0.83
Control Delay	71.6	33.0	17.0	69.0	43.1	22.2	68.7	56.8	9.0	82.3	55.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.6	33.0	17.0	69.0	43.1	22.2	68.7	56.8	9.0	82.3	55.1
Queue Length 50th (ft)	401	356	60	153	234	43	66	123	0	103	226
Queue Length 95th (ft)	505	465	128	232	324	117	103	182	44	170	279
Internal Link Dist (ft)		1743			941			1199			650
Turn Bay Length (ft)	460		100	490		100	125		105	145	
Base Capacity (vph)	532	2304	736	281	1695	516	320	509	497	177	984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.60	0.24	0.58	0.48	0.26	0.43	0.28	0.20	0.60	0.59

Intersection Summary

HCM Signalized Intersection Capacity Analysis
2: 06/13/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	428	1391	178	162	816	132	137	141	99	107	319	263
Future Volume (vph)	428	1391	178	162	816	132	137	141	99	107	319	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.89	1.00	1.00	0.97	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1543	1770	5085	1415	3433	1863	1540	1770	3158	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1543	1770	5085	1415	3433	1863	1540	1770	3158	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	428	1391	178	162	816	132	137	141	99	107	319	263
RTOR Reduction (vph)	0	0	38	0	0	46	0	0	81	0	113	0
Lane Group Flow (vph)	428	1391	140	162	816	86	137	141	18	107	469	0
Confl. Peds. (#/hr)	37		10	10		37	79		11	11		79
Confl. Bikes (#/hr)						4			3			
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	41.2	68.0	68.0	23.2	50.0	50.0	14.0	27.4	27.4	14.4	27.8	
Effective Green, g (s)	41.2	68.0	68.0	23.2	50.0	50.0	14.0	27.4	27.4	14.4	27.8	
Actuated g/C Ratio	0.27	0.45	0.45	0.15	0.33	0.33	0.09	0.18	0.18	0.10	0.19	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	3.0	3.0	2.5	2.5	
Lane Grp Cap (vph)	486	2305	699	273	1695	471	320	340	281	169	585	
v/s Ratio Prot	c0.24	c0.27		c0.09	0.16		0.04	0.08		c0.06	c0.15	
v/s Ratio Perm			0.09			0.06			0.01			
v/c Ratio	0.88	0.60	0.20	0.59	0.48	0.18	0.43	0.41	0.06	0.63	0.80	
Uniform Delay, d1	52.0	30.9	24.7	59.0	39.7	35.5	64.2	54.2	50.7	65.3	58.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.7	1.2	0.6	2.9	1.0	0.9	0.7	0.8	0.1	6.6	7.6	
Delay (s)	68.8	32.0	25.3	61.9	40.7	36.3	64.9	55.0	50.8	71.9	66.0	
Level of Service	E	C	C	E	D	D	E	E	D	E	E	
Approach Delay (s)		39.3			43.3			57.5			66.9	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	46.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Queues
5:

06/13/2018

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	55	45	232	529
v/c Ratio	0.21	0.18	0.16	0.37
Control Delay	13.7	12.3	3.2	4.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.7	12.3	3.2	4.4
Queue Length 50th (ft)	10	6	16	49
Queue Length 95th (ft)	28	23	40	108
Internal Link Dist (ft)	1105	729	432	1138
Turn Bay Length (ft)				
Base Capacity (vph)	757	679	1419	1425
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.07	0.07	0.16	0.37

Intersection Summary

HCM Signalized Intersection Capacity Analysis
5: 06/13/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	32	19	13	9	23	7	201	24	29	494	6
Future Volume (vph)	4	32	19	13	9	23	7	201	24	29	494	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.96			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			0.99			1.00			1.00	
Frt		0.95			0.93			0.99			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1707			1678			1828			1853	
Flt Permitted		0.97			0.88			0.99			0.98	
Satd. Flow (perm)		1660			1503			1808			1820	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	32	19	13	9	23	7	201	24	29	494	6
RTOR Reduction (vph)	0	17	0	0	21	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	38	0	0	24	0	0	228	0	0	529	0
Confl. Peds. (#/hr)	3		24	24		3	22		6	6		22
Confl. Bikes (#/hr)			15						2			4
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		4.4			4.4			33.5			33.5	
Effective Green, g (s)		4.4			4.4			33.5			33.5	
Actuated g/C Ratio		0.09			0.09			0.71			0.71	
Clearance Time (s)		4.0			4.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		155			141			1291			1300	
v/s Ratio Prot												
v/s Ratio Perm		c0.02			0.02			0.13			c0.29	
v/c Ratio		0.24			0.17			0.18			0.41	
Uniform Delay, d1		19.7			19.6			2.2			2.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			0.6			0.3			0.9	
Delay (s)		20.5			20.2			2.5			3.6	
Level of Service		C			C			A			A	
Approach Delay (s)		20.5			20.2			2.5			3.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	46.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

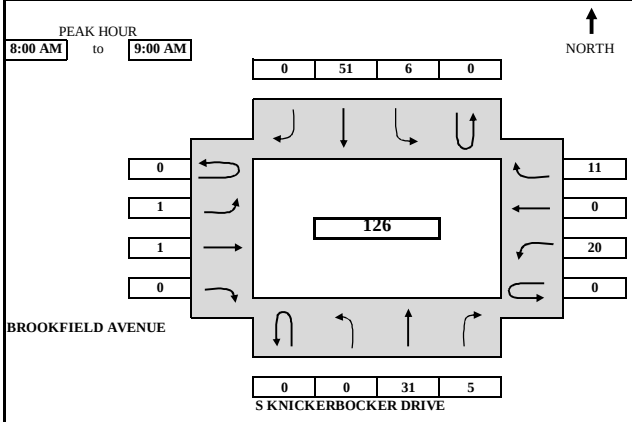
Appendix B
Existing Traffic Counts

B.A.Y.M.E.T.R.I.C.S.

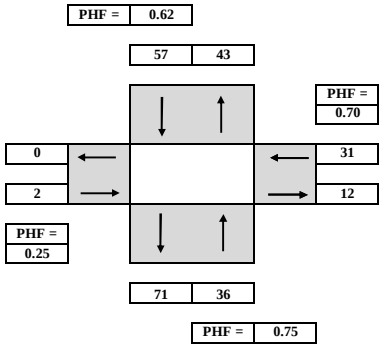
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S KNICKERBOCKER DRIVE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-1AM**

PEAK HOUR **8:00 AM** to **9:00 AM**



ARRIVAL / DEPARTURE VOLUMES



TIME	PERIOD		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM		0	3	1		0	0	0		0	1	0		1	0	0	**6**
7:15 AM	to	7:30 AM		0	7	1		0	8	0		0	1	1		2	0	1	**21**
7:30 AM	to	7:45 AM		1	7	3		1	14	0		1	2	1		3	0	1	**34**
7:45 AM	to	8:00 AM		1	12	3		2	22	0		1	2	1		5	0	2	**51**
8:00 AM	to	8:15 AM		1	20	7		4	43	0		2	3	1		14	0	4	**99**
8:15 AM	to	8:30 AM		1	27	7		5	53	0		2	3	1		19	0	9	**127**
8:30 AM	to	8:45 AM		1	35	8		6	63	0		2	3	1		22	0	10	**151**
8:45 AM	to	9:00 AM		1	43	8		8	73	0		2	3	1		25	0	13	**177**
9:00 AM	to	9:15 AM		1	55	8		10	76	0		2	3	1		27	0	17	**200**
9:15 AM	to	9:30 AM		1	60	9		15	81	0		2	3	1		28	0	17	**217**
9:30 AM	to	9:45 AM		1	66	12		17	92	0		2	4	1		30	0	20	**245**
9:45 AM	to	########		1	72	13		19	103	0		2	4	1		30	0	22	**267**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	3	1	0	0	0	0	0	0	1	0	0	1	0	0	**6**
7:15 AM	to	7:30 AM	0	0	4	0	0	0	8	0	0	0	0	1	0	1	0	1	**15**
7:30 AM	to	7:45 AM	0	1	0	2	0	1	6	0	0	1	1	0	0	1	0	0	**13**
7:45 AM	to	8:00 AM	0	0	5	0	0	1	8	0	0	0	0	0	0	2	0	1	**17**
8:00 AM	to	8:15 AM	0	0	8	4	0	2	21	0	0	1	1	0	0	9	0	2	**48**
8:15 AM	to	8:30 AM	0	0	7	0	0	1	10	0	0	0	0	0	0	5	0	5	**28**
8:30 AM	to	8:45 AM	0	0	8	1	0	1	10	0	0	0	0	0	0	3	0	1	**24**
8:45 AM	to	9:00 AM	0	0	8	0	0	2	10	0	0	0	0	0	0	3	0	3	**26**
9:00 AM	to	9:15 AM	0	0	12	0	0	2	3	0	0	0	0	0	0	2	0	4	**23**
9:15 AM	to	9:30 AM	0	0	5	1	0	5	5	0	0	0	0	0	0	1	0	0	**17**
9:30 AM	to	9:45 AM	0	0	6	3	0	2	11	0	0	0	1	0	0	2	0	3	**28**
9:45 AM	to	########	0	0	6	1	0	2	11	0	0	0	0	0	0	0	0	2	**22**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	1	12	3	0	2	22	0	0	1	2	1	0	5	0	2	**51**
7:15 AM	to	8:15 AM	0	1	17	6	0	4	43	0	0	2	2	1	0	13	0	4	**93**
7:30 AM	to	8:30 AM	0	1	20	6	0	5	45	0	0	2	2	0	0	17	0	8	**106**
7:45 AM	to	8:45 AM	0	0	28	5	0	5	49	0	0	1	1	0	0	19	0	9	**117**
8:00 AM	to	9:00 AM	0	0	31	5	0	6	51	0	0	1	1	0	0	20	0	11	**126**
8:15 AM	to	9:15 AM	0	0	35	1	0	6	33	0	0	0	0	0	0	13	0	13	**101**
8:30 AM	to	9:30 AM	0	0	33	2	0	10	28	0	0	0	0	0	0	9	0	8	**90**
8:45 AM	to	9:45 AM	0	0	31	4	0	11	29	0	0	0	1	0	0	8	0	10	**94**
9:00 AM	to	########	0	0	29	5	0	11	30	0	0	0	1	0	0	5	0	9	**90**

PEAK HOUR SUMMARY

8:00 AM	to	9:00 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
			NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME			0	0	31	5	0	6	51	0	0	1	1	0	0	20	0	11	**126**
PHF BY MOVEMENT			0.00	0.00	0.97	0.31	0.00	0.75	0.61	0.00	0.00	0.25	0.25	0.00	0.00	0.56	0.00	0.55	OVERALL
PHF BY APPROACH			0.75				0.62				0.25				0.70				**0.66**
BICYCLE			0				2				0				0				**2**
PEDESTRIAN			3				0				0				0				**3**
			N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:			0				0				2				1				**3**

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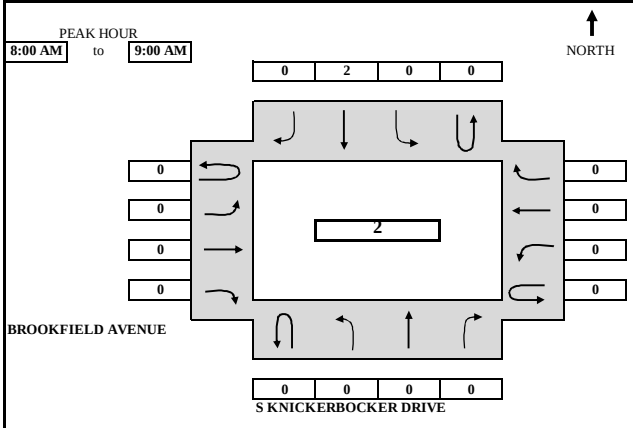
B.A.Y.M.E.T.R.I.C.S.

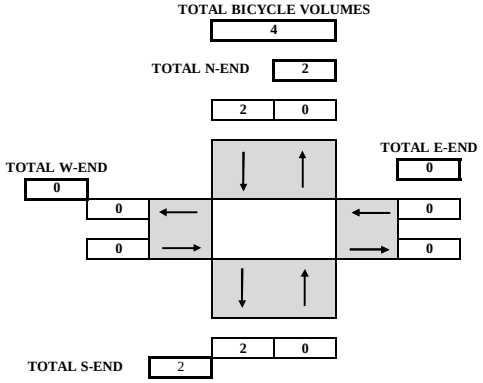
BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S KNICKERBOCKER DRIVE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-1AM**

PEAK HOUR **8:00 AM** to **9:00 AM**



PEAK HOUR TOTAL BICYCLE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
7:15 AM	to	7:30 AM	0	0	1	0	0	1	1	0	0	0	0	0	0	2	0	0	**5**
7:30 AM	to	7:45 AM	0	0	1	0	0	1	1	0	0	0	0	0	0	3	0	0	**6**
7:45 AM	to	8:00 AM	0	0	1	0	0	1	1	0	0	1	0	0	0	3	0	0	**7**
8:00 AM	to	8:15 AM	0	0	1	0	0	1	2	0	0	1	0	0	0	3	0	0	**8**
8:15 AM	to	8:30 AM	0	0	1	0	0	1	2	0	0	1	0	0	0	3	0	0	**8**
8:30 AM	to	8:45 AM	0	0	1	0	0	1	2	0	0	1	0	0	0	3	0	0	**8**
8:45 AM	to	9:00 AM	0	0	1	0	0	1	3	0	0	1	0	0	0	3	0	0	**9**
9:00 AM	to	9:15 AM	0	0	1	0	0	1	3	0	0	1	0	0	0	3	0	0	**9**
9:15 AM	to	9:30 AM	0	0	2	0	0	1	4	0	0	1	0	0	0	4	0	0	**12**
9:30 AM	to	9:45 AM	0	0	4	0	0	1	6	0	0	1	0	0	0	4	0	0	**16**
9:45 AM	to	########	0	0	4	0	0	1	7	0	0	1	0	0	0	4	0	0	**17**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
7:15 AM	to	7:30 AM	0	0	1	0	0	1	1	0	0	0	0	0	0	1	0	0	**4**
7:30 AM	to	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
7:45 AM	to	8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**
8:00 AM	to	8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
8:15 AM	to	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:30 AM	to	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:45 AM	to	9:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
9:00 AM	to	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:15 AM	to	9:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	**3**
9:30 AM	to	9:45 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	**4**
9:45 AM	to	########	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	0	1	0	0	1	1	0	0	1	0	0	0	3	0	0	**7**
7:15 AM	to	8:15 AM	0	0	1	0	0	1	2	0	0	1	0	0	0	2	0	0	**7**
7:30 AM	to	8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	**3**
7:45 AM	to	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	**2**
8:00 AM	to	9:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	**2**
8:15 AM	to	9:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
8:30 AM	to	9:30 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	**4**
8:45 AM	to	9:45 AM	0	0	3	0	0	0	4	0	0	0	0	0	0	1	0	0	**8**
9:00 AM	to	########	0	0	3	0	0	0	4	0	0	0	0	0	0	1	0	0	**8**

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8:00 AM to 9:00 AM

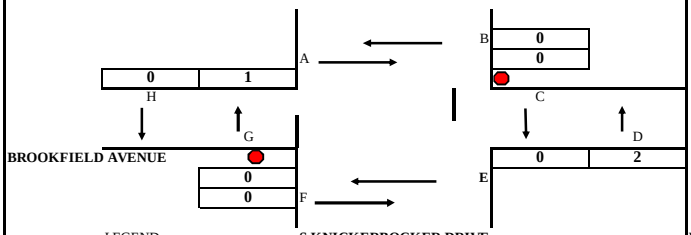
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	0	2	0	0	**2**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S KNICKERBOCKER DRIVE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**7:00 AM TO 10:00 AM**	**FILE:**	**3805027-1AM**

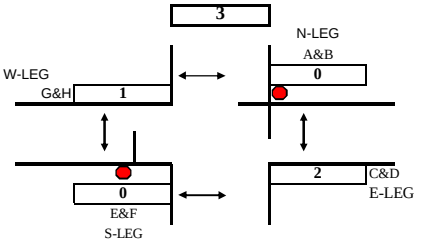
PEAK HOUR
8:00 AM TO **9:00 AM**



S KNICKERBOCKER DRIVE

LEGEND:
CROSSWALK
SIDEWALK
STOP CONTROL LINE
STOP

PEAK HOUR
TOTAL PEDESTRIAN VOLUMES



BY LEG:	
N-LEG	**0**
S-LEG	**0**
E-LEG	**2**
W-LEG	**1**

BY DIRECTION:	
NB(D+G)	**3**
SB(C+H)	**0**
EB(A+F)	**0**
WB(B+E)	**0**

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
07:00 AM	---	07:15 AM	1	0	0	0	0	0	0	0	***1***
07:15 AM	---	07:30 AM	1	0	1	2	0	0	0	0	***4***
07:30 AM	---	07:45 AM	1	0	1	5	0	0	3	0	***10***
07:45 AM	---	08:00 AM	1	0	3	6	0	0	3	0	***13***
08:00 AM	---	08:15 AM	1	0	3	7	0	0	3	0	***14***
08:15 AM	---	08:30 AM	1	0	3	8	0	0	3	0	***15***
08:30 AM	---	08:45 AM	1	0	3	8	0	0	4	0	***16***
08:45 AM	---	09:00 AM	1	0	3	8	0	0	4	0	***16***
09:00 AM	---	09:15 AM	1	0	4	9	0	0	6	1	***21***
09:15 AM	---	09:30 AM	1	0	4	9	0	0	6	1	***21***
09:30 AM	---	09:45 AM	1	0	7	11	0	0	6	3	***28***
09:45 AM	---	10:00 AM	1	0	8	11	0	0	6	3	***29***
TOTAL BY PERIOD											
07:00 AM	---	07:15 AM	1	0	0	0	0	0	0	0	***1***
07:15 AM	---	07:30 AM	0	0	1	2	0	0	0	0	***3***
07:30 AM	---	07:45 AM	0	0	0	3	0	0	3	0	***6***
07:45 AM	---	08:00 AM	0	0	2	1	0	0	0	0	***3***
08:00 AM	---	08:15 AM	0	0	0	1	0	0	0	0	***1***
08:15 AM	---	08:30 AM	0	0	0	1	0	0	0	0	***1***
08:30 AM	---	08:45 AM	0	0	0	0	0	0	1	0	***1***
08:45 AM	---	09:00 AM	0	0	0	0	0	0	0	0	***0***
09:00 AM	---	09:15 AM	0	0	1	1	0	0	2	1	***5***
09:15 AM	---	09:30 AM	0	0	0	0	0	0	0	0	***0***
09:30 AM	---	09:45 AM	0	0	3	2	0	0	0	2	***7***
09:45 AM	---	10:00 AM	0	0	1	0	0	0	0	0	***1***
HOURLY TOTALS											
07:00 AM	---	08:00 AM	1	0	3	6	0	0	3	0	***13***
07:15 AM	---	08:15 AM	0	0	3	7	0	0	3	0	***13***
07:30 AM	---	08:30 AM	0	0	2	6	0	0	3	0	***11***
07:45 AM	---	08:45 AM	0	0	2	3	0	0	1	0	***6***
08:00 AM	---	09:00 AM	0	0	0	2	0	0	1	0	***3***
08:15 AM	---	09:15 AM	0	0	1	2	0	0	3	1	***7***
08:30 AM	---	09:30 AM	0	0	1	1	0	0	3	1	***6***
08:45 AM	---	09:45 AM	0	0	4	3	0	0	2	3	***12***
09:00 AM	---	10:00 AM	0	0	5	3	0	0	2	3	***13***

Tel : (510) 232-1271 ***Fax: (510) 232-1272***

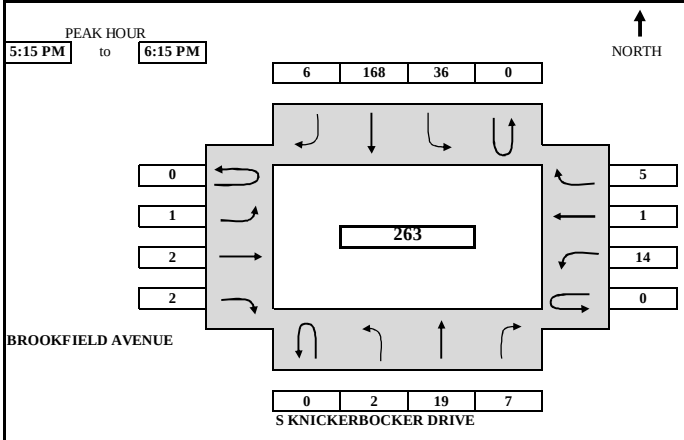
8:00 AM	to	9:00 AM				
VOLUME BY DIRECTION		NB	SB	EB	WB	TOTAL
PEDESTRIAN		3	0	0	0	**3**
VOLUME BY LEG		N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN		0	0	2	1	**3**

B.A.Y.M.E.T.R.I.C.S.

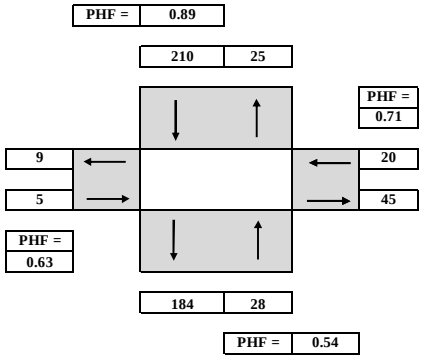
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S KNICKERBOCKER DRIVE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-2PM**

PEAK HOUR **5:15 PM** to **6:15 PM**



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	0	6	2	0	10	25	0		0	0	0		6	0	1	**50**
4:15 PM	to	4:30 PM	0	0	9	4	0	20	45	0		0	0	0		8	1	3	**90**
4:30 PM	to	4:45 PM	0	0	14	4	0	23	74	0		1	1	0		13	1	4	**135**
4:45 PM	to	5:00 PM	0	0	22	5	0	30	99	1		1	1	0		17	1	4	**181**
5:00 PM	to	5:15 PM	0	0	27	6	0	36	133	1		1	1	0		22	1	6	**234**
5:15 PM	to	5:30 PM	0	1	35	10	0	44	176	4		1	2	0		24	1	6	**304**
5:30 PM	to	5:45 PM	0	1	38	10	0	57	221	5		2	3	0		27	2	7	**373**
5:45 PM	to	6:00 PM	0	1	41	10	0	64	265	6		2	3	0		32	2	9	**435**
6:00 PM	to	6:15 PM	0	2	46	13	0	72	301	7		2	3	2		36	2	11	**497**
6:15 PM	to	6:30 PM	0	2	51	13	0	79	336	7		2	3	2		38	2	12	**547**
6:30 PM	to	6:45 PM	1	2	59	14	0	93	372	9		2	3	2		43	3	13	**616**
6:45 PM	to	7:00 PM	1	2	67	17	1	99	408	9		2	3	2		45	3	14	**673**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	6	2	0	10	25	0	0	0	0	0	0	6	0	1	**50**
4:15 PM	to	4:30 PM	0	0	3	2	0	10	20	0	0	0	0	0	0	2	1	2	**40**
4:30 PM	to	4:45 PM	0	0	5	0	0	3	29	0	0	1	1	0	0	5	0	1	**45**
4:45 PM	to	5:00 PM	0	0	8	1	0	7	25	1	0	0	0	0	0	4	0	0	**46**
5:00 PM	to	5:15 PM	0	0	5	1	0	6	34	0	0	0	0	0	0	5	0	2	**53**
5:15 PM	to	5:30 PM	0	1	8	4	0	8	43	3	0	0	1	0	0	2	0	0	**70**
5:30 PM	to	5:45 PM	0	0	3	0	0	13	45	1	0	1	1	0	0	3	1	1	**69**
5:45 PM	to	6:00 PM	0	0	3	0	0	7	44	1	0	0	0	0	0	5	0	2	**62**
6:00 PM	to	6:15 PM	0	1	5	3	0	8	36	1	0	0	0	2	0	4	0	2	**62**
6:15 PM	to	6:30 PM	0	0	5	0	0	7	35	0	0	0	0	0	0	2	0	1	**50**
6:30 PM	to	6:45 PM	1	0	8	1	0	14	36	2	0	0	0	0	0	5	1	1	**69**
6:45 PM	to	7:00 PM	0	0	8	3	1	6	36	0	0	0	0	0	0	2	0	1	**57**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	22	5	0	30	99	1	0	1	1	0	0	17	1	4	**181**
4:15 PM	to	5:15 PM	0	0	21	4	0	26	108	1	0	1	1	0	0	16	1	5	**184**
4:30 PM	to	5:30 PM	0	1	26	6	0	24	131	4	0	1	2	0	0	16	0	3	**214**
4:45 PM	to	5:45 PM	0	1	24	6	0	34	147	5	0	1	2	0	0	14	1	3	**238**
5:00 PM	to	6:00 PM	0	1	19	5	0	34	166	5	0	1	2	0	0	15	1	5	**254**
5:15 PM	to	6:15 PM	0	2	19	7	0	36	168	6	0	1	2	2	0	14	1	5	**263**
5:30 PM	to	6:30 PM	0	1	16	3	0	35	160	3	0	1	1	2	0	14	1	6	**243**
5:45 PM	to	6:45 PM	1	1	21	4	0	36	151	4	0	0	0	2	0	16	1	6	**243**
6:00 PM	to	7:00 PM	1	1	26	7	1	35	143	3	0	0	0	2	0	13	1	5	**238**

PEAK HOUR SUMMARY

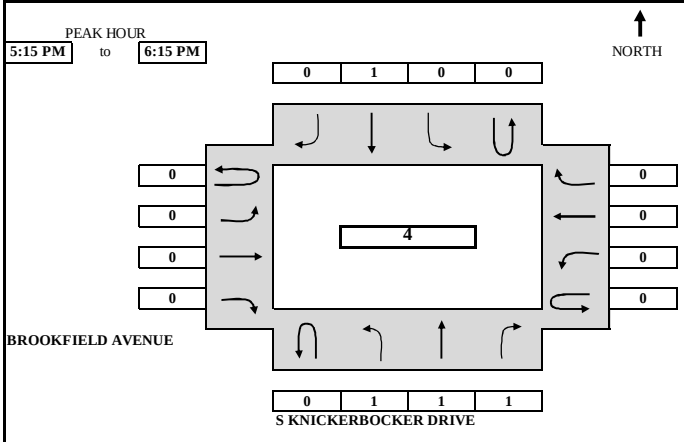
5:15 PM to 6:15 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	2	19	7	0	36	168	6	0	1	2	2	0	14	1	5	**263**
PHF BY MOVEMENT	0.00	0.50	0.59	0.44	0.00	0.69	0.93	0.50	0.00	0.25	0.50	0.25	0.00	0.70	0.25	0.63	OVERALL
PHF BY APPROACH	0.54				0.89				0.63				0.71				**0.94**
BICYCLE	3				1				0				0				**4**
PEDESTRIAN	9				9				7				1				**26**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	5				3				8				10				**26**

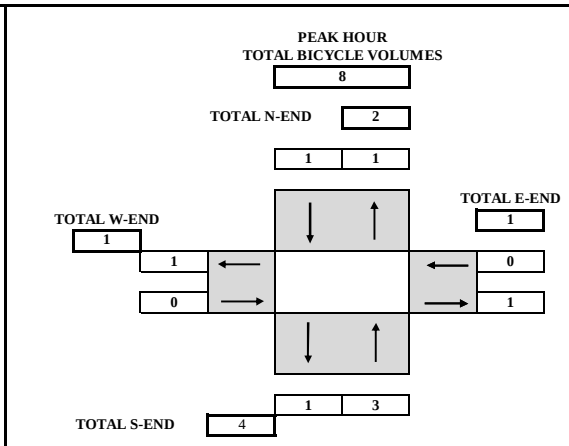
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S KNICKERBOCKER DRIVE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-2PM**





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	0	2	0	0	0	2	0	0	1	0	0	0	0	0	0	**5**
4:15 PM	to	4:30 PM	0	0	2	0	0	0	2	1	0	1	0	0	0	0	0	0	**6**
4:30 PM	to	4:45 PM	0	0	2	0	0	0	3	1	0	1	0	0	0	0	0	0	**7**
4:45 PM	to	5:00 PM	0	0	2	0	0	0	3	1	0	1	0	0	0	0	0	0	**7**
5:00 PM	to	5:15 PM	0	0	2	0	0	0	3	1	0	1	0	0	0	0	0	0	**7**
5:15 PM	to	5:30 PM	0	0	2	0	0	0	3	1	0	1	0	0	0	0	0	0	**7**
5:30 PM	to	5:45 PM	0	0	3	1	0	0	4	1	0	1	0	0	0	0	0	0	**10**
5:45 PM	to	6:00 PM	0	0	3	1	0	0	4	1	0	1	0	0	0	0	0	0	**10**
6:00 PM	to	6:15 PM	0	1	3	1	0	0	4	1	0	1	0	0	0	0	0	0	**11**
6:15 PM	to	6:30 PM	0	1	3	1	0	0	4	1	0	1	0	0	0	0	0	0	**11**
6:30 PM	to	6:45 PM	0	1	3	2	0	0	4	1	0	1	0	0	0	0	0	0	**12**
6:45 PM	to	7:00 PM	0	1	3	3	0	0	4	1	0	1	0	0	0	0	0	0	**13**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	2	0	0	0	2	0	0	1	0	0	0	0	0	0	**5**
4:15 PM	to	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
4:30 PM	to	4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
4:45 PM	to	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	to	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:15 PM	to	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:30 PM	to	5:45 PM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	**3**
5:45 PM	to	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	to	6:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:15 PM	to	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:30 PM	to	6:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:45 PM	to	7:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	2	0	0	0	3	1	0	1	0	0	0	0	0	0	**7**
4:15 PM	to	5:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	**2**
4:30 PM	to	5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
4:45 PM	to	5:45 PM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	**3**
5:00 PM	to	6:00 PM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	**3**
5:15 PM	to	6:15 PM	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	**4**
5:30 PM	to	6:30 PM	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	**4**
5:45 PM	to	6:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 PM	to	7:00 PM	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**3**

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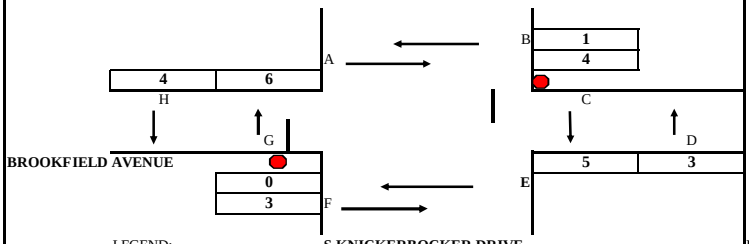
5:15 PM to 6:15 PM					
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	3	1	0	0	**4**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

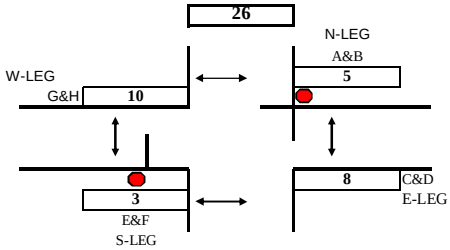
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S KNICKERBOCKER DRIVE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**4:00 PM TO 7:00 PM**	**FILE:**	**3805027-2PM**

PEAK HOUR: **5:15 PM** TO **6:15 PM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR TOTAL PEDESTRIAN VOLUMES



BY LEG:		**BY DIRECTION:**	
N-LEG	**5**	**NB**(D+G)	**9**
S-LEG	**3**	**SB**(C+H)	**9**
E-LEG	**8**	**EB**(A+F)	**7**
W-LEG	**10**	**WB**(B+E)	**1**

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
04:00 PM	---	04:15 PM	0	0	2	2	0	0	0	1	***5***
04:15 PM	---	04:30 PM	0	0	2	2	1	1	0	2	***8***
04:30 PM	---	04:45 PM	0	0	3	3	2	1	1	2	***12***
04:45 PM	---	05:00 PM	1	1	3	3	3	1	4	2	***18***
05:00 PM	---	05:15 PM	1	3	4	4	5	1	6	4	***28***
05:15 PM	---	05:30 PM	1	4	4	4	5	1	6	6	***31***
05:30 PM	---	05:45 PM	5	4	6	6	5	1	11	8	***46***
05:45 PM	---	06:00 PM	5	4	8	7	5	1	12	8	***50***
06:00 PM	---	06:15 PM	5	4	9	7	5	4	12	8	***54***
06:15 PM	---	06:30 PM	7	5	10	7	7	4	15	9	***64***
06:30 PM	---	06:45 PM	7	5	10	8	8	4	15	9	***66***
06:45 PM	---	07:00 PM	7	5	11	10	8	4	17	10	***72***
TOTAL BY PERIOD											
04:00 PM	---	04:15 PM	0	0	2	2	0	0	0	1	***5***
04:15 PM	---	04:30 PM	0	0	0	0	1	1	0	1	***3***
04:30 PM	---	04:45 PM	0	0	1	1	1	0	1	0	***4***
04:45 PM	---	05:00 PM	1	1	0	0	1	0	3	0	***6***
05:00 PM	---	05:15 PM	0	2	1	1	2	0	2	2	***10***
05:15 PM	---	05:30 PM	0	1	0	0	0	0	0	2	***3***
05:30 PM	---	05:45 PM	4	0	2	2	0	0	5	2	***15***
05:45 PM	---	06:00 PM	0	0	2	1	0	0	1	0	***4***
06:00 PM	---	06:15 PM	0	0	1	0	0	3	0	0	***4***
06:15 PM	---	06:30 PM	2	1	1	0	2	0	3	1	***10***
06:30 PM	---	06:45 PM	0	0	0	1	1	0	0	0	***2***
06:45 PM	---	07:00 PM	0	0	1	2	0	0	2	1	***6***
HOURLY TOTALS											
04:00 PM	---	05:00 PM	1	1	3	3	3	1	4	2	***18***
04:15 PM	---	05:15 PM	1	3	2	2	5	1	6	3	***23***
04:30 PM	---	05:30 PM	1	4	2	2	4	0	6	4	***23***
04:45 PM	---	05:45 PM	5	4	3	3	3	0	10	6	***34***
05:00 PM	---	06:00 PM	4	3	5	4	2	0	8	6	***32***
05:15 PM	---	06:15 PM	4	1	5	3	0	3	6	4	***26***
05:30 PM	---	06:30 PM	6	1	6	3	2	3	9	3	***33***
05:45 PM	---	06:45 PM	2	1	4	2	3	3	4	1	***20***
06:00 PM	---	07:00 PM	2	1	3	3	3	3	5	2	***22***

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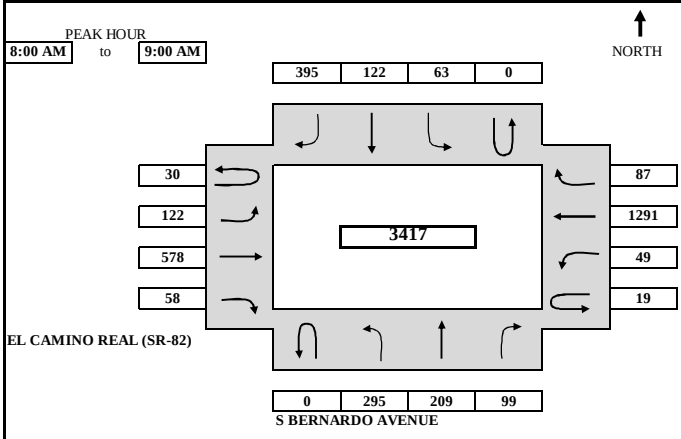
5:15 PM	to	6:15 PM				
VOLUME BY DIRECTION		NB	SB	EB	WB	TOTAL
PEDESTRIAN		9	9	7	1	**26**
VOLUME BY LEG		N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN		5	3	8	10	**26**

B.A.Y.M.E.T.R.I.C.S.

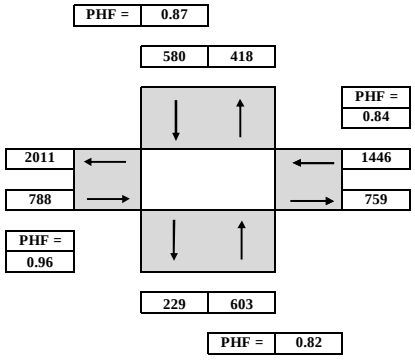
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**EL CAMINO REAL (SR-82)**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-2AM**

PEAK HOUR **8:00 AM** to **9:00 AM**



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM		28	9	9		3	21	63	6	17	72	5	1	9	153	5	**401**
7:15 AM	to	7:30 AM		53	21	18		11	53	153	13	38	163	20	3	15	328	12	**901**
7:30 AM	to	7:45 AM		88	35	38		16	95	262	18	58	248	35	9	26	609	24	**1561**
7:45 AM	to	8:00 AM		126	68	45		35	140	367	25	90	358	46	10	41	874	44	**2269**
8:00 AM	to	8:15 AM		191	122	70		51	193	465	34	119	489	62	12	49	1170	67	**3094**
8:15 AM	to	8:30 AM		279	191	97		70	217	562	40	141	646	75	17	71	1533	89	**4028**
8:30 AM	to	8:45 AM		344	235	126		86	247	663	50	182	787	89	24	82	1924	112	**4951**
8:45 AM	to	9:00 AM		421	277	144		98	262	762	55	212	936	104	29	90	2165	131	**5686**
9:00 AM	to	9:15 AM		490	322	158		115	285	843	65	245	1119	120	37	103	2460	145	**6507**
9:15 AM	to	9:30 AM		578	360	178		122	310	934	73	272	1245	135	42	117	2705	166	**7237**
9:30 AM	to	9:45 AM		644	402	196		136	337	1043	85	294	1410	148	44	140	2987	190	**8056**
9:45 AM	to	10:00 AM		692	435	212		147	362	1125	97	318	1567	159	49	146	3240	212	**8761**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	28	9	9	0	3	21	63	6	17	72	5	1	9	153	5	**401**
7:15 AM	to	7:30 AM	0	25	12	9	0	8	32	90	7	21	91	15	2	6	175	7	**500**
7:30 AM	to	7:45 AM	0	35	14	20	0	5	42	109	5	20	85	15	6	11	281	12	**660**
7:45 AM	to	8:00 AM	0	38	33	7	0	19	45	105	7	32	110	11	1	15	265	20	**708**
8:00 AM	to	8:15 AM	0	65	54	25	0	16	53	98	9	29	131	16	2	8	296	23	**825**
8:15 AM	to	8:30 AM	0	88	69	27	0	19	24	97	6	22	157	13	5	22	363	22	**934**
8:30 AM	to	8:45 AM	0	65	44	29	0	16	30	101	10	41	141	14	7	11	391	23	**923**
8:45 AM	to	9:00 AM	0	77	42	18	0	12	15	99	5	30	149	15	5	8	241	19	**735**
9:00 AM	to	9:15 AM	0	69	45	14	0	17	23	81	10	33	183	16	8	13	295	14	**821**
9:15 AM	to	9:30 AM	0	88	38	20	0	7	25	91	8	27	126	15	5	14	245	21	**730**
9:30 AM	to	9:45 AM	0	66	42	18	0	14	27	109	12	22	165	13	2	23	282	24	**819**
9:45 AM	to	10:00 AM	0	48	33	16	0	11	25	82	12	24	157	11	5	6	253	22	**705**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	126	68	45	0	35	140	367	25	90	358	46	10	41	874	44	**2269**
7:15 AM	to	8:15 AM	0	163	113	61	0	48	172	402	28	102	417	57	11	40	1017	62	**2693**
7:30 AM	to	8:30 AM	0	226	170	79	0	59	164	409	27	103	483	55	14	56	1205	77	**3127**
7:45 AM	to	8:45 AM	0	256	200	88	0	70	152	401	32	124	539	54	15	56	1315	88	**3390**
8:00 AM	to	9:00 AM	0	295	209	99	0	63	122	395	30	122	578	58	19	49	1291	87	**3417**
8:15 AM	to	9:15 AM	0	299	200	88	0	64	92	378	31	126	630	58	25	54	1290	78	**3413**
8:30 AM	to	9:30 AM	0	299	169	81	0	52	93	372	33	131	599	60	25	46	1172	77	**3209**
8:45 AM	to	9:45 AM	0	300	167	70	0	50	90	380	35	112	623	59	20	58	1063	78	**3105**
9:00 AM	to	10:00 AM	0	271	158	68	0	49	100	363	42	106	631	55	20	56	1075	81	**3075**

PEAK HOUR SUMMARY

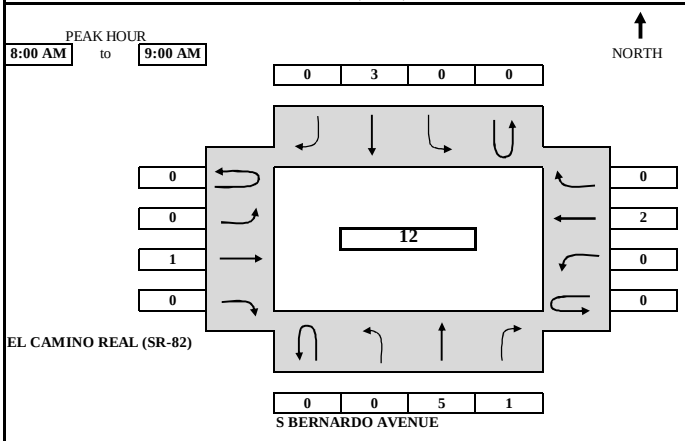
8:00 AM to 9:00 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	295	209	99	0	63	122	395	30	122	578	58	19	49	1291	87	**3417**
PHF BY MOVEMENT	0.00	0.84	0.76	0.85	0.00	0.83	0.58	0.98	0.75	0.74	0.92	0.91	0.68	0.56	0.83	0.95	OVERALL
PHF BY APPROACH	0.82				0.87				0.96				0.84				**0.91**
BICYCLE	6				3				1				2				**12**
PEDESTRIAN	25				22				14				5				**66**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	9				10				10				37				**66**

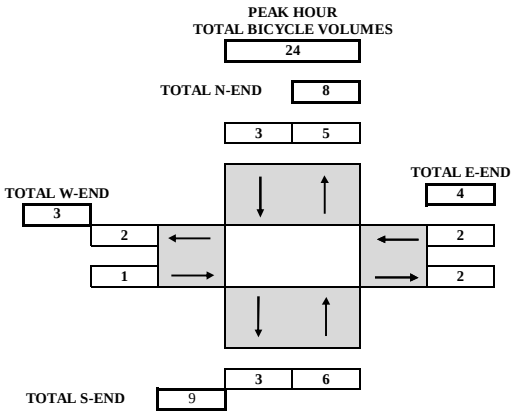
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**EL CAMINO REAL (SR-82)**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-2AM**





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	**3**
7:15 AM	to	7:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	**3**
7:30 AM	to	7:45 AM	0	1	1	0	0	0	0	0	0	0	3	0	0	0	1	0	**6**
7:45 AM	to	8:00 AM	0	1	1	0	0	0	1	0	0	0	3	0	0	0	1	0	**7**
8:00 AM	to	8:15 AM	0	1	4	1	0	0	3	0	0	0	3	0	0	0	2	0	**14**
8:15 AM	to	8:30 AM	0	1	5	1	0	0	3	0	0	0	3	0	0	0	2	0	**15**
8:30 AM	to	8:45 AM	0	1	5	1	0	0	3	0	0	0	4	0	0	0	2	0	**16**
8:45 AM	to	9:00 AM	0	1	6	1	0	0	4	0	0	0	4	0	0	0	3	0	**19**
9:00 AM	to	9:15 AM	0	1	7	1	0	0	7	0	0	1	4	0	0	0	3	0	**24**
9:15 AM	to	9:30 AM	0	1	10	1	0	0	7	0	0	2	5	0	0	0	3	0	**29**
9:30 AM	to	9:45 AM	0	1	11	1	0	0	9	1	0	2	5	0	0	0	3	0	**33**
9:45 AM	to	10:00 AM	0	1	11	1	0	0	9	1	0	2	5	0	0	0	3	0	**33**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	**3**
7:15 AM	to	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:30 AM	to	7:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	**3**
7:45 AM	to	8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	to	8:15 AM	0	0	3	1	0	0	2	0	0	0	0	0	0	0	1	0	**7**
8:15 AM	to	8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
8:30 AM	to	8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**
8:45 AM	to	9:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	**3**
9:00 AM	to	9:15 AM	0	0	1	0	0	0	3	0	0	1	0	0	0	0	0	0	**5**
9:15 AM	to	9:30 AM	0	0	3	0	0	0	0	0	0	1	1	0	0	0	0	0	**5**
9:30 AM	to	9:45 AM	0	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	**4**
9:45 AM	to	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	1	1	0	0	0	1	0	0	0	3	0	0	0	1	0	**7**
7:15 AM	to	8:15 AM	0	1	4	1	0	0	3	0	0	0	0	0	0	0	2	0	**11**
7:30 AM	to	8:30 AM	0	1	5	1	0	0	3	0	0	0	0	0	0	0	2	0	**12**
7:45 AM	to	8:45 AM	0	0	4	1	0	0	3	0	0	0	1	0	0	0	1	0	**10**
8:00 AM	to	9:00 AM	0	0	5	1	0	0	3	0	0	0	1	0	0	0	2	0	**12**
8:15 AM	to	9:15 AM	0	0	3	0	0	0	4	0	0	1	1	0	0	0	1	0	**10**
8:30 AM	to	9:30 AM	0	0	5	0	0	0	4	0	0	2	2	0	0	0	1	0	**14**
8:45 AM	to	9:45 AM	0	0	6	0	0	0	6	1	0	2	1	0	0	0	1	0	**17**
9:00 AM	to	10:00 AM	0	0	5	0	0	0	5	1	0	2	1	0	0	0	0	0	**14**

TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

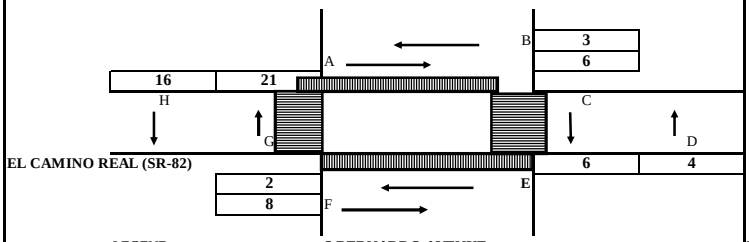
8:00 AM to 9:00 AM					
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	6	3	1	2	**12**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

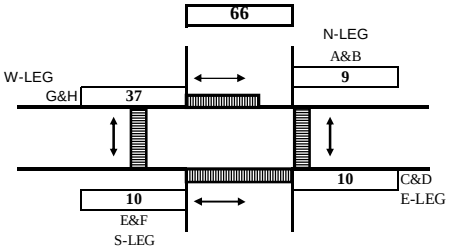
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**EL CAMINO REAL (SR-82)**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**7:00 AM TO 10:00 AM**	**FILE:**	**3805027-2AM**

PEAK HOUR
8:00 AM TO **9:00 AM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR
TOTAL PEDESTRIAN VOLUMES



BY LEG:		**BY DIRECTION:**	
N-LEG	**9**	**NB**(D+G)	**25**
S-LEG	**10**	**SB**(C+H)	**22**
E-LEG	**10**	**EB**(A+F)	**14**
W-LEG	**37**	**WB**(B+E)	**5**

TIME PERIOD			**NORTH X-WALK**		**EAST X-WALK**		**SOUTH X-WALK**		**WEST X-WALK**		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
			SURVEY DATA								
07:00 AM	---	07:15 AM	1	0	0	1	1	0	4	4	***11***
07:15 AM	---	07:30 AM	1	1	1	2	1	1	8	11	***26***
07:30 AM	---	07:45 AM	1	1	3	3	1	3	9	16	***37***
07:45 AM	---	08:00 AM	3	3	4	3	1	4	10	20	***48***
08:00 AM	---	08:15 AM	4	4	8	5	2	8	16	25	***72***
08:15 AM	---	08:30 AM	7	4	8	5	2	10	18	30	***84***
08:30 AM	---	08:45 AM	8	5	8	7	2	12	26	32	***100***
08:45 AM	---	09:00 AM	9	6	10	7	3	12	31	36	***114***
09:00 AM	---	09:15 AM	10	6	13	7	4	12	34	46	***132***
09:15 AM	---	09:30 AM	11	6	16	8	6	15	35	49	***146***
09:30 AM	---	09:45 AM	15	7	16	9	8	15	36	53	***159***
09:45 AM	---	10:00 AM	18	8	16	10	8	16	40	60	***176***
			TOTAL BY PERIOD								
07:00 AM	---	07:15 AM	1	0	0	1	1	0	4	4	***11***
07:15 AM	---	07:30 AM	0	1	1	1	0	1	4	7	***15***
07:30 AM	---	07:45 AM	0	0	2	1	0	2	1	5	***11***
07:45 AM	---	08:00 AM	2	2	1	0	0	1	1	4	***11***
08:00 AM	---	08:15 AM	1	1	4	2	1	4	6	5	***24***
08:15 AM	---	08:30 AM	3	0	0	0	0	2	2	5	***12***
08:30 AM	---	08:45 AM	1	1	0	2	0	2	8	2	***16***
08:45 AM	---	09:00 AM	1	1	2	0	1	0	5	4	***14***
09:00 AM	---	09:15 AM	1	0	3	0	1	0	3	10	***18***
09:15 AM	---	09:30 AM	1	0	3	1	2	3	1	3	***14***
09:30 AM	---	09:45 AM	4	1	0	1	2	0	1	4	***13***
09:45 AM	---	10:00 AM	3	1	0	1	0	1	4	7	***17***
			HOURLY TOTALS								
07:00 AM	---	08:00 AM	3	3	4	3	1	4	10	20	***48***
07:15 AM	---	08:15 AM	3	4	8	4	1	8	12	21	***61***
07:30 AM	---	08:30 AM	6	3	7	3	1	9	10	19	***58***
07:45 AM	---	08:45 AM	7	4	5	4	1	9	17	16	***63***
08:00 AM	---	09:00 AM	6	3	6	4	2	8	21	16	***66***
08:15 AM	---	09:15 AM	6	2	5	2	2	4	18	21	***60***
08:30 AM	---	09:30 AM	4	2	8	3	4	5	17	19	***62***
08:45 AM	---	09:45 AM	7	2	8	2	6	3	10	21	***59***
09:00 AM	---	10:00 AM	9	2	6	3	5	4	9	24	***62***

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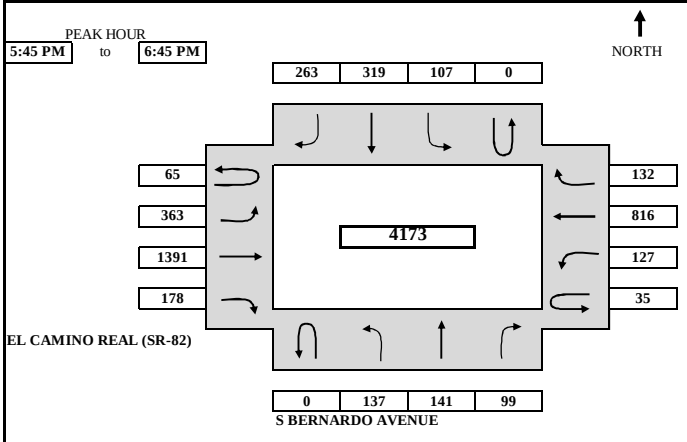
8:00 AM	to	9:00 AM					
VOLUME BY DIRECTION			NB	SB	EB	WB	TOTAL
PEDESTRIAN			25	22	14	5	**66**
VOLUME BY LEG			N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN			9	10	10	37	**66**

B.A.Y.M.E.T.R.I.C.S.

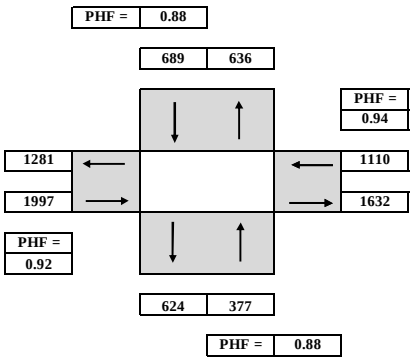
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**EL CAMINO REAL (SR-82)**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-2PM**

PEAK HOUR **5:45 PM** to **6:45 PM**



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM		36	27	18		15	42	36	10	67	319	37	6	30	178	28	**849**
4:15 PM	to	4:30 PM		70	66	37		28	75	82	18	128	652	76	12	65	364	54	**1727**
4:30 PM	to	4:45 PM		103	103	58		51	117	134	25	174	932	110	18	90	551	79	**2545**
4:45 PM	to	5:00 PM		134	135	79		69	168	187	33	238	1232	154	26	113	767	97	**3432**
5:00 PM	to	5:15 PM		169	156	98		89	233	241	44	306	1580	202	31	144	947	110	**4350**
5:15 PM	to	5:30 PM		215	196	123		116	304	298	50	385	1913	255	38	173	1156	146	**5368**
5:30 PM	to	5:45 PM		250	239	145		146	376	356	57	466	2258	319	45	200	1329	170	**6356**
5:45 PM	to	6:00 PM		277	273	174		170	476	427	71	582	2611	376	57	243	1528	211	**7476**
6:00 PM	to	6:15 PM		304	309	204		192	560	487	82	663	2977	415	65	272	1717	242	**8489**
6:15 PM	to	6:30 PM		344	343	217		216	636	556	101	750	3305	458	65	304	1942	277	**9514**
6:30 PM	to	6:45 PM		387	380	244		253	695	619	122	829	3649	497	80	327	2145	302	**10529**
6:45 PM	to	7:00 PM		409	420	267		277	737	676	135	922	3981	534	87	368	2345	341	**11499**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	36	27	18	0	15	42	36	10	67	319	37	6	30	178	28	**849**
4:15 PM	to	4:30 PM	0	34	39	19	0	13	33	46	8	61	333	39	6	35	186	26	**878**
4:30 PM	to	4:45 PM	0	33	37	21	0	23	42	52	7	46	280	34	6	25	187	25	**818**
4:45 PM	to	5:00 PM	0	31	32	21	0	18	51	53	8	64	300	44	8	23	216	18	**887**
5:00 PM	to	5:15 PM	0	35	21	19	0	20	65	54	11	68	348	48	5	31	180	13	**918**
5:15 PM	to	5:30 PM	0	46	40	25	0	27	71	57	6	79	333	53	7	29	209	36	**1018**
5:30 PM	to	5:45 PM	0	35	43	22	0	30	72	58	7	81	345	64	7	27	173	24	**988**
5:45 PM	to	6:00 PM	0	27	34	29	0	24	100	71	14	116	353	57	12	43	199	41	**1120**
6:00 PM	to	6:15 PM	0	27	36	30	0	22	84	60	11	81	366	39	8	29	189	31	**1013**
6:15 PM	to	6:30 PM	0	40	34	13	0	24	76	69	19	87	328	43	0	32	225	35	**1025**
6:30 PM	to	6:45 PM	0	43	37	27	0	37	59	63	21	79	344	39	15	23	203	25	**1015**
6:45 PM	to	7:00 PM	0	22	40	23	0	24	42	57	13	93	332	37	7	41	200	39	**970**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	134	135	79	0	69	168	187	33	238	1232	154	26	113	767	97	**3432**
4:15 PM	to	5:15 PM	0	133	129	80	0	74	191	205	34	239	1261	165	25	114	769	82	**3501**
4:30 PM	to	5:30 PM	0	145	130	86	0	88	229	216	32	257	1261	179	26	108	792	92	**3641**
4:45 PM	to	5:45 PM	0	147	136	87	0	95	259	222	32	292	1326	209	27	110	778	91	**3811**
5:00 PM	to	6:00 PM	0	143	138	95	0	101	308	240	38	344	1379	222	31	130	761	114	**4044**
5:15 PM	to	6:15 PM	0	135	153	106	0	103	327	246	38	357	1397	213	34	128	770	132	**4139**
5:30 PM	to	6:30 PM	0	129	147	94	0	100	332	258	51	365	1392	203	27	131	786	131	**4146**
5:45 PM	to	6:45 PM	0	137	141	99	0	107	319	263	65	363	1391	178	35	127	816	132	**4173**
6:00 PM	to	7:00 PM	0	132	147	93	0	107	261	249	64	340	1370	158	30	125	817	130	**4023**

PEAK HOUR SUMMARY

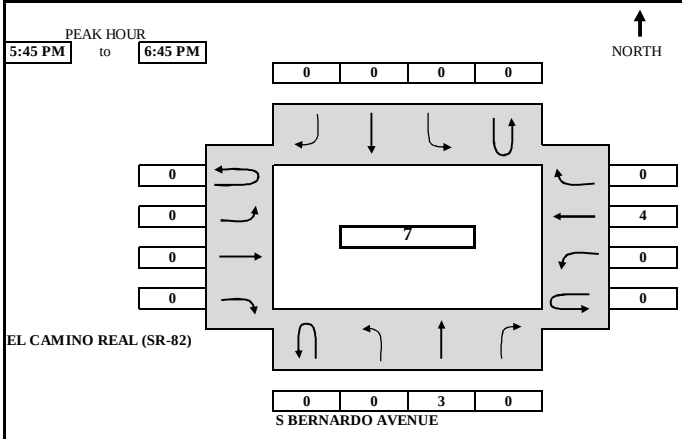
5:45 PM	to	6:45 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
			NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME			0	137	141	99	0	107	319	263	65	363	1391	178	35	127	816	132	**4173**
PHF BY MOVEMENT			0.00	0.80	0.95	0.83	0.00	0.72	0.80	0.93	0.77	0.78	0.95	0.78	0.58	0.74	0.91	0.80	OVERALL
PHF BY APPROACH				0.88				0.88				0.92				0.94			**0.93**
BICYCLE				3				0				0				4			**7**
PEDESTRIAN				45				45				30				17			**137**
				N-LEG				**S-LEG**				**E-LEG**				**W-LEG**			
PEDESTRIAN BY LEG:				37				10				11				79			**137**

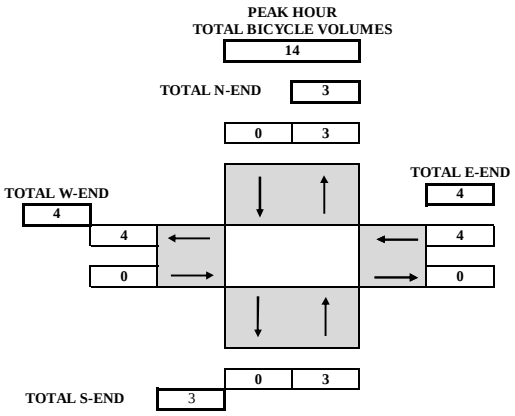
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**EL CAMINO REAL (SR-82)**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-2PM**





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	**3**
4:15 PM	to	4:30 PM	0	0	1	0	0	0	0	0	0	2	0	1	0	0	0	1	**5**
4:30 PM	to	4:45 PM	0	0	1	0	0	0	0	0	0	2	0	1	0	0	1	1	**6**
4:45 PM	to	5:00 PM	0	0	1	0	0	0	0	0	0	2	0	1	0	0	1	2	**7**
5:00 PM	to	5:15 PM	0	0	2	0	0	0	0	0	0	2	0	1	0	0	4	2	**11**
5:15 PM	to	5:30 PM	0	0	2	0	0	0	0	0	0	2	0	2	0	0	5	2	**13**
5:30 PM	to	5:45 PM	0	0	3	0	0	0	0	0	0	2	0	2	0	0	6	2	**15**
5:45 PM	to	6:00 PM	0	0	3	0	0	0	0	0	0	2	0	2	0	0	9	2	**18**
6:00 PM	to	6:15 PM	0	0	5	0	0	0	0	0	0	2	0	2	0	0	9	2	**20**
6:15 PM	to	6:30 PM	0	0	5	0	0	0	0	0	0	2	0	2	0	0	9	2	**20**
6:30 PM	to	6:45 PM	0	0	6	0	0	0	0	0	0	2	0	2	0	0	10	2	**22**
6:45 PM	to	7:00 PM	0	0	6	0	0	0	0	0	0	2	0	2	0	0	11	2	**23**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	**3**
4:15 PM	to	4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	**2**
4:30 PM	to	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
4:45 PM	to	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
5:00 PM	to	5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	**4**
5:15 PM	to	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	**2**
5:30 PM	to	5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	**2**
5:45 PM	to	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	**3**
6:00 PM	to	6:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:15 PM	to	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:30 PM	to	6:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	**2**
6:45 PM	to	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	1	0	0	0	0	0	0	2	0	1	0	0	1	2	**7**
4:15 PM	to	5:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	2	**8**
4:30 PM	to	5:30 PM	0	0	1	0	0	0	0	0	0	0	0	1	0	0	5	1	**8**
4:45 PM	to	5:45 PM	0	0	2	0	0	0	0	0	0	0	0	1	0	0	5	1	**9**
5:00 PM	to	6:00 PM	0	0	2	0	0	0	0	0	0	0	0	1	0	0	8	0	**11**
5:15 PM	to	6:15 PM	0	0	3	0	0	0	0	0	0	0	0	1	0	0	5	0	**9**
5:30 PM	to	6:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4	0	**7**
5:45 PM	to	6:45 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4	0	**7**
6:00 PM	to	7:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	**5**

TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

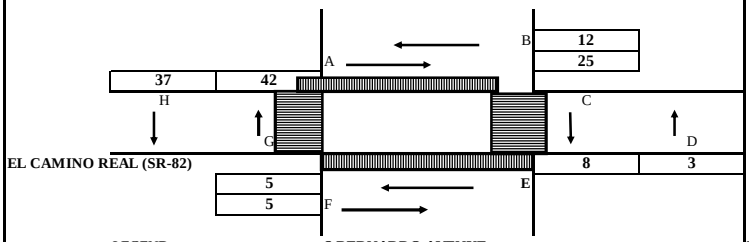
5:45 PM	to	6:45 PM					
APPROACH VOLUME			NB	SB	EB	WB	TOTAL
BICYCLE			3	0	0	4	**7**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

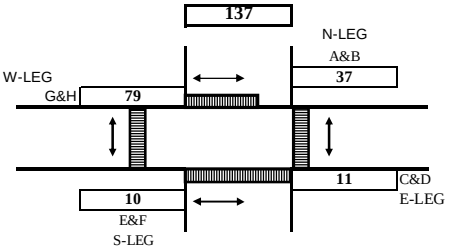
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**EL CAMINO REAL (SR-82)**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**4:00 PM TO 7:00 PM**	**FILE:**	**3805027-2PM**

PEAK HOUR **5:45 PM** TO **6:45 PM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR TOTAL PEDESTRIAN VOLUMES



BY LEG:		**BY DIRECTION:**	
N-LEG	**37**	**NB**(D+G)	**45**
S-LEG	**10**	**SB**(C+H)	**45**
E-LEG	**11**	**EB**(A+F)	**30**
W-LEG	**79**	**WB**(B+E)	**17**

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
04:00 PM	---	04:15 PM	1	4	6	1	4	0	7	8	***31***
04:15 PM	---	04:30 PM	6	6	8	1	4	2	12	10	***49***
04:30 PM	---	04:45 PM	10	6	8	1	4	2	18	18	***67***
04:45 PM	---	05:00 PM	19	9	9	2	4	3	26	20	***92***
05:00 PM	---	05:15 PM	21	9	10	2	6	4	33	26	***111***
05:15 PM	---	05:30 PM	21	10	10	4	7	8	37	32	***129***
05:30 PM	---	05:45 PM	23	10	10	4	7	8	42	33	***137***
05:45 PM	---	06:00 PM	30	12	10	6	7	11	53	41	***170***
06:00 PM	---	06:15 PM	37	15	14	6	7	12	61	45	***197***
06:15 PM	---	06:30 PM	37	17	14	7	7	13	68	57	***220***
06:30 PM	---	06:45 PM	48	22	18	7	12	13	84	70	***274***
06:45 PM	---	07:00 PM	50	28	18	8	12	13	91	78	***298***
TOTAL BY PERIOD											
04:00 PM	---	04:15 PM	1	4	6	1	4	0	7	8	***31***
04:15 PM	---	04:30 PM	5	2	2	0	0	2	5	2	***18***
04:30 PM	---	04:45 PM	4	0	0	0	0	0	6	8	***18***
04:45 PM	---	05:00 PM	9	3	1	1	0	1	8	2	***25***
05:00 PM	---	05:15 PM	2	0	1	0	2	1	7	6	***19***
05:15 PM	---	05:30 PM	0	1	0	2	1	4	4	6	***18***
05:30 PM	---	05:45 PM	2	0	0	0	0	0	5	1	***8***
05:45 PM	---	06:00 PM	7	2	0	2	0	3	11	8	***33***
06:00 PM	---	06:15 PM	7	3	4	0	0	1	8	4	***27***
06:15 PM	---	06:30 PM	0	2	0	1	0	1	7	12	***23***
06:30 PM	---	06:45 PM	11	5	4	0	5	0	16	13	***54***
06:45 PM	---	07:00 PM	2	6	0	1	0	0	7	8	***24***
HOURLY TOTALS											
04:00 PM	---	05:00 PM	19	9	9	2	4	3	26	20	***92***
04:15 PM	---	05:15 PM	20	5	4	1	2	4	26	18	***80***
04:30 PM	---	05:30 PM	15	4	2	3	3	6	25	22	***80***
04:45 PM	---	05:45 PM	13	4	2	3	3	6	24	15	***70***
05:00 PM	---	06:00 PM	11	3	1	4	3	8	27	21	***78***
05:15 PM	---	06:15 PM	16	6	4	4	1	8	28	19	***86***
05:30 PM	---	06:30 PM	16	7	4	3	0	5	31	25	***91***
05:45 PM	---	06:45 PM	25	12	8	3	5	5	42	37	***137***
06:00 PM	---	07:00 PM	20	16	8	2	5	2	38	37	***128***

Tel : (510) 232-1271 ***Fax: (510) 232-1272***

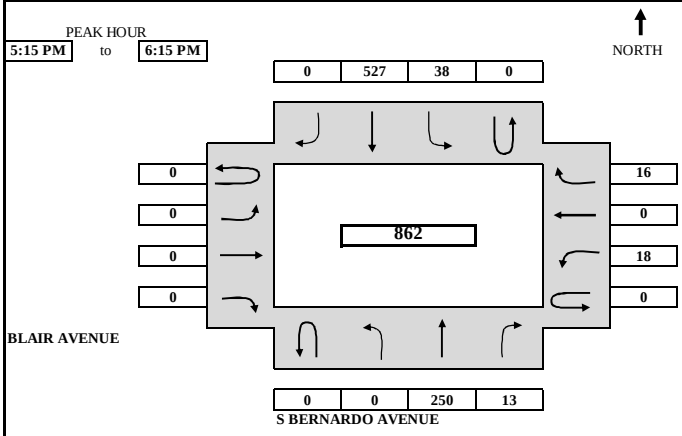
5:45 PM	to	6:45 PM					
VOLUME BY DIRECTION			NB	SB	EB	WB	TOTAL
PEDESTRIAN			45	45	30	17	**137**
VOLUME BY LEG			N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN			37	10	11	79	**137**

B.A.Y.M.E.T.R.I.C.S.

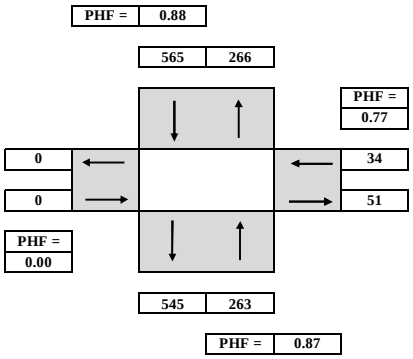
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**BLAIR AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-3PM**

PEAK HOUR **5:15 PM** to **6:15 PM**



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM			47	6		5	80							1		7	**146**
4:15 PM	to	4:30 PM			111	8		11	155							3		12	**300**
4:30 PM	to	4:45 PM			167	11		14	229							4		18	**443**
4:45 PM	to	5:00 PM			218	14		20	330							5		20	**607**
5:00 PM	to	5:15 PM			271	18		26	436							6		24	**781**
5:15 PM	to	5:30 PM			344	19		37	557							10		27	**994**
5:30 PM	to	5:45 PM			395	25		45	710							16		32	**1223**
5:45 PM	to	6:00 PM			449	27		55	849							19		37	**1436**
6:00 PM	to	6:15 PM			521	31		64	963							24		40	**1643**
6:15 PM	to	6:30 PM			575	38		71	1078							34		45	**1841**
6:30 PM	to	6:45 PM			640	44		77	1171							36		48	**2016**
6:45 PM	to	7:00 PM			680	48		80	1255							39		53	**2155**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	47	6	0	5	80	0	0	0	0	0	0	1	0	7	**146**
4:15 PM	to	4:30 PM	0	0	64	2	0	6	75	0	0	0	0	0	0	2	0	5	**154**
4:30 PM	to	4:45 PM	0	0	56	3	0	3	74	0	0	0	0	0	0	1	0	6	**143**
4:45 PM	to	5:00 PM	0	0	51	3	0	6	101	0	0	0	0	0	0	1	0	2	**164**
5:00 PM	to	5:15 PM	0	0	53	4	0	6	106	0	0	0	0	0	0	1	0	4	**174**
5:15 PM	to	5:30 PM	0	0	73	1	0	11	121	0	0	0	0	0	0	4	0	3	**213**
5:30 PM	to	5:45 PM	0	0	51	6	0	8	153	0	0	0	0	0	0	6	0	5	**229**
5:45 PM	to	6:00 PM	0	0	54	2	0	10	139	0	0	0	0	0	0	3	0	5	**213**
6:00 PM	to	6:15 PM	0	0	72	4	0	9	114	0	0	0	0	0	0	5	0	3	**207**
6:15 PM	to	6:30 PM	0	0	54	7	0	7	115	0	0	0	0	0	0	10	0	5	**198**
6:30 PM	to	6:45 PM	0	0	65	6	0	6	93	0	0	0	0	0	0	2	0	3	**175**
6:45 PM	to	7:00 PM	0	0	40	4	0	3	84	0	0	0	0	0	0	3	0	5	**139**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	218	14	0	20	330	0	0	0	0	0	0	5	0	20	**607**
4:15 PM	to	5:15 PM	0	0	224	12	0	21	356	0	0	0	0	0	0	5	0	17	**635**
4:30 PM	to	5:30 PM	0	0	233	11	0	26	402	0	0	0	0	0	0	7	0	15	**694**
4:45 PM	to	5:45 PM	0	0	228	14	0	31	481	0	0	0	0	0	0	12	0	14	**780**
5:00 PM	to	6:00 PM	0	0	231	13	0	35	519	0	0	0	0	0	0	14	0	17	**829**
5:15 PM	to	6:15 PM	0	0	250	13	0	38	527	0	0	0	0	0	0	18	0	16	**862**
5:30 PM	to	6:30 PM	0	0	231	19	0	34	521	0	0	0	0	0	0	24	0	18	**847**
5:45 PM	to	6:45 PM	0	0	245	19	0	32	461	0	0	0	0	0	0	20	0	16	**793**
6:00 PM	to	7:00 PM	0	0	231	21	0	25	406	0	0	0	0	0	0	20	0	16	**719**

PEAK HOUR SUMMARY

5:15 PM	to	6:15 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
			NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME			0	0	250	13	0	38	527	0	0	0	0	0	0	18	0	16	**862**
PHF BY MOVEMENT			0.00	0.00	0.86	0.54	0.00	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.80	OVERALL
PHF BY APPROACH			0.87				0.88				0.00				0.77				**0.94**
BICYCLE			1				3				0				1				**5**
PEDESTRIAN			2				8				11				5				**26**
			N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:			16				0				10				0				**26**

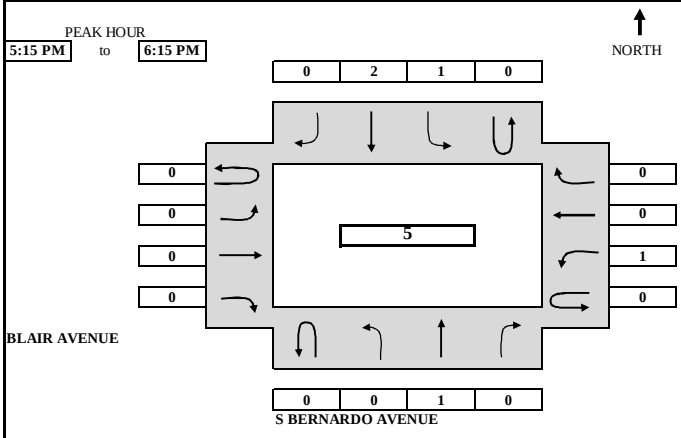
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

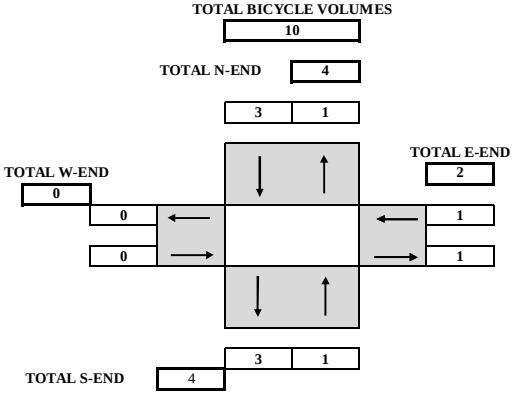
BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	TRAFFIC COUNTS IN SUNNYVALE	**SURVEY DATE:**	5/15/2018	**DAY:**	TUESDAY
N-S APPROACH:	S BERNARDO AVENUE	**SURVEY TIME:**	4:00 PM	**TO**	7:00 PM
E-W APPROACH:	BLAIR AVENUE	**JURISDICTION:**	SUNNYVALE	**FILE:**	3805027-3PM

PEAK HOUR
5:15 PM to 6:15 PM



PEAK HOUR
TOTAL BICYCLE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	**3**
4:15 PM	to	4:30 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	**3**
4:30 PM	to	4:45 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	**3**
4:45 PM	to	5:00 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	**3**
5:00 PM	to	5:15 PM	0	0	2	0	0	0	4	0	0	0	0	0	0	1	0	0	**7**
5:15 PM	to	5:30 PM	0	0	2	0	0	1	6	0	0	0	0	0	0	1	0	0	**10**
5:30 PM	to	5:45 PM	0	0	2	0	0	1	6	0	0	0	0	0	0	1	0	0	**10**
5:45 PM	to	6:00 PM	0	0	3	0	0	1	6	0	0	0	0	0	0	2	0	0	**12**
6:00 PM	to	6:15 PM	0	0	3	0	0	1	6	0	0	0	0	0	0	2	0	0	**12**
6:15 PM	to	6:30 PM	0	0	4	0	0	1	7	0	0	0	0	0	0	2	0	0	**14**
6:30 PM	to	6:45 PM	0	0	4	0	0	1	7	0	0	0	0	0	0	2	0	0	**14**
6:45 PM	to	7:00 PM	0	0	4	1	0	1	7	0	0	0	0	0	0	2	0	0	**15**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	**3**
4:15 PM	to	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:30 PM	to	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:45 PM	to	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	to	5:15 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	**4**
5:15 PM	to	5:30 PM	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	**3**
5:30 PM	to	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:45 PM	to	6:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	**2**
6:00 PM	to	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:15 PM	to	6:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
6:30 PM	to	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:45 PM	to	7:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	**3**
4:15 PM	to	5:15 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	**4**
4:30 PM	to	5:30 PM	0	0	1	0	0	1	4	0	0	0	0	0	0	1	0	0	**7**
4:45 PM	to	5:45 PM	0	0	1	0	0	1	4	0	0	0	0	0	0	1	0	0	**7**
5:00 PM	to	6:00 PM	0	0	2	0	0	1	4	0	0	0	0	0	0	2	0	0	**9**
5:15 PM	to	6:15 PM	0	0	1	0	0	1	2	0	0	0	0	0	0	1	0	0	**5**
5:30 PM	to	6:30 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	**4**
5:45 PM	to	6:45 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	**4**
6:00 PM	to	7:00 PM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	**3**

TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

5:15 PM to 6:15 PM

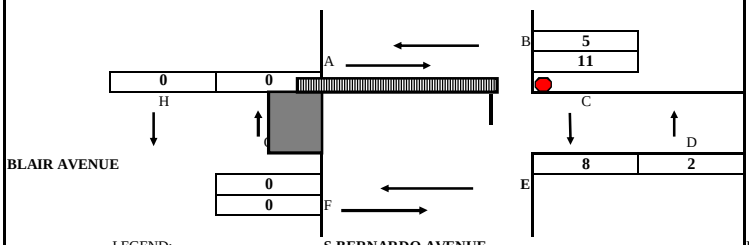
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	1	3	0	1	**5**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

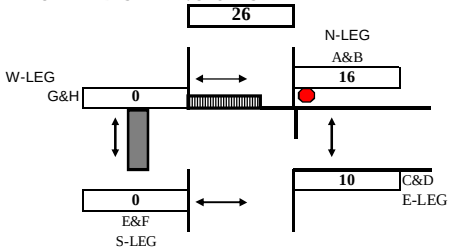
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**			**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**			**DAY:**	**TUESDAY**
E-W APPROACH:	**BLAIR AVENUE**			**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**4:00 PM**	**TO**	**7:00 PM**	**FILE:**	**3805027-3PM**

PEAK HOUR
5:15 PM TO **6:15 PM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR
TOTAL PEDESTRIAN VOLUMES
26



BY LEG:	
N-LEG	**16**
S-LEG	**0**
E-LEG	**10**
W-LEG	**0**

BY DIRECTION:	
NB(D+G)	**2**
SB(C+H)	**8**
EB(A+F)	**11**
WB(B+E)	**5**

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
04:00 PM	---	04:15 PM	0	0	0	1	0	0	0	0	***1***
04:15 PM	---	04:30 PM	0	0	1	1	0	1	0	0	***3***
04:30 PM	---	04:45 PM	0	2	2	1	0	1	0	0	***6***
04:45 PM	---	05:00 PM	1	2	2	1	0	1	0	0	***7***
05:00 PM	---	05:15 PM	3	3	2	1	0	1	0	0	***10***
05:15 PM	---	05:30 PM	9	3	4	2	0	1	0	0	***19***
05:30 PM	---	05:45 PM	11	6	7	2	0	1	0	0	***27***
05:45 PM	---	06:00 PM	11	8	10	3	0	1	0	0	***33***
06:00 PM	---	06:15 PM	14	8	10	3	0	1	0	0	***36***
06:15 PM	---	06:30 PM	15	8	10	3	0	1	0	0	***37***
06:30 PM	---	06:45 PM	17	8	11	4	0	1	0	0	***41***
06:45 PM	---	07:00 PM	17	8	12	4	0	1	0	0	***42***
TOTAL BY PERIOD											
04:00 PM	---	04:15 PM	0	0	0	1	0	0	0	0	***1***
04:15 PM	---	04:30 PM	0	0	1	0	0	1	0	0	***2***
04:30 PM	---	04:45 PM	0	2	1	0	0	0	0	0	***3***
04:45 PM	---	05:00 PM	1	0	0	0	0	0	0	0	***1***
05:00 PM	---	05:15 PM	2	1	0	0	0	0	0	0	***3***
05:15 PM	---	05:30 PM	6	0	2	1	0	0	0	0	***9***
05:30 PM	---	05:45 PM	2	3	3	0	0	0	0	0	***8***
05:45 PM	---	06:00 PM	0	2	3	1	0	0	0	0	***6***
06:00 PM	---	06:15 PM	3	0	0	0	0	0	0	0	***3***
06:15 PM	---	06:30 PM	1	0	0	0	0	0	0	0	***1***
06:30 PM	---	06:45 PM	2	0	1	1	0	0	0	0	***4***
06:45 PM	---	07:00 PM	0	0	1	0	0	0	0	0	***1***
HOURLY TOTALS											
04:00 PM	---	05:00 PM	1	2	2	1	0	1	0	0	***7***
04:15 PM	---	05:15 PM	3	3	2	0	0	1	0	0	***9***
04:30 PM	---	05:30 PM	9	3	3	1	0	0	0	0	***16***
04:45 PM	---	05:45 PM	11	4	5	1	0	0	0	0	***21***
05:00 PM	---	06:00 PM	10	6	8	2	0	0	0	0	***26***
05:15 PM	---	06:15 PM	11	5	8	2	0	0	0	0	***26***
05:30 PM	---	06:30 PM	6	5	6	1	0	0	0	0	***18***
05:45 PM	---	06:45 PM	6	2	4	2	0	0	0	0	***14***
06:00 PM	---	07:00 PM	6	0	2	1	0	0	0	0	***9***

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5:15 PM	to	6:15 PM				
VOLUME BY DIRECTION		NB	SB	EB	WB	TOTAL
PEDESTRIAN		2	8	11	5	**26**
VOLUME BY LEG		N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN		16	0	10	0	**26**

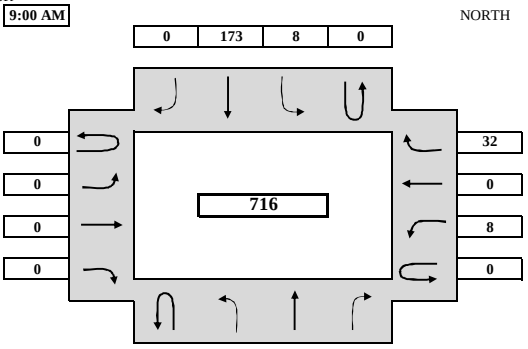
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

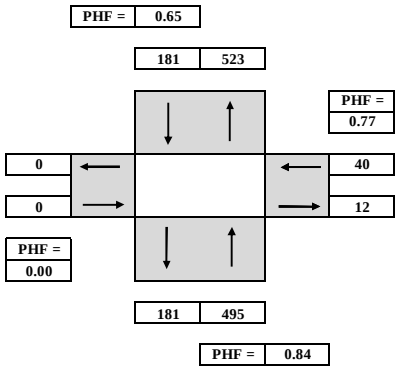
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**BLAIR AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-3AM**

PEAK HOUR **8:00 AM** to **9:00 AM**

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM			35	3		0	26							0		3	**67**
7:15 AM	to	7:30 AM			68	4		2	67							1		8	**150**
7:30 AM	to	7:45 AM			124	5		2	130							4		17	**282**
7:45 AM	to	8:00 AM			198	6		4	179							9		21	**417**
8:00 AM	to	8:15 AM			316	8		7	246							10		33	**620**
8:15 AM	to	8:30 AM			461	10		8	284							12		41	**816**
8:30 AM	to	8:45 AM			580	10		9	324							14		49	**986**
8:45 AM	to	9:00 AM			689	10		12	352							17		53	**1133**
9:00 AM	to	9:15 AM			811	10		14	396							18		62	**1311**
9:15 AM	to	9:30 AM			928	11		15	436							19		65	**1474**
9:30 AM	to	9:45 AM			1040	14		18	481							20		71	**1644**
9:45 AM	to	10:00 AM			1120	16		20	511							21		74	**1762**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	35	3	0	0	26	0	0	0	0	0	0	0	0	3	**67**
7:15 AM	to	7:30 AM	0	0	33	1	0	2	41	0	0	0	0	0	0	1	0	5	**83**
7:30 AM	to	7:45 AM	0	0	56	1	0	0	63	0	0	0	0	0	0	3	0	9	**132**
7:45 AM	to	8:00 AM	0	0	74	1	0	2	49	0	0	0	0	0	0	5	0	4	**135**
8:00 AM	to	8:15 AM	0	0	118	2	0	3	67	0	0	0	0	0	0	1	0	12	**203**
8:15 AM	to	8:30 AM	0	0	145	2	0	1	38	0	0	0	0	0	0	2	0	8	**196**
8:30 AM	to	8:45 AM	0	0	119	0	0	1	40	0	0	0	0	0	0	2	0	8	**170**
8:45 AM	to	9:00 AM	0	0	109	0	0	3	28	0	0	0	0	0	0	3	0	4	**147**
9:00 AM	to	9:15 AM	0	0	122	0	0	2	44	0	0	0	0	0	0	1	0	9	**178**
9:15 AM	to	9:30 AM	0	0	117	1	0	1	40	0	0	0	0	0	0	1	0	3	**163**
9:30 AM	to	9:45 AM	0	0	112	3	0	3	45	0	0	0	0	0	0	1	0	6	**170**
9:45 AM	to	10:00 AM	0	0	80	2	0	2	30	0	0	0	0	0	0	1	0	3	**118**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	0	198	6	0	4	179	0	0	0	0	0	0	9	0	21	**417**
7:15 AM	to	8:15 AM	0	0	281	5	0	7	220	0	0	0	0	0	0	10	0	30	**553**
7:30 AM	to	8:30 AM	0	0	393	6	0	6	217	0	0	0	0	0	0	11	0	33	**666**
7:45 AM	to	8:45 AM	0	0	456	5	0	7	194	0	0	0	0	0	0	10	0	32	**704**
8:00 AM	to	9:00 AM	0	0	491	4	0	8	173	0	0	0	0	0	0	8	0	32	**716**
8:15 AM	to	9:15 AM	0	0	495	2	0	7	150	0	0	0	0	0	0	8	0	29	**691**
8:30 AM	to	9:30 AM	0	0	467	1	0	7	152	0	0	0	0	0	0	7	0	24	**658**
8:45 AM	to	9:45 AM	0	0	460	4	0	9	157	0	0	0	0	0	0	6	0	22	**658**
9:00 AM	to	10:00 AM	0	0	431	6	0	8	159	0	0	0	0	0	0	4	0	21	**629**

PEAK HOUR SUMMARY

8:00 AM to 9:00 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	0	491	4	0	8	173	0	0	0	0	0	0	8	0	32	**716**
PHF BY MOVEMENT	0.00	0.00	0.85	0.50	0.00	0.67	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.67	OVERALL
PHF BY APPROACH	0.84				0.65				0.00				0.77				**0.88**
BICYCLE	4				2				0				0				**6**
PEDESTRIAN	0				4				2				1				**7**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	3				0				4				0				**7**

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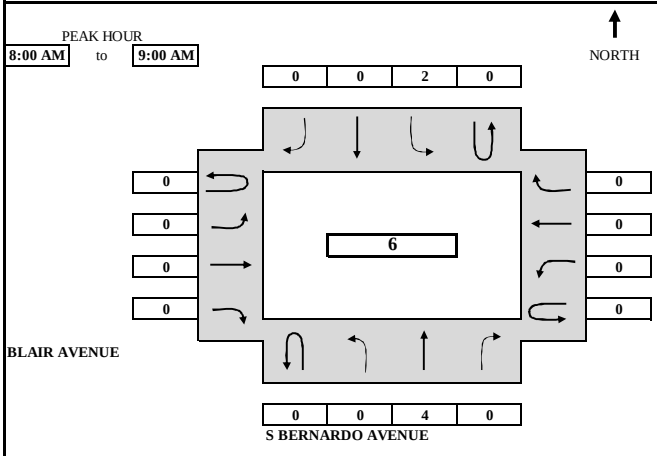
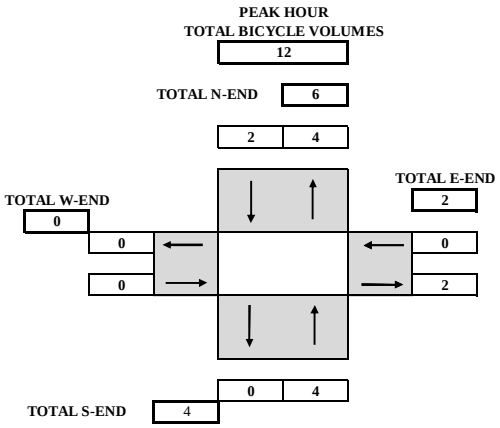
B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**BLAIR AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-3AM**





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:15 AM	to	7:30 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	1	0	0	**4**
7:30 AM	to	7:45 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	1	0	0	**4**
7:45 AM	to	8:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	1	0	0	**5**
8:00 AM	to	8:15 AM	0	0	4	2	0	2	0	0	0	0	0	0	0	1	0	0	**9**
8:15 AM	to	8:30 AM	0	0	5	2	0	2	0	0	0	0	0	0	0	1	0	0	**10**
8:30 AM	to	8:45 AM	0	0	5	2	0	2	0	0	0	0	0	0	0	1	0	0	**10**
8:45 AM	to	9:00 AM	0	0	6	2	0	2	0	0	0	0	0	0	0	1	0	0	**11**
9:00 AM	to	9:15 AM	0	0	7	2	0	2	1	0	0	0	0	0	0	1	0	1	**14**
9:15 AM	to	9:30 AM	0	0	7	2	0	2	3	0	0	0	0	0	0	1	0	1	**16**
9:30 AM	to	9:45 AM	0	0	8	2	0	2	4	0	0	0	0	0	0	1	0	1	**18**
9:45 AM	to	10:00 AM	0	0	8	2	0	2	5	0	0	0	0	0	0	1	0	1	**19**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:15 AM	to	7:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	**3**
7:30 AM	to	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:45 AM	to	8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	to	8:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	**4**
8:15 AM	to	8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
8:30 AM	to	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:45 AM	to	9:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 AM	to	9:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	**3**
9:15 AM	to	9:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	**2**
9:30 AM	to	9:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
9:45 AM	to	10:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	1	0	0	**5**
7:15 AM	to	8:15 AM	0	0	4	1	0	2	0	0	0	0	0	0	0	1	0	0	**8**
7:30 AM	to	8:30 AM	0	0	4	0	0	2	0	0	0	0	0	0	0	0	0	0	**6**
7:45 AM	to	8:45 AM	0	0	4	0	0	2	0	0	0	0	0	0	0	0	0	0	**6**
8:00 AM	to	9:00 AM	0	0	4	0	0	2	0	0	0	0	0	0	0	0	0	0	**6**
8:15 AM	to	9:15 AM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	1	**5**
8:30 AM	to	9:30 AM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	1	**6**
8:45 AM	to	9:45 AM	0	0	3	0	0	0	4	0	0	0	0	0	0	0	0	1	**8**
9:00 AM	to	10:00 AM	0	0	2	0	0	0	5	0	0	0	0	0	0	0	0	1	**8**

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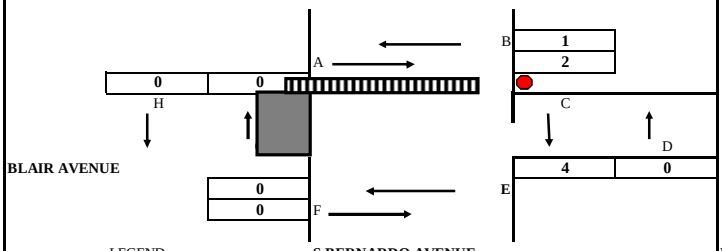
8:00 AM	to	9:00 AM					
APPROACH VOLUME			NB	SB	EB	WB	TOTAL
BICYCLE			4	2	0	0	**6**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

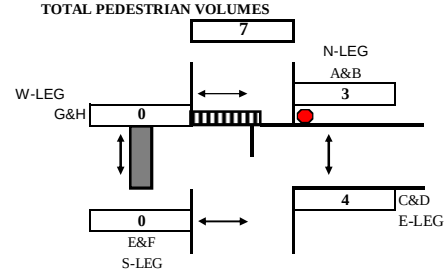
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**BLAIR AVENUE**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**7:00 AM TO 10:00 AM**	**FILE:**	**3805027-3AM**

PEAK HOUR **8:00 AM** TO **9:00 AM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR TOTAL PEDESTRIAN VOLUMES



BY LEG:	
N-LEG	3
S-LEG	0
E-LEG	4
W-LEG	0

BY DIRECTION:	
NB(D+G)	0
SB(C+H)	4
EB(A+F)	2
WB(B+E)	1

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
07:00 AM	---	07:15 AM	0	1	1	0	0	0	0	0	***2***
07:15 AM	---	07:30 AM	1	1	1	0	0	0	0	0	***3***
07:30 AM	---	07:45 AM	5	2	1	0	0	0	0	0	***8***
07:45 AM	---	08:00 AM	5	2	1	0	0	0	0	0	***8***
08:00 AM	---	08:15 AM	7	3	2	0	0	0	0	0	***12***
08:15 AM	---	08:30 AM	7	3	4	0	0	0	0	0	***14***
08:30 AM	---	08:45 AM	7	3	4	0	0	0	0	0	***14***
08:45 AM	---	09:00 AM	7	3	5	0	0	0	0	0	***15***
09:00 AM	---	09:15 AM	8	5	8	1	0	0	0	0	***22***
09:15 AM	---	09:30 AM	8	6	10	1	0	0	0	0	***25***
09:30 AM	---	09:45 AM	8	8	14	1	0	0	0	0	***31***
09:45 AM	---	10:00 AM	8	9	14	1	0	0	0	0	***32***
TOTAL BY PERIOD											
07:00 AM	---	07:15 AM	0	1	1	0	0	0	0	0	***2***
07:15 AM	---	07:30 AM	1	0	0	0	0	0	0	0	***1***
07:30 AM	---	07:45 AM	4	1	0	0	0	0	0	0	***5***
07:45 AM	---	08:00 AM	0	0	0	0	0	0	0	0	***0***
08:00 AM	---	08:15 AM	2	1	1	0	0	0	0	0	***4***
08:15 AM	---	08:30 AM	0	0	2	0	0	0	0	0	***2***
08:30 AM	---	08:45 AM	0	0	0	0	0	0	0	0	***0***
08:45 AM	---	09:00 AM	0	0	1	0	0	0	0	0	***1***
09:00 AM	---	09:15 AM	1	2	3	1	0	0	0	0	***7***
09:15 AM	---	09:30 AM	0	1	2	0	0	0	0	0	***3***
09:30 AM	---	09:45 AM	0	2	4	0	0	0	0	0	***6***
09:45 AM	---	10:00 AM	0	1	0	0	0	0	0	0	***1***
HOURLY TOTALS											
07:00 AM	---	08:00 AM	5	2	1	0	0	0	0	0	***8***
07:15 AM	---	08:15 AM	7	2	1	0	0	0	0	0	***10***
07:30 AM	---	08:30 AM	6	2	3	0	0	0	0	0	***11***
07:45 AM	---	08:45 AM	2	1	3	0	0	0	0	0	***6***
08:00 AM	---	09:00 AM	2	1	4	0	0	0	0	0	***7***
08:15 AM	---	09:15 AM	1	2	6	1	0	0	0	0	***10***
08:30 AM	---	09:30 AM	1	3	6	1	0	0	0	0	***11***
08:45 AM	---	09:45 AM	1	5	10	1	0	0	0	0	***17***
09:00 AM	---	10:00 AM	1	6	9	1	0	0	0	0	***17***

Tel : (510) 232-1271 ***Fax: (510) 232-1272***

8:00 AM	to	9:00 AM				
VOLUME BY DIRECTION		NB	SB	EB	WB	TOTAL
PEDESTRIAN		0	4	2	1	7
VOLUME BY LEG		N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN		3	0	4	0	7

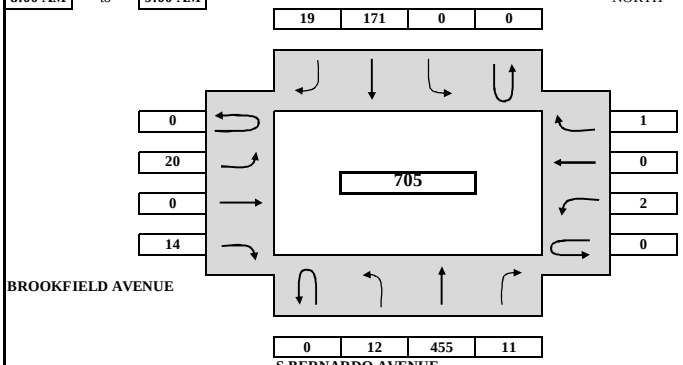
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

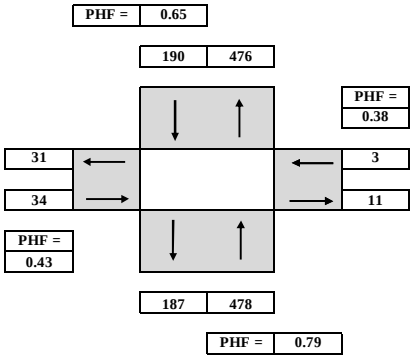
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-4AM**

PEAK HOUR **8:00 AM** to **9:00 AM**

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM		0	32	0		0	25	1		5	0	2		2	0	0	**67**
7:15 AM	to	7:30 AM		1	68	2		0	65	3		5	0	3		3	0	0	**150**
7:30 AM	to	7:45 AM		1	120	2		0	126	3		8	0	5		3	0	0	**268**
7:45 AM	to	8:00 AM		2	192	3		1	188	6		12	0	6		3	0	0	**413**
8:00 AM	to	8:15 AM		5	300	8		1	253	14		20	0	18		3	0	0	**622**
8:15 AM	to	8:30 AM		12	442	10		1	288	21		24	0	18		3	0	0	**819**
8:30 AM	to	8:45 AM		12	541	12		1	327	24		30	0	20		4	0	1	**972**
8:45 AM	to	9:00 AM		14	647	14		1	359	25		32	0	20		5	0	1	**1118**
9:00 AM	to	9:15 AM		15	763	15		1	398	31		39	0	23		5	0	1	**1291**
9:15 AM	to	9:30 AM		15	864	17		1	440	34		51	0	27		6	0	1	**1456**
9:30 AM	to	9:45 AM		15	953	19		1	476	37		59	0	27		7	1	1	**1596**
9:45 AM	to	10:00 AM		17	1028	20		1	510	40		69	0	33		7	1	1	**1727**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	32	0	0	0	25	1	0	5	0	2	0	2	0	0	**67**
7:15 AM	to	7:30 AM	0	1	36	2	0	0	40	2	0	0	0	1	0	1	0	0	**83**
7:30 AM	to	7:45 AM	0	0	52	0	0	0	61	0	0	3	0	2	0	0	0	0	**118**
7:45 AM	to	8:00 AM	0	1	72	1	0	1	62	3	0	4	0	1	0	0	0	0	**145**
8:00 AM	to	8:15 AM	0	3	108	5	0	0	65	8	0	8	0	12	0	0	0	0	**209**
8:15 AM	to	8:30 AM	0	7	142	2	0	0	35	7	0	4	0	0	0	0	0	0	**197**
8:30 AM	to	8:45 AM	0	0	99	2	0	0	39	3	0	6	0	2	0	1	0	1	**153**
8:45 AM	to	9:00 AM	0	2	106	2	0	0	32	1	0	2	0	0	0	1	0	0	**146**
9:00 AM	to	9:15 AM	0	1	116	1	0	0	39	6	0	7	0	3	0	0	0	0	**173**
9:15 AM	to	9:30 AM	0	0	101	2	0	0	42	3	0	12	0	4	0	1	0	0	**165**
9:30 AM	to	9:45 AM	0	0	89	2	0	0	36	3	0	8	0	0	0	1	1	0	**140**
9:45 AM	to	10:00 AM	0	2	75	1	0	0	34	3	0	10	0	6	0	0	0	0	**131**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	2	192	3	0	1	188	6	0	12	0	6	0	3	0	0	**413**
7:15 AM	to	8:15 AM	0	5	268	8	0	1	228	13	0	15	0	16	0	1	0	0	**555**
7:30 AM	to	8:30 AM	0	11	374	8	0	1	223	18	0	19	0	15	0	0	0	0	**669**
7:45 AM	to	8:45 AM	0	11	421	10	0	1	201	21	0	22	0	15	0	1	0	1	**704**
8:00 AM	to	9:00 AM	0	12	455	11	0	0	171	19	0	20	0	14	0	2	0	1	**705**
8:15 AM	to	9:15 AM	0	10	463	7	0	0	145	17	0	19	0	5	0	2	0	1	**669**
8:30 AM	to	9:30 AM	0	3	422	7	0	0	152	13	0	27	0	9	0	3	0	1	**637**
8:45 AM	to	9:45 AM	0	3	412	7	0	0	149	13	0	29	0	7	0	3	1	0	**624**
9:00 AM	to	10:00 AM	0	3	381	6	0	0	151	15	0	37	0	13	0	2	1	0	**609**

PEAK HOUR SUMMARY

8:00 AM	to	9:00 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
			NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME			0	12	455	11	0	0	171	19	0	20	0	14	0	2	0	1	**705**
PHF BY MOVEMENT			0.00	0.43	0.80	0.55	0.00	0.00	0.66	0.59	0.00	0.63	0.00	0.29	0.00	0.50	0.00	0.25	OVERALL
PHF BY APPROACH				0.79				0.65				0.43				0.38			**0.84**
BICYCLE				4				3				0				1			**8**
PEDESTRIAN				20				21				0				0			**41**
				N-LEG				**S-LEG**				**E-LEG**				**W-LEG**			
PEDESTRIAN BY LEG:				0				0				0				41			**41**

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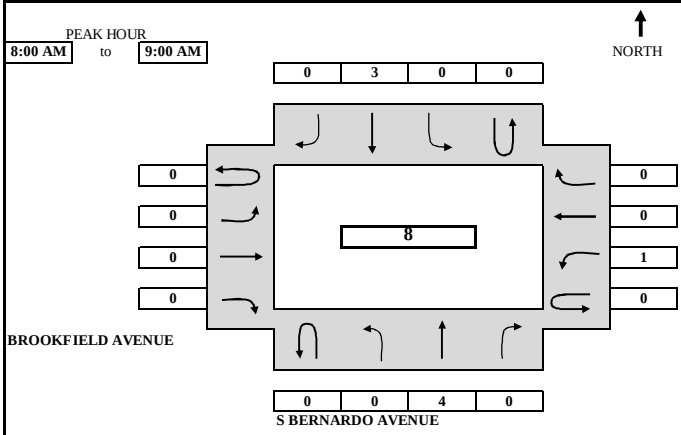
B.A.Y.M.E.T.R.I.C.S.

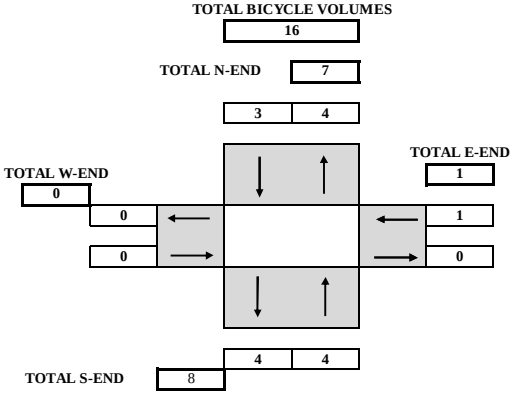
BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-4AM**

PEAK HOUR **8:00 AM** to **9:00 AM**



PEAK HOUR
TOTAL BICYCLE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:15 AM	to	7:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
7:30 AM	to	7:45 AM	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	**4**
7:45 AM	to	8:00 AM	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	**5**
8:00 AM	to	8:15 AM	0	0	3	0	0	0	3	1	0	0	0	0	0	1	0	0	**8**
8:15 AM	to	8:30 AM	0	0	5	0	0	0	4	1	0	0	0	0	0	1	0	0	**11**
8:30 AM	to	8:45 AM	0	0	5	0	0	0	4	1	0	0	0	0	0	1	0	0	**11**
8:45 AM	to	9:00 AM	0	0	6	0	0	0	5	1	0	0	0	0	0	1	0	0	**13**
9:00 AM	to	9:15 AM	0	0	6	0	0	0	6	1	0	0	0	0	0	1	0	0	**14**
9:15 AM	to	9:30 AM	0	0	9	0	0	0	6	1	0	0	0	0	0	1	0	0	**17**
9:30 AM	to	9:45 AM	0	0	10	0	0	0	7	1	0	0	0	0	0	1	0	0	**19**
9:45 AM	to	10:00 AM	0	0	10	0	0	0	8	1	0	0	0	0	0	1	0	0	**20**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:15 AM	to	7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
7:30 AM	to	7:45 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	**2**
7:45 AM	to	8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	to	8:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	**3**
8:15 AM	to	8:30 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
8:30 AM	to	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:45 AM	to	9:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
9:00 AM	to	9:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
9:15 AM	to	9:30 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
9:30 AM	to	9:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
9:45 AM	to	10:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	**5**
7:15 AM	to	8:15 AM	0	0	2	0	0	0	3	1	0	0	0	0	0	1	0	0	**7**
7:30 AM	to	8:30 AM	0	0	4	0	0	0	3	1	0	0	0	0	0	1	0	0	**9**
7:45 AM	to	8:45 AM	0	0	3	0	0	0	3	0	0	0	0	0	0	1	0	0	**7**
8:00 AM	to	9:00 AM	0	0	4	0	0	0	3	0	0	0	0	0	0	1	0	0	**8**
8:15 AM	to	9:15 AM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	**6**
8:30 AM	to	9:30 AM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	**6**
8:45 AM	to	9:45 AM	0	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	**8**
9:00 AM	to	10:00 AM	0	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	**7**

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8:00 AM to 9:00 AM

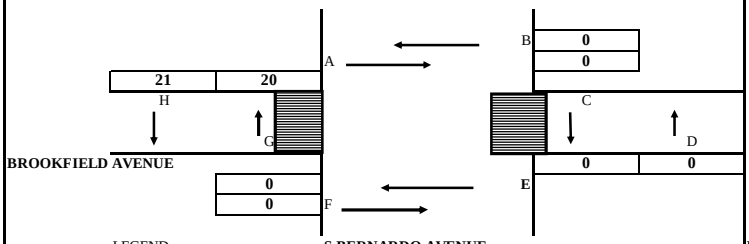
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	4	3	0	1	**8**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

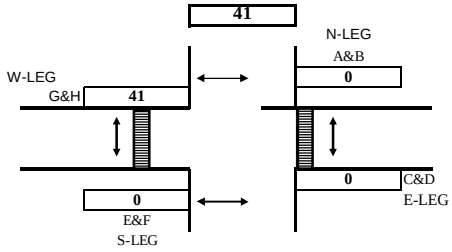
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**7:00 AM TO 10:00 AM**	**FILE:**	**3805027-4AM**

PEAK HOUR
8:00 AM TO **9:00 AM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR
TOTAL PEDESTRIAN VOLUMES



BY LEG:		**BY DIRECTION:**	
N-LEG	**0**	**NB**(D+G)	**20**
S-LEG	**0**	**SB**(C+H)	**21**
E-LEG	**0**	**EB**(A+F)	**0**
W-LEG	**41**	**WB**(B+E)	**0**

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
07:00 AM	---	07:15 AM	0	0	1	0	0	0	3	0	***4***
07:15 AM	---	07:30 AM	0	0	2	0	0	0	3	2	***7***
07:30 AM	---	07:45 AM	0	0	2	0	0	0	4	2	***8***
07:45 AM	---	08:00 AM	0	0	2	0	0	0	4	10	***16***
08:00 AM	---	08:15 AM	0	0	2	0	0	0	9	26	***37***
08:15 AM	---	08:30 AM	0	0	2	0	0	0	20	27	***49***
08:30 AM	---	08:45 AM	0	0	2	0	0	0	24	30	***56***
08:45 AM	---	09:00 AM	0	0	2	0	0	0	24	31	***57***
09:00 AM	---	09:15 AM	0	0	2	0	0	0	25	31	***58***
09:15 AM	---	09:30 AM	0	0	2	0	0	0	25	32	***59***
09:30 AM	---	09:45 AM	0	0	2	0	0	0	25	35	***62***
09:45 AM	---	10:00 AM	0	0	2	0	0	0	25	35	***62***
TOTAL BY PERIOD											
07:00 AM	---	07:15 AM	0	0	1	0	0	0	3	0	***4***
07:15 AM	---	07:30 AM	0	0	1	0	0	0	0	2	***3***
07:30 AM	---	07:45 AM	0	0	0	0	0	0	1	0	***1***
07:45 AM	---	08:00 AM	0	0	0	0	0	0	0	8	***8***
08:00 AM	---	08:15 AM	0	0	0	0	0	0	5	16	***21***
08:15 AM	---	08:30 AM	0	0	0	0	0	0	11	1	***12***
08:30 AM	---	08:45 AM	0	0	0	0	0	0	4	3	***7***
08:45 AM	---	09:00 AM	0	0	0	0	0	0	0	1	***1***
09:00 AM	---	09:15 AM	0	0	0	0	0	0	1	0	***1***
09:15 AM	---	09:30 AM	0	0	0	0	0	0	0	1	***1***
09:30 AM	---	09:45 AM	0	0	0	0	0	0	0	3	***3***
09:45 AM	---	10:00 AM	0	0	0	0	0	0	0	0	***0***
HOURLY TOTALS											
07:00 AM	---	08:00 AM	0	0	2	0	0	0	4	10	***16***
07:15 AM	---	08:15 AM	0	0	1	0	0	0	6	26	***33***
07:30 AM	---	08:30 AM	0	0	0	0	0	0	17	25	***42***
07:45 AM	---	08:45 AM	0	0	0	0	0	0	20	28	***48***
08:00 AM	---	09:00 AM	0	0	0	0	0	0	20	21	***41***
08:15 AM	---	09:15 AM	0	0	0	0	0	0	16	5	***21***
08:30 AM	---	09:30 AM	0	0	0	0	0	0	5	5	***10***
08:45 AM	---	09:45 AM	0	0	0	0	0	0	1	5	***6***
09:00 AM	---	10:00 AM	0	0	0	0	0	0	1	4	***5***

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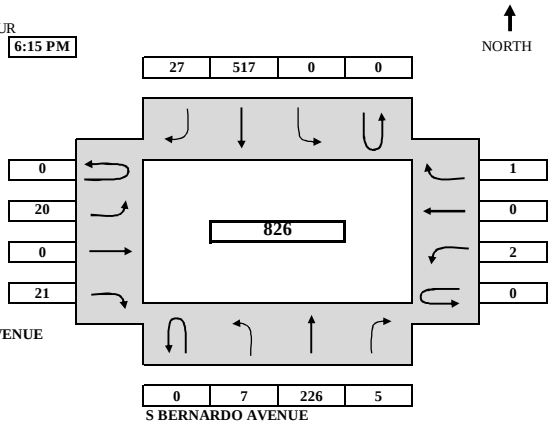
8:00 AM to 9:00 AM					
VOLUME BY DIRECTION	NB	SB	EB	WB	TOTAL
PEDESTRIAN	20	21	0	0	**41**
VOLUME BY LEG	N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN	0	0	0	41	**41**

B.A.Y.M.E.T.R.I.C.S.

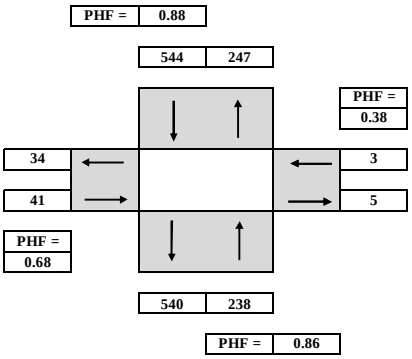
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-2PM**

PEAK HOUR **5:15 PM** to **6:15 PM**



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM		0	49	0		0	64	8		10	0	6		1	0	0	**138**
4:15 PM	to	4:30 PM		3	96	2		0	143	13		17	0	12		3	0	0	**289**
4:30 PM	to	4:45 PM		4	137	4		0	232	17		20	0	15		5	0	1	**435**
4:45 PM	to	5:00 PM		4	180	5		0	332	25		24	0	21		6	0	1	**598**
5:00 PM	to	5:15 PM		4	223	7		0	451	32		25	0	24		6	0	3	**775**
5:15 PM	to	5:30 PM		4	278	10		0	570	36		31	0	29		8	0	3	**969**
5:30 PM	to	5:45 PM		5	327	10		0	719	41		35	0	34		8	0	3	**1182**
5:45 PM	to	6:00 PM		9	383	11		0	853	49		37	0	38		8	0	3	**1391**
6:00 PM	to	6:15 PM		11	449	12		0	968	59		45	0	45		8	0	4	**1601**
6:15 PM	to	6:30 PM		11	499	13		1	1082	64		49	0	48		11	0	4	**1782**
6:30 PM	to	6:45 PM		12	535	14		1	1191	72		53	0	58		11	0	4	**1951**
6:45 PM	to	7:00 PM		13	597	14		2	1272	77		59	0	60		12	0	4	**2110**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	49	0	0	0	64	8	0	10	0	6	0	1	0	0	**138**
4:15 PM	to	4:30 PM	0	3	47	2	0	0	79	5	0	7	0	6	0	2	0	0	**151**
4:30 PM	to	4:45 PM	0	1	41	2	0	0	89	4	0	3	0	3	0	2	0	1	**146**
4:45 PM	to	5:00 PM	0	0	43	1	0	0	100	8	0	4	0	6	0	1	0	0	**163**
5:00 PM	to	5:15 PM	0	0	43	2	0	0	119	7	0	1	0	3	0	0	0	2	**177**
5:15 PM	to	5:30 PM	0	0	55	3	0	0	119	4	0	6	0	5	0	2	0	0	**194**
5:30 PM	to	5:45 PM	0	1	49	0	0	0	149	5	0	4	0	5	0	0	0	0	**213**
5:45 PM	to	6:00 PM	0	4	56	1	0	0	134	8	0	2	0	4	0	0	0	0	**209**
6:00 PM	to	6:15 PM	0	2	66	1	0	0	115	10	0	8	0	7	0	0	0	1	**210**
6:15 PM	to	6:30 PM	0	0	50	1	0	1	114	5	0	4	0	3	0	3	0	0	**181**
6:30 PM	to	6:45 PM	0	1	36	1	0	0	109	8	0	4	0	10	0	0	0	0	**169**
6:45 PM	to	7:00 PM	0	1	62	0	0	1	81	5	0	6	0	2	0	1	0	0	**159**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	4	180	5	0	0	332	25	0	24	0	21	0	6	0	1	**598**
4:15 PM	to	5:15 PM	0	4	174	7	0	0	387	24	0	15	0	18	0	5	0	3	**637**
4:30 PM	to	5:30 PM	0	1	182	8	0	0	427	23	0	14	0	17	0	5	0	3	**680**
4:45 PM	to	5:45 PM	0	1	190	6	0	0	487	24	0	15	0	19	0	3	0	2	**747**
5:00 PM	to	6:00 PM	0	5	203	6	0	0	521	24	0	13	0	17	0	2	0	2	**793**
5:15 PM	to	6:15 PM	0	7	226	5	0	0	517	27	0	20	0	21	0	2	0	1	**826**
5:30 PM	to	6:30 PM	0	7	221	3	0	1	512	28	0	18	0	19	0	3	0	1	**813**
5:45 PM	to	6:45 PM	0	7	208	4	0	1	472	31	0	18	0	24	0	3	0	1	**769**
6:00 PM	to	7:00 PM	0	4	214	3	0	2	419	28	0	22	0	22	0	4	0	1	**719**

PEAK HOUR SUMMARY

5:15 PM to 6:15 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	7	226	5	0	0	517	27	0	20	0	21	0	2	0	1	**826**
PHF BY MOVEMENT	0.00	0.44	0.86	0.42	0.00	0.00	0.87	0.68	0.00	0.63	0.00	0.75	0.00	0.25	0.00	0.25	OVERALL
PHF BY APPROACH	0.86				0.88				0.68				0.38				**0.97**
BICYCLE	4				6				0				0				**10**
PEDESTRIAN	14				0				0				0				**14**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	0				0				0				14				**14**

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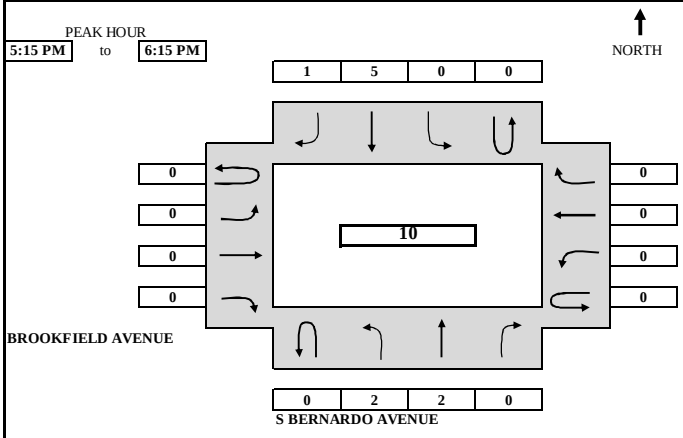
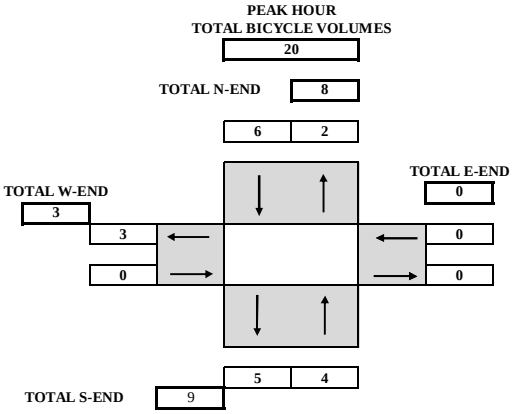
B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-2PM**





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
4:15 PM	to	4:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
4:30 PM	to	4:45 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
4:45 PM	to	5:00 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
5:00 PM	to	5:15 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
5:15 PM	to	5:30 PM	0	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	**6**
5:30 PM	to	5:45 PM	0	1	3	0	0	0	5	0	0	0	0	0	0	0	0	0	**9**
5:45 PM	to	6:00 PM	0	1	3	0	0	0	6	0	0	0	0	0	0	0	0	0	**10**
6:00 PM	to	6:15 PM	0	2	4	0	0	0	6	1	0	0	0	0	0	0	0	0	**13**
6:15 PM	to	6:30 PM	0	2	4	0	0	0	6	1	0	0	0	0	0	0	0	0	**13**
6:30 PM	to	6:45 PM	0	2	4	0	0	0	6	1	0	0	0	0	0	0	0	0	**13**
6:45 PM	to	7:00 PM	0	2	4	0	0	0	7	1	0	1	0	0	0	0	0	0	**15**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
4:15 PM	to	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:30 PM	to	4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:45 PM	to	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	to	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:15 PM	to	5:30 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	**3**
5:30 PM	to	5:45 PM	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
5:45 PM	to	6:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
6:00 PM	to	6:15 PM	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	**3**
6:15 PM	to	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:30 PM	to	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:45 PM	to	7:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	**2**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
4:15 PM	to	5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:30 PM	to	5:30 PM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	**4**
4:45 PM	to	5:45 PM	0	1	1	0	0	0	4	0	0	0	0	0	0	0	0	0	**6**
5:00 PM	to	6:00 PM	0	1	1	0	0	0	5	0	0	0	0	0	0	0	0	0	**7**
5:15 PM	to	6:15 PM	0	2	2	0	0	0	5	1	0	0	0	0	0	0	0	0	**10**
5:30 PM	to	6:30 PM	0	2	2	0	0	0	2	1	0	0	0	0	0	0	0	0	**7**
5:45 PM	to	6:45 PM	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	**4**
6:00 PM	to	7:00 PM	0	1	1	0	0	0	1	1	0	1	0	0	0	0	0	0	**5**

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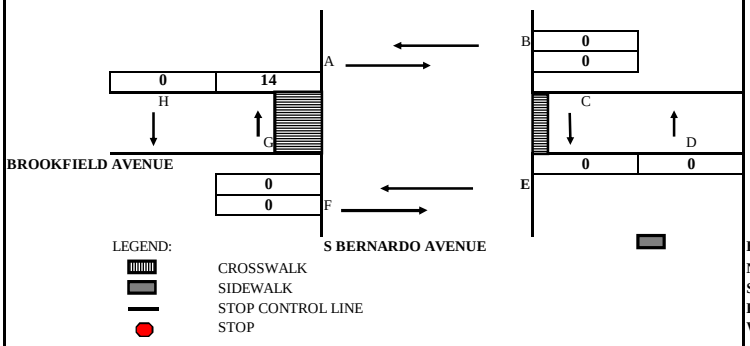
5:15 PM to 6:15 PM					
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	4	6	0	0	**10**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

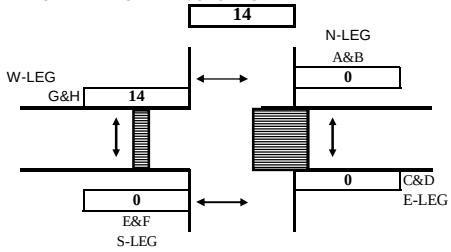
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**BROOKFIELD AVENUE**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**4:00 PM TO 7:00 PM**	**FILE:**	**3805027-2PM**

PEAK HOUR
5:15 PM TO **6:15 PM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR
TOTAL PEDESTRIAN VOLUMES
14



BY LEG:		**BY DIRECTION:**	
N-LEG	**0**	**NB**(D+G)	**14**
S-LEG	**0**	**SB**(C+H)	**0**
E-LEG	**0**	**EB**(A+F)	**0**
W-LEG	**14**	**WB**(B+E)	**0**

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
04:00 PM	---	04:15 PM	0	0	0	0	0	0	3	3	***6***
04:15 PM	---	04:30 PM	0	0	1	0	0	0	6	4	***11***
04:30 PM	---	04:45 PM	0	0	1	0	0	0	6	4	***11***
04:45 PM	---	05:00 PM	0	0	1	0	0	0	6	6	***13***
05:00 PM	---	05:15 PM	0	0	1	1	0	0	8	7	***17***
05:15 PM	---	05:30 PM	0	0	1	1	0	0	10	7	***19***
05:30 PM	---	05:45 PM	0	0	1	1	0	0	12	7	***21***
05:45 PM	---	06:00 PM	0	0	1	1	0	0	19	7	***28***
06:00 PM	---	06:15 PM	0	0	1	1	0	0	22	7	***31***
06:15 PM	---	06:30 PM	0	0	1	1	0	0	22	8	***32***
06:30 PM	---	06:45 PM	0	0	1	1	0	0	24	9	***35***
06:45 PM	---	07:00 PM	0	0	3	1	0	0	24	9	***37***
TOTAL BY PERIOD											
04:00 PM	---	04:15 PM	0	0	0	0	0	0	3	3	***6***
04:15 PM	---	04:30 PM	0	0	1	0	0	0	3	1	***5***
04:30 PM	---	04:45 PM	0	0	0	0	0	0	0	0	***0***
04:45 PM	---	05:00 PM	0	0	0	0	0	0	0	2	***2***
05:00 PM	---	05:15 PM	0	0	0	1	0	0	2	1	***4***
05:15 PM	---	05:30 PM	0	0	0	0	0	0	2	0	***2***
05:30 PM	---	05:45 PM	0	0	0	0	0	0	2	0	***2***
05:45 PM	---	06:00 PM	0	0	0	0	0	0	7	0	***7***
06:00 PM	---	06:15 PM	0	0	0	0	0	0	3	0	***3***
06:15 PM	---	06:30 PM	0	0	0	0	0	0	0	1	***1***
06:30 PM	---	06:45 PM	0	0	0	0	0	0	2	1	***3***
06:45 PM	---	07:00 PM	0	0	2	0	0	0	0	0	***2***
HOURLY TOTALS											
04:00 PM	---	05:00 PM	0	0	1	0	0	0	6	6	***13***
04:15 PM	---	05:15 PM	0	0	1	1	0	0	5	4	***11***
04:30 PM	---	05:30 PM	0	0	0	1	0	0	4	3	***8***
04:45 PM	---	05:45 PM	0	0	0	1	0	0	6	3	***10***
05:00 PM	---	06:00 PM	0	0	0	1	0	0	13	1	***15***
05:15 PM	---	06:15 PM	0	0	0	0	0	0	14	0	***14***
05:30 PM	---	06:30 PM	0	0	0	0	0	0	12	1	***13***
05:45 PM	---	06:45 PM	0	0	0	0	0	0	12	2	***14***
06:00 PM	---	07:00 PM	0	0	2	0	0	0	5	2	***9***

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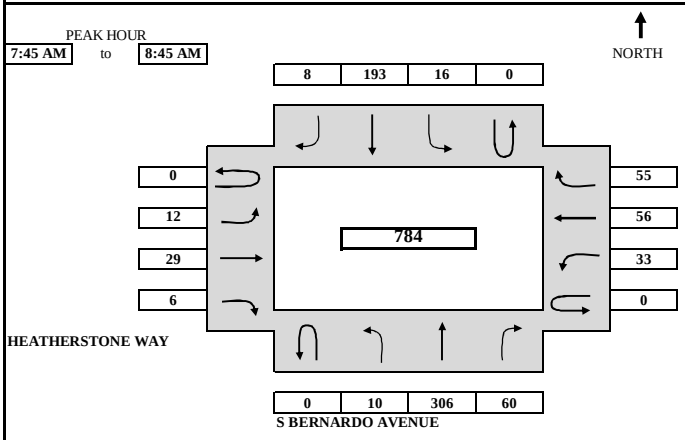
5:15 PM	to	6:15 PM				
VOLUME BY DIRECTION		NB	SB	EB	WB	TOTAL
PEDESTRIAN		14	0	0	0	**14**
VOLUME BY LEG		N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN		0	0	0	14	**14**

B.A.Y.M.E.T.R.I.C.S.

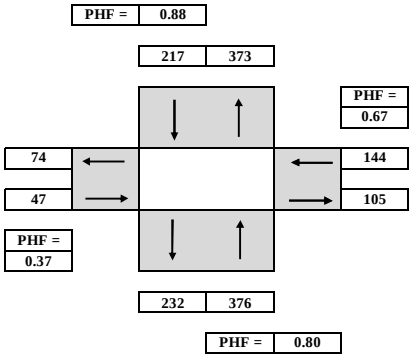
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**HEATHERSTONE WAY**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-5AM**

PEAK HOUR **7:45 AM** to **8:45 AM**



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM		1	27	3		2	25	0		1	0	0		1	1	1	**62**
7:15 AM	to	7:30 AM		2	56	6		3	79	2		2	0	2		3	2	4	**161**
7:30 AM	to	7:45 AM		3	113	12		6	149	2		2	1	2		6	5	11	**312**
7:45 AM	to	8:00 AM		5	166	22		12	205	2		2	2	3		9	11	20	**459**
8:00 AM	to	8:15 AM		6	243	61		18	257	3		8	27	4		27	30	37	**721**
8:15 AM	to	8:30 AM		11	335	68		20	301	7		12	28	5		39	48	56	**930**
8:30 AM	to	8:45 AM		13	419	72		22	342	10		14	30	8		39	61	66	**1096**
8:45 AM	to	9:00 AM		15	498	73		24	378	12		14	33	11		41	67	73	**1239**
9:00 AM	to	9:15 AM		19	566	77		27	415	14		14	35	12		43	72	79	**1373**
9:15 AM	to	9:30 AM		26	641	78		31	458	14		15	35	14		45	78	83	**1518**
9:30 AM	to	9:45 AM		29	714	82		31	502	14		15	37	16		49	82	91	**1662**
9:45 AM	to	10:00 AM		31	773	83		31	543	14		15	39	16		52	83	93	**1773**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	1	27	3	0	2	25	0	0	1	0	0	0	1	1	1	**62**
7:15 AM	to	7:30 AM	0	1	29	3	0	1	54	2	0	1	0	2	0	2	1	3	**99**
7:30 AM	to	7:45 AM	0	1	57	6	0	3	70	0	0	0	1	0	0	3	3	7	**151**
7:45 AM	to	8:00 AM	0	2	53	10	0	6	56	0	0	0	1	1	0	3	6	9	**147**
8:00 AM	to	8:15 AM	0	1	77	39	0	6	52	1	0	6	25	1	0	18	19	17	**262**
8:15 AM	to	8:30 AM	0	5	92	7	0	2	44	4	0	4	1	1	0	12	18	19	**209**
8:30 AM	to	8:45 AM	0	2	84	4	0	2	41	3	0	2	2	3	0	0	13	10	**166**
8:45 AM	to	9:00 AM	0	2	79	1	0	2	36	2	0	0	3	3	0	2	6	7	**143**
9:00 AM	to	9:15 AM	0	4	68	4	0	3	37	2	0	0	2	1	0	2	5	6	**134**
9:15 AM	to	9:30 AM	0	7	75	1	0	4	43	0	0	1	0	2	0	2	6	4	**145**
9:30 AM	to	9:45 AM	0	3	73	4	0	0	44	0	0	0	2	2	0	4	4	8	**144**
9:45 AM	to	10:00 AM	0	2	59	1	0	0	41	0	0	0	2	0	0	3	1	2	**111**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	5	166	22	0	12	205	2	0	2	2	3	0	9	11	20	**459**
7:15 AM	to	8:15 AM	0	5	216	58	0	16	232	3	0	7	27	4	0	26	29	36	**659**
7:30 AM	to	8:30 AM	0	9	279	62	0	17	222	5	0	10	28	3	0	36	46	52	**769**
7:45 AM	to	8:45 AM	0	10	306	60	0	16	193	8	0	12	29	6	0	33	56	55	**784**
8:00 AM	to	9:00 AM	0	10	332	51	0	12	173	10	0	12	31	8	0	32	56	53	**780**
8:15 AM	to	9:15 AM	0	13	323	16	0	9	158	11	0	6	8	8	0	16	42	42	**652**
8:30 AM	to	9:30 AM	0	15	306	10	0	11	157	7	0	3	7	9	0	6	30	27	**588**
8:45 AM	to	9:45 AM	0	16	295	10	0	9	160	4	0	1	7	8	0	10	21	25	**566**
9:00 AM	to	10:00 AM	0	16	275	10	0	7	165	2	0	1	6	5	0	11	16	20	**534**

PEAK HOUR SUMMARY

7:45 AM	to	8:45 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
			NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME			0	10	306	60	0	16	193	8	0	12	29	6	0	33	56	55	**784**
PHF BY MOVEMENT			0.00	0.50	0.83	0.38	0.00	0.67	0.86	0.50	0.00	0.50	0.29	0.50	0.00	0.46	0.74	0.72	OVERALL
PHF BY APPROACH			0.80				0.88				0.37				0.67				**0.75**
BICYCLE			3				1				1				8				**13**
PEDESTRIAN			41				99				167				58				**365**
			N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:			47				178				51				89				**365**

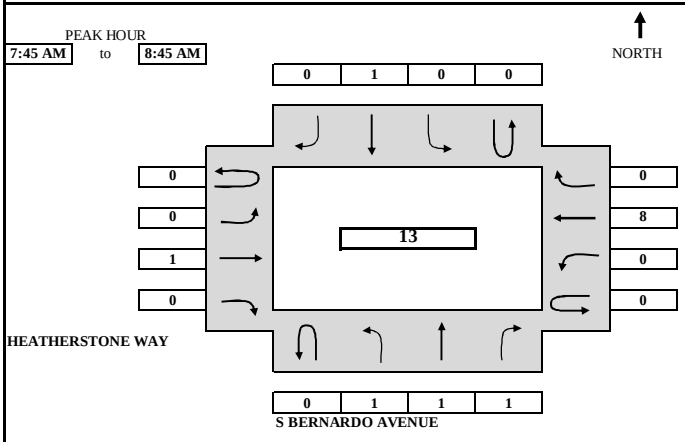
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

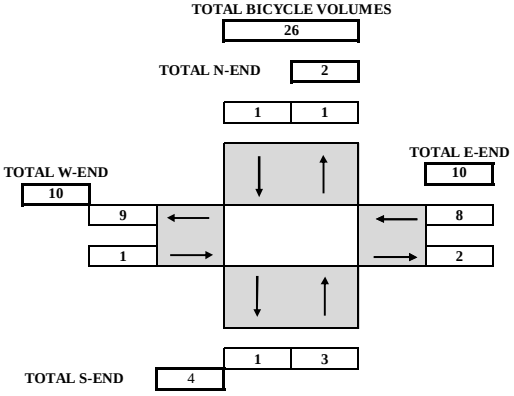
BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**HEATHERSTONE WAY**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-5AM**

PEAK HOUR **7:45 AM** to **8:45 AM**



PEAK HOUR TOTAL BICYCLE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM	0	0	1	0	0	0	2	1	0	0	0	0	0	0	1	0	**5**
7:15 AM	to	7:30 AM	0	0	1	0	0	0	2	1	0	0	0	0	0	0	1	0	**5**
7:30 AM	to	7:45 AM	0	0	2	0	0	0	2	1	0	0	0	0	0	0	1	0	**6**
7:45 AM	to	8:00 AM	0	0	2	1	0	0	3	1	0	0	0	0	0	0	2	0	**9**
8:00 AM	to	8:15 AM	0	0	2	1	0	0	3	1	0	0	0	0	0	0	3	0	**10**
8:15 AM	to	8:30 AM	0	0	3	1	0	0	3	1	0	0	0	0	0	0	8	0	**16**
8:30 AM	to	8:45 AM	0	1	3	1	0	0	3	1	0	0	1	0	0	0	9	0	**19**
8:45 AM	to	9:00 AM	0	1	3	1	0	0	4	1	0	1	1	0	0	0	9	0	**21**
9:00 AM	to	9:15 AM	0	1	3	1	0	0	5	2	0	1	1	0	0	0	11	0	**25**
9:15 AM	to	9:30 AM	0	1	5	1	0	0	5	2	0	1	1	0	0	0	14	0	**30**
9:30 AM	to	9:45 AM	0	1	5	1	0	0	6	2	0	1	2	0	0	0	15	1	**34**
9:45 AM	to	10:00 AM	0	1	5	1	0	0	7	2	0	1	3	0	0	0	15	1	**36**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	1	0	0	0	2	1	0	0	0	0	0	0	1	0	**5**
7:15 AM	to	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:30 AM	to	7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:45 AM	to	8:00 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	**3**
8:00 AM	to	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
8:15 AM	to	8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	**6**
8:30 AM	to	8:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	**3**
8:45 AM	to	9:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	**2**
9:00 AM	to	9:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	**4**
9:15 AM	to	9:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	**5**
9:30 AM	to	9:45 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1	**4**
9:45 AM	to	10:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	**2**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	0	2	1	0	0	3	1	0	0	0	0	0	0	2	0	**9**
7:15 AM	to	8:15 AM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	2	0	**5**
7:30 AM	to	8:30 AM	0	0	2	1	0	0	1	0	0	0	0	0	0	0	7	0	**11**
7:45 AM	to	8:45 AM	0	1	1	1	0	0	1	0	0	0	1	0	0	0	8	0	**13**
8:00 AM	to	9:00 AM	0	1	1	0	0	0	1	0	0	1	1	0	0	0	7	0	**12**
8:15 AM	to	9:15 AM	0	1	1	0	0	0	2	1	0	1	1	0	0	0	8	0	**15**
8:30 AM	to	9:30 AM	0	1	2	0	0	0	2	1	0	1	1	0	0	0	6	0	**14**
8:45 AM	to	9:45 AM	0	0	2	0	0	0	3	1	0	1	1	0	0	0	6	1	**15**
9:00 AM	to	10:00 AM	0	0	2	0	0	0	3	1	0	0	2	0	0	0	6	1	**15**

TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

7:45 AM to 8:45 AM

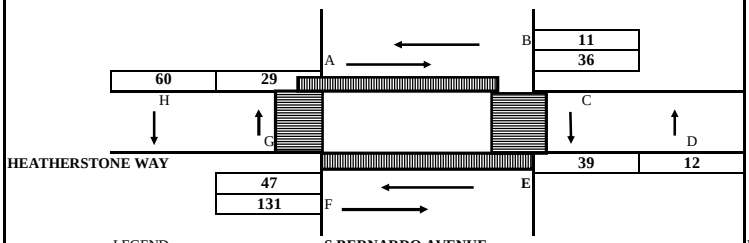
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	3	1	1	8	**13**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

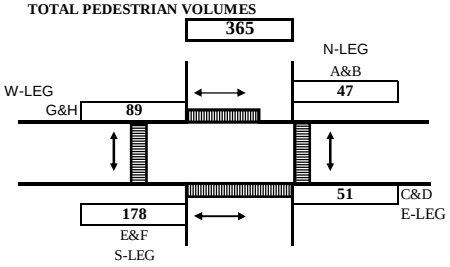
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**HEATHERSTONE WAY**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**7:00 AM TO 10:00 AM**	**FILE:**	**3805027-5AM**

PEAK HOUR **7:45 AM** TO **8:45 AM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR TOTAL PEDESTRIAN VOLUMES



BY LEG:		BY DIRECTION:	
N-LEG	**47**	**NB**(D+G)	**41**
S-LEG	**178**	**SB**(C+H)	**99**
E-LEG	**51**	**EB**(A+F)	**167**
W-LEG	**89**	**WB**(B+E)	**58**

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
07:00 AM	---	07:15 AM	0	0	1	0	1	0	0	0	***2***
07:15 AM	---	07:30 AM	0	1	3	0	1	1	0	1	***7***
07:30 AM	---	07:45 AM	0	2	4	1	1	2	0	1	***11***
07:45 AM	---	08:00 AM	3	3	7	4	2	15	0	7	***41***
08:00 AM	---	08:15 AM	35	7	42	10	17	131	7	59	***308***
08:15 AM	---	08:30 AM	35	13	42	13	46	132	27	60	***368***
08:30 AM	---	08:45 AM	36	13	43	13	48	133	29	61	***376***
08:45 AM	---	09:00 AM	36	13	44	13	49	133	29	61	***378***
09:00 AM	---	09:15 AM	36	13	44	14	49	134	29	64	***383***
09:15 AM	---	09:30 AM	36	13	44	14	50	134	31	64	***386***
09:30 AM	---	09:45 AM	37	15	44	14	50	134	33	66	***393***
09:45 AM	---	10:00 AM	38	16	44	14	51	134	33	67	***397***
TOTAL BY PERIOD											
07:00 AM	---	07:15 AM	0	0	1	0	1	0	0	0	***2***
07:15 AM	---	07:30 AM	0	1	2	0	0	1	0	1	***5***
07:30 AM	---	07:45 AM	0	1	1	1	0	1	0	0	***4***
07:45 AM	---	08:00 AM	3	1	3	3	1	13	0	6	***30***
08:00 AM	---	08:15 AM	32	4	35	6	15	116	7	52	***267***
08:15 AM	---	08:30 AM	0	6	0	3	29	1	20	1	***60***
08:30 AM	---	08:45 AM	1	0	1	0	2	1	2	1	***8***
08:45 AM	---	09:00 AM	0	0	1	0	1	0	0	0	***2***
09:00 AM	---	09:15 AM	0	0	0	1	0	1	0	3	***5***
09:15 AM	---	09:30 AM	0	0	0	0	1	0	2	0	***3***
09:30 AM	---	09:45 AM	1	2	0	0	0	0	2	2	***7***
09:45 AM	---	10:00 AM	1	1	0	0	1	0	0	1	***4***
HOURLY TOTALS											
07:00 AM	---	08:00 AM	3	3	7	4	2	15	0	7	***41***
07:15 AM	---	08:15 AM	35	7	41	10	16	131	7	59	***306***
07:30 AM	---	08:30 AM	35	12	39	13	45	131	27	59	***361***
07:45 AM	---	08:45 AM	36	11	39	12	47	131	29	60	***365***
08:00 AM	---	09:00 AM	33	10	37	9	47	118	29	54	***337***
08:15 AM	---	09:15 AM	1	6	2	4	32	3	22	5	***75***
08:30 AM	---	09:30 AM	1	0	2	1	4	2	4	4	***18***
08:45 AM	---	09:45 AM	1	2	1	1	2	1	4	5	***17***
09:00 AM	---	10:00 AM	2	3	0	1	2	1	4	6	***19***

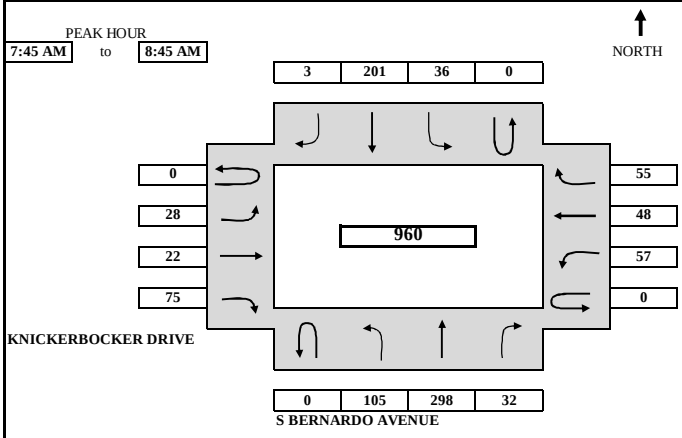
Tel : (510) 232-1271 ***Fax: (510) 232-1272***

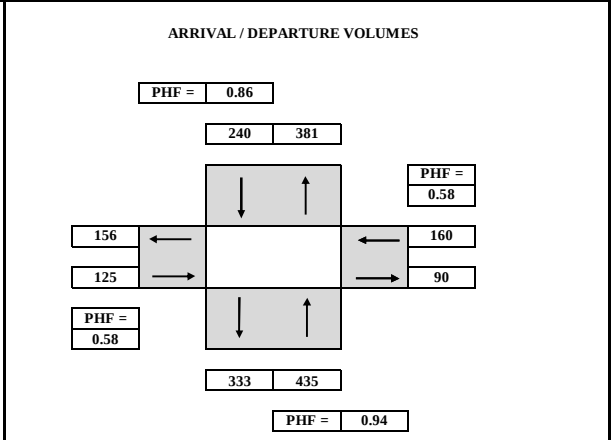
7:45 AM	to	8:45 AM				
VOLUME BY DIRECTION		NB	SB	EB	WB	TOTAL
PEDESTRIAN		41	99	167	58	**365**
VOLUME BY LEG		N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN		47	178	51	89	**365**

B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**KNICKERBOCKER DRIVE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-6AM**





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM		4	26	3		0	23	1		1	2	9		2	3	2	**76**
7:15 AM	to	7:30 AM		10	54	4		2	76	1		2	5	17		5	9	4	**189**
7:30 AM	to	7:45 AM		17	90	4		6	152	1		2	8	40		14	9	13	**356**
7:45 AM	to	8:00 AM		36	156	11		18	205	1		7	10	64		20	12	21	**561**
8:00 AM	to	8:15 AM		47	235	33		33	258	3		24	25	86		41	25	39	**849**
8:15 AM	to	8:30 AM		77	318	35		39	315	4		27	28	110		67	45	62	**1127**
8:30 AM	to	8:45 AM		122	388	36		42	353	4		30	30	115		71	57	68	**1316**
8:45 AM	to	9:00 AM		159	473	37		44	395	5		31	32	132		75	64	71	**1518**
9:00 AM	to	9:15 AM		202	570	38		46	433	6		34	35	139		78	68	76	**1725**
9:15 AM	to	9:30 AM		228	656	39		48	483	8		36	39	160		84	74	80	**1935**
9:30 AM	to	9:45 AM		251	739	40		50	529	10		38	40	184		87	78	83	**2129**
9:45 AM	to	10:00 AM		266	805	42		51	570	12		39	41	197		88	81	88	**2280**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	4	26	3	0	0	23	1	0	1	2	9	0	2	3	2	**76**
7:15 AM	to	7:30 AM	0	6	28	1	0	2	53	0	0	1	3	8	0	3	6	2	**113**
7:30 AM	to	7:45 AM	0	7	36	0	0	4	76	0	0	0	3	23	0	9	0	9	**167**
7:45 AM	to	8:00 AM	0	19	66	7	0	12	53	0	0	5	2	24	0	6	3	8	**205**
8:00 AM	to	8:15 AM	0	11	79	22	0	15	53	2	0	17	15	22	0	21	13	18	**288**
8:15 AM	to	8:30 AM	0	30	83	2	0	6	57	1	0	3	3	24	0	26	20	23	**278**
8:30 AM	to	8:45 AM	0	45	70	1	0	3	38	0	0	3	2	5	0	4	12	6	**189**
8:45 AM	to	9:00 AM	0	37	85	1	0	2	42	1	0	1	2	17	0	4	7	3	**202**
9:00 AM	to	9:15 AM	0	43	97	1	0	2	38	1	0	3	3	7	0	3	4	5	**207**
9:15 AM	to	9:30 AM	0	26	86	1	0	2	50	2	0	2	4	21	0	6	6	4	**210**
9:30 AM	to	9:45 AM	0	23	83	1	0	2	46	2	0	2	1	24	0	3	4	3	**194**
9:45 AM	to	10:00 AM	0	15	66	2	0	1	41	2	0	1	1	13	0	1	3	5	**151**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	36	156	11	0	18	205	1	0	7	10	64	0	20	12	21	**561**
7:15 AM	to	8:15 AM	0	43	209	30	0	33	235	2	0	23	23	77	0	39	22	37	**773**
7:30 AM	to	8:30 AM	0	67	264	31	0	37	239	3	0	25	23	93	0	62	36	58	**938**
7:45 AM	to	8:45 AM	0	105	298	32	0	36	201	3	0	28	22	75	0	57	48	55	**960**
8:00 AM	to	9:00 AM	0	123	317	26	0	26	190	4	0	24	22	68	0	55	52	50	**957**
8:15 AM	to	9:15 AM	0	155	335	5	0	13	175	3	0	10	10	53	0	37	43	37	**876**
8:30 AM	to	9:30 AM	0	151	338	4	0	9	168	4	0	9	11	50	0	17	29	18	**808**
8:45 AM	to	9:45 AM	0	129	351	4	0	8	176	6	0	8	10	69	0	16	21	15	**813**
9:00 AM	to	10:00 AM	0	107	332	5	0	7	175	7	0	8	9	65	0	13	17	17	**762**

PEAK HOUR SUMMARY

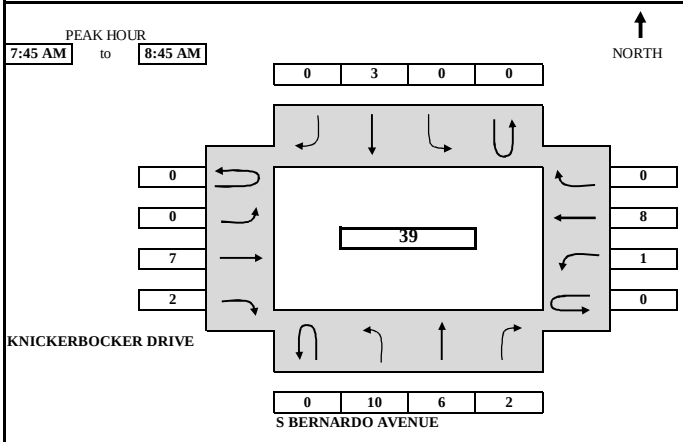
7:45 AM to 8:45 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	105	298	32	0	36	201	3	0	28	22	75	0	57	48	55	**960**
PHF BY MOVEMENT	0.00	0.58	0.90	0.36	0.00	0.60	0.88	0.38	0.00	0.41	0.37	0.78	0.00	0.55	0.60	0.60	OVERALL
PHF BY APPROACH	0.94				0.86				0.58				0.58				**0.83**
BICYCLE	18				3				9				9				**39**
PEDESTRIAN	53				24				24				48				**149**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	24				48				56				21				**149**

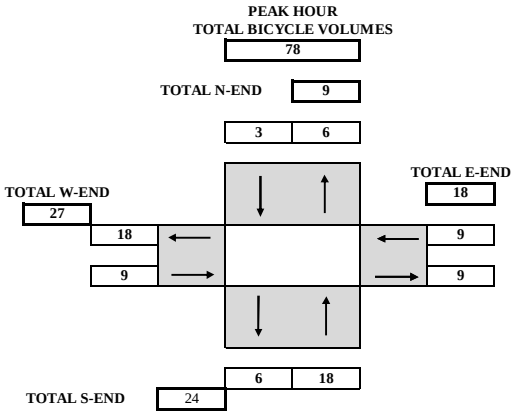
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**10:00 AM**
E-W APPROACH:	**KNICKERBOCKER DRIVE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-6AM**





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM	0	1	1	0	0	0	2	0	0	0	1	0	0	0	1	0	**6**
7:15 AM	to	7:30 AM	0	4	1	0	0	1	2	0	0	0	3	0	0	0	2	0	**13**
7:30 AM	to	7:45 AM	0	5	2	0	0	1	2	0	0	0	3	0	0	0	4	0	**17**
7:45 AM	to	8:00 AM	0	7	3	1	0	1	3	0	0	0	6	0	0	0	4	0	**25**
8:00 AM	to	8:15 AM	0	7	6	2	0	1	4	0	0	0	9	1	0	0	9	0	**39**
8:15 AM	to	8:30 AM	0	13	8	2	0	1	5	0	0	0	10	2	0	1	9	0	**51**
8:30 AM	to	8:45 AM	0	15	8	2	0	1	5	0	0	0	10	2	0	1	12	0	**56**
8:45 AM	to	9:00 AM	0	15	8	2	0	1	6	0	0	0	11	3	0	1	13	0	**60**
9:00 AM	to	9:15 AM	0	20	8	2	0	1	7	0	0	0	11	3	0	1	16	0	**69**
9:15 AM	to	9:30 AM	0	21	11	2	0	1	7	0	0	0	12	3	0	1	18	0	**76**
9:30 AM	to	9:45 AM	0	21	11	2	0	1	8	0	0	0	13	3	0	1	18	0	**78**
9:45 AM	to	10:00 AM	0	21	11	2	0	1	10	0	0	0	14	5	0	1	20	0	**85**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	1	1	0	0	0	2	0	0	0	1	0	0	0	1	0	**6**
7:15 AM	to	7:30 AM	0	3	0	0	0	1	0	0	0	0	2	0	0	0	1	0	**7**
7:30 AM	to	7:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0	**4**
7:45 AM	to	8:00 AM	0	2	1	1	0	0	1	0	0	0	3	0	0	0	0	0	**8**
8:00 AM	to	8:15 AM	0	0	3	1	0	0	1	0	0	0	3	1	0	0	5	0	**14**
8:15 AM	to	8:30 AM	0	6	2	0	0	0	1	0	0	0	1	1	0	1	0	0	**12**
8:30 AM	to	8:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	**5**
8:45 AM	to	9:00 AM	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0	**4**
9:00 AM	to	9:15 AM	0	5	0	0	0	0	1	0	0	0	0	0	0	0	3	0	**9**
9:15 AM	to	9:30 AM	0	1	3	0	0	0	0	0	0	0	1	0	0	0	2	0	**7**
9:30 AM	to	9:45 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	**2**
9:45 AM	to	10:00 AM	0	0	0	0	0	0	2	0	0	0	1	2	0	0	2	0	**7**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	7	3	1	0	1	3	0	0	0	6	0	0	0	4	0	**25**
7:15 AM	to	8:15 AM	0	6	5	2	0	1	2	0	0	0	8	1	0	0	8	0	**33**
7:30 AM	to	8:30 AM	0	9	7	2	0	0	3	0	0	0	7	2	0	1	7	0	**38**
7:45 AM	to	8:45 AM	0	10	6	2	0	0	3	0	0	0	7	2	0	1	8	0	**39**
8:00 AM	to	9:00 AM	0	8	5	1	0	0	3	0	0	0	5	3	0	1	9	0	**35**
8:15 AM	to	9:15 AM	0	13	2	0	0	0	3	0	0	0	2	2	0	1	7	0	**30**
8:30 AM	to	9:30 AM	0	8	3	0	0	0	2	0	0	0	2	1	0	0	9	0	**25**
8:45 AM	to	9:45 AM	0	6	3	0	0	0	3	0	0	0	3	1	0	0	6	0	**22**
9:00 AM	to	10:00 AM	0	6	3	0	0	0	4	0	0	0	3	2	0	0	7	0	**25**

TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

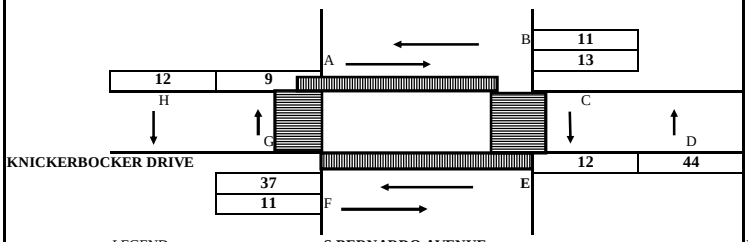
7:45 AM to 8:45 AM					
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	18	3	9	9	**39**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

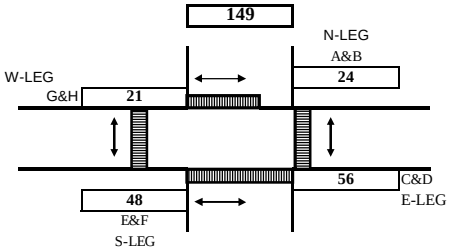
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**KNICKERBOCKER DRIVE**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**7:00 AM TO 10:00 AM**	**FILE:**	**3805027-6AM**

PEAK HOUR
7:45 AM TO **8:45 AM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR
TOTAL PEDESTRIAN VOLUMES



BY LEG:		**BY DIRECTION:**	
N-LEG	**24**	**NB**(D+G)	**53**
S-LEG	**48**	**SB**(C+H)	**24**
E-LEG	**56**	**EB**(A+F)	**24**
W-LEG	**21**	**WB**(B+E)	**48**

TIME PERIOD From		To	NORTH X-WALK A	B	EAST X-WALK C	D	SOUTH X-WALK E	F	WEST X-WALK G	H	TOTAL
SURVEY DATA											
07:00 AM	---	07:15 AM	1	1	3	0	0	1	0	0	***6***
07:15 AM	---	07:30 AM	2	1	4	0	1	1	1	0	***10***
07:30 AM	---	07:45 AM	3	1	5	1	1	2	3	0	***16***
07:45 AM	---	08:00 AM	3	2	6	9	1	11	3	0	***35***
08:00 AM	---	08:15 AM	14	3	10	41	33	11	11	3	***126***
08:15 AM	---	08:30 AM	15	11	16	42	38	12	12	10	***156***
08:30 AM	---	08:45 AM	16	12	17	45	38	13	12	12	***165***
08:45 AM	---	09:00 AM	16	13	17	47	38	14	12	12	***169***
09:00 AM	---	09:15 AM	17	14	18	47	38	14	12	12	***172***
09:15 AM	---	09:30 AM	17	14	18	47	39	14	12	12	***173***
09:30 AM	---	09:45 AM	17	14	19	47	40	15	12	12	***176***
09:45 AM	---	10:00 AM	17	14	19	47	40	15	12	13	***177***
TOTAL BY PERIOD											
07:00 AM	---	07:15 AM	1	1	3	0	0	1	0	0	***6***
07:15 AM	---	07:30 AM	1	0	1	0	1	0	1	0	***4***
07:30 AM	---	07:45 AM	1	0	1	1	0	1	2	0	***6***
07:45 AM	---	08:00 AM	0	1	1	8	0	9	0	0	***19***
08:00 AM	---	08:15 AM	11	1	4	32	32	0	8	3	***91***
08:15 AM	---	08:30 AM	1	8	6	1	5	1	1	7	***30***
08:30 AM	---	08:45 AM	1	1	1	3	0	1	0	2	***9***
08:45 AM	---	09:00 AM	0	1	0	2	0	1	0	0	***4***
09:00 AM	---	09:15 AM	1	1	1	0	0	0	0	0	***3***
09:15 AM	---	09:30 AM	0	0	0	0	1	0	0	0	***1***
09:30 AM	---	09:45 AM	0	0	1	0	1	1	0	0	***3***
09:45 AM	---	10:00 AM	0	0	0	0	0	0	0	1	***1***
HOURLY TOTALS											
07:00 AM	---	08:00 AM	3	2	6	9	1	11	3	0	***35***
07:15 AM	---	08:15 AM	13	2	7	41	33	10	11	3	***120***
07:30 AM	---	08:30 AM	13	10	12	42	37	11	11	10	***146***
07:45 AM	---	08:45 AM	13	11	12	44	37	11	9	12	***149***
08:00 AM	---	09:00 AM	13	11	11	38	37	3	9	12	***134***
08:15 AM	---	09:15 AM	3	11	8	6	5	3	1	9	***46***
08:30 AM	---	09:30 AM	2	3	2	5	1	2	0	2	***17***
08:45 AM	---	09:45 AM	1	2	2	2	2	2	0	0	***11***
09:00 AM	---	10:00 AM	1	1	2	0	2	1	0	1	***8***

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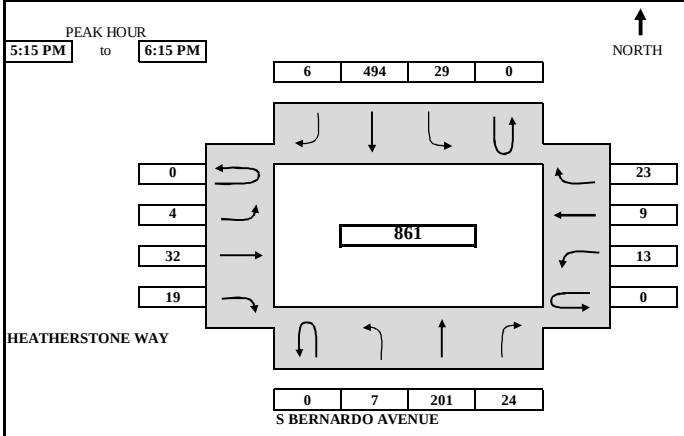
7:45 AM	to	8:45 AM				
VOLUME BY DIRECTION		NB	SB	EB	WB	TOTAL
PEDESTRIAN		53	24	24	48	**149**
VOLUME BY LEG		N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN		24	48	56	21	**149**

B.A.Y.M.E.T.R.I.C.S.

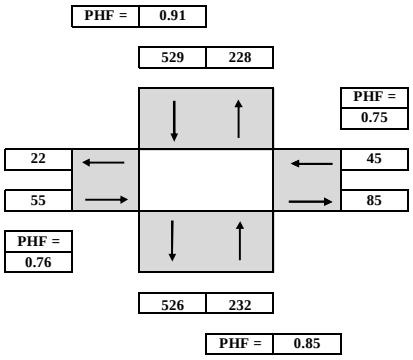
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**HEATHERSTONE WAY**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-5PM**

PEAK HOUR **5:15 PM** to **6:15 PM**



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM		2	29	4		7	71	1		1	3	0		3	5	2	**128**
4:15 PM	to	4:30 PM		3	78	8		10	149	2		1	4	1		7	8	8	**279**
4:30 PM	to	4:45 PM		5	120	14		14	229	2		2	8	2		12	8	13	**429**
4:45 PM	to	5:00 PM		5	147	19		21	323	3		4	13	6		16	10	17	**584**
5:00 PM	to	5:15 PM		5	186	24		30	416	3		5	16	8		22	12	21	**748**
5:15 PM	to	5:30 PM		7	227	29		37	544	5		6	25	12		27	13	25	**957**
5:30 PM	to	5:45 PM		8	276	34		45	664	6		6	32	16		28	17	28	**1160**
5:45 PM	to	6:00 PM		9	333	44		54	797	9		8	42	22		31	18	36	**1403**
6:00 PM	to	6:15 PM		12	387	48		59	910	9		9	48	27		35	21	44	**1609**
6:15 PM	to	6:30 PM		15	445	51		69	1020	11		13	53	28		39	23	48	**1815**
6:30 PM	to	6:45 PM		16	487	54		75	1116	14		14	55	30		41	25	53	**1980**
6:45 PM	to	7:00 PM		20	524	61		82	1195	15		14	62	33		46	28	54	**2134**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	2	29	4	0	7	71	1	0	1	3	0	0	3	5	2	**128**
4:15 PM	to	4:30 PM	0	1	49	4	0	3	78	1	0	0	1	1	0	4	3	6	**151**
4:30 PM	to	4:45 PM	0	2	42	6	0	4	80	0	0	1	4	1	0	5	0	5	**150**
4:45 PM	to	5:00 PM	0	0	27	5	0	7	94	1	0	2	5	4	0	4	2	4	**155**
5:00 PM	to	5:15 PM	0	0	39	5	0	9	93	0	0	1	3	2	0	6	2	4	**164**
5:15 PM	to	5:30 PM	0	2	41	5	0	7	128	2	0	1	9	4	0	5	1	4	**209**
5:30 PM	to	5:45 PM	0	1	49	5	0	8	120	1	0	0	7	4	0	1	4	3	**203**
5:45 PM	to	6:00 PM	0	1	57	10	0	9	133	3	0	2	10	6	0	3	1	8	**243**
6:00 PM	to	6:15 PM	0	3	54	4	0	5	113	0	0	1	6	5	0	4	3	8	**206**
6:15 PM	to	6:30 PM	0	3	58	3	0	10	110	2	0	4	5	1	0	4	2	4	**206**
6:30 PM	to	6:45 PM	0	1	42	3	0	6	96	3	0	1	2	2	0	2	2	5	**165**
6:45 PM	to	7:00 PM	0	4	37	7	0	7	79	1	0	0	7	3	0	5	3	1	**154**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	5	147	19	0	21	323	3	0	4	13	6	0	16	10	17	**584**
4:15 PM	to	5:15 PM	0	3	157	20	0	23	345	2	0	4	13	8	0	19	7	19	**620**
4:30 PM	to	5:30 PM	0	4	149	21	0	27	395	3	0	5	21	11	0	20	5	17	**678**
4:45 PM	to	5:45 PM	0	3	156	20	0	31	435	4	0	4	24	14	0	16	9	15	**731**
5:00 PM	to	6:00 PM	0	4	186	25	0	33	474	6	0	4	29	16	0	15	8	19	**819**
5:15 PM	to	6:15 PM	0	7	201	24	0	29	494	6	0	4	32	19	0	13	9	23	**861**
5:30 PM	to	6:30 PM	0	8	218	22	0	32	476	6	0	7	28	16	0	12	10	23	**858**
5:45 PM	to	6:45 PM	0	8	211	20	0	30	452	8	0	8	23	14	0	13	8	25	**820**
6:00 PM	to	7:00 PM	0	11	191	17	0	28	398	6	0	6	20	11	0	15	10	18	**731**

PEAK HOUR SUMMARY

5:15 PM	to	6:15 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
			NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME			0	7	201	24	0	29	494	6	0	4	32	19	0	13	9	23	**861**
PHF BY MOVEMENT			0.00	0.58	0.88	0.60	0.00	0.81	0.93	0.50	0.00	0.50	0.80	0.79	0.00	0.65	0.56	0.72	OVERALL
PHF BY APPROACH			0.85				0.91				0.76				0.75				**0.89**
BICYCLE			3				4				15				1				**23**
PEDESTRIAN			20				8				9				18				**55**
			N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:			3				24				6				22				**55**

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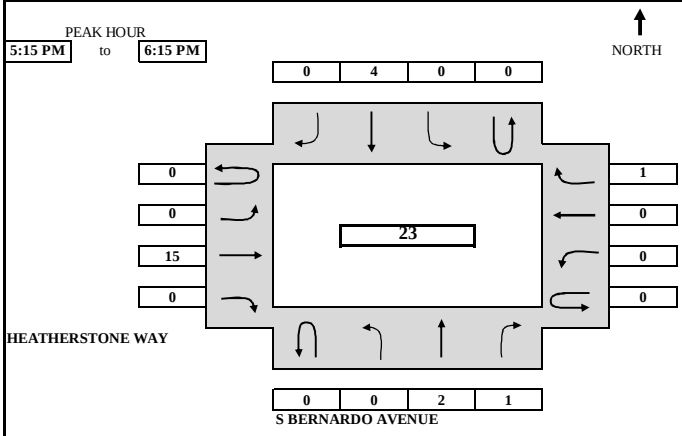
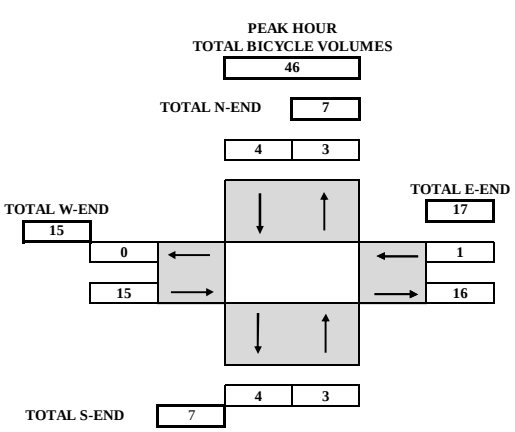
B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	TRAFFIC COUNTS IN SUNNYVALE	**SURVEY DATE:**	5/15/2018	**DAY:**	TUESDAY
N-S APPROACH:	S BERNARDO AVENUE	**SURVEY TIME:**	4:00 PM	**TO**	7:00 PM
E-W APPROACH:	HEATHERSTONE WAY	**JURISDICTION:**	SUNNYVALE	**FILE:**	3805027-5PM





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:15 PM	to	4:30 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
4:30 PM	to	4:45 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	1	0	**5**
4:45 PM	to	5:00 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	1	0	**5**
5:00 PM	to	5:15 PM	0	0	3	0	0	0	1	0	0	1	1	0	0	0	1	0	**7**
5:15 PM	to	5:30 PM	0	0	3	1	0	0	3	0	0	1	3	0	0	0	1	0	**12**
5:30 PM	to	5:45 PM	0	0	4	1	0	0	4	0	0	1	8	0	0	0	1	1	**20**
5:45 PM	to	6:00 PM	0	0	4	1	0	0	5	0	0	1	14	0	0	0	1	1	**27**
6:00 PM	to	6:15 PM	0	0	5	1	0	0	5	0	0	1	16	0	0	0	1	1	**30**
6:15 PM	to	6:30 PM	0	0	5	2	0	0	5	0	0	1	17	0	0	0	1	1	**32**
6:30 PM	to	6:45 PM	0	0	5	2	0	0	5	0	0	1	20	0	0	0	1	1	**35**
6:45 PM	to	7:00 PM	0	0	5	2	0	0	6	0	0	1	21	0	0	0	1	1	**37**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:15 PM	to	4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
4:30 PM	to	4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	**2**
4:45 PM	to	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	to	5:15 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	**2**
5:15 PM	to	5:30 PM	0	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	**5**
5:30 PM	to	5:45 PM	0	0	1	0	0	0	1	0	0	0	5	0	0	0	0	1	**8**
5:45 PM	to	6:00 PM	0	0	0	0	0	0	1	0	0	0	6	0	0	0	0	0	**7**
6:00 PM	to	6:15 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	**3**
6:15 PM	to	6:30 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	**2**
6:30 PM	to	6:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	**3**
6:45 PM	to	7:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	**2**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	1	0	**5**
4:15 PM	to	5:15 PM	0	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	**5**
4:30 PM	to	5:30 PM	0	0	1	1	0	0	2	0	0	1	3	0	0	0	1	0	**9**
4:45 PM	to	5:45 PM	0	0	1	1	0	0	3	0	0	1	8	0	0	0	0	1	**15**
5:00 PM	to	6:00 PM	0	0	1	1	0	0	4	0	0	1	14	0	0	0	0	1	**22**
5:15 PM	to	6:15 PM	0	0	2	1	0	0	4	0	0	0	15	0	0	0	0	1	**23**
5:30 PM	to	6:30 PM	0	0	2	1	0	0	2	0	0	0	14	0	0	0	0	1	**20**
5:45 PM	to	6:45 PM	0	0	1	1	0	0	1	0	0	0	12	0	0	0	0	0	**15**
6:00 PM	to	7:00 PM	0	0	1	1	0	0	1	0	0	0	7	0	0	0	0	0	**10**

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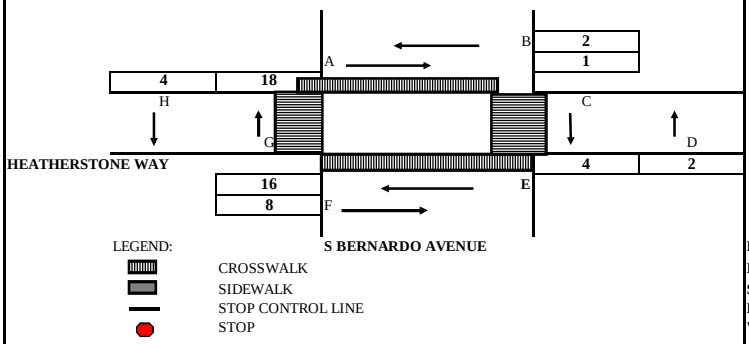
5:15 PM to 6:15 PM					
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	3	4	15	1	**23**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

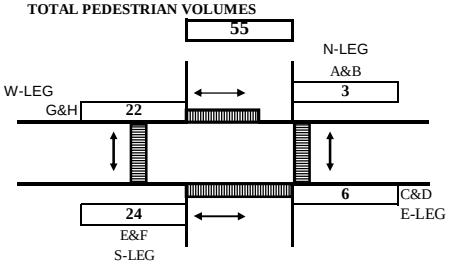
PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**HEATHERSTONE WAY**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**4:00 PM TO 7:00 PM**	**FILE:**	**3805027-5PM**

PEAK HOUR **5:15 PM** TO **6:15 PM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR TOTAL PEDESTRIAN VOLUMES



BY LEG:		**BY DIRECTION:**	
N-LEG	**3**	**NB**(D+G)	**20**
S-LEG	**24**	**SB**(C+H)	**8**
E-LEG	**6**	**EB**(A+F)	**9**
W-LEG	**22**	**WB**(B+E)	**18**

TIME PERIOD			**NORTH X-WALK**		**EAST X-WALK**		**SOUTH X-WALK**		**WEST X-WALK**		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
04:00 PM	---	04:15 PM	2	0	0	0	0	0	5	0	***7***
04:15 PM	---	04:30 PM	3	2	1	0	0	0	5	0	***11***
04:30 PM	---	04:45 PM	3	2	1	0	0	1	5	0	***12***
04:45 PM	---	05:00 PM	3	2	1	0	0	5	5	3	***19***
05:00 PM	---	05:15 PM	5	2	1	2	1	7	7	5	***30***
05:15 PM	---	05:30 PM	5	2	1	2	3	8	12	5	***38***
05:30 PM	---	05:45 PM	5	3	1	3	7	8	14	6	***47***
05:45 PM	---	06:00 PM	6	3	3	3	12	12	23	7	***69***
06:00 PM	---	06:15 PM	6	4	5	4	17	15	25	9	***85***
06:15 PM	---	06:30 PM	10	4	7	4	20	17	26	13	***101***
06:30 PM	---	06:45 PM	11	4	7	5	23	17	30	13	***110***
06:45 PM	---	07:00 PM	11	4	7	5	24	18	30	16	***115***
TOTAL BY PERIOD											
04:00 PM	---	04:15 PM	2	0	0	0	0	0	5	0	***7***
04:15 PM	---	04:30 PM	1	2	1	0	0	0	0	0	***4***
04:30 PM	---	04:45 PM	0	0	0	0	0	1	0	0	***1***
04:45 PM	---	05:00 PM	0	0	0	0	0	4	0	3	***7***
05:00 PM	---	05:15 PM	2	0	0	2	1	2	2	2	***11***
05:15 PM	---	05:30 PM	0	0	0	0	2	1	5	0	***8***
05:30 PM	---	05:45 PM	0	1	0	1	4	0	2	1	***9***
05:45 PM	---	06:00 PM	1	0	2	0	5	4	9	1	***22***
06:00 PM	---	06:15 PM	0	1	2	1	5	3	2	2	***16***
06:15 PM	---	06:30 PM	4	0	2	0	3	2	1	4	***16***
06:30 PM	---	06:45 PM	1	0	0	1	3	0	4	0	***9***
06:45 PM	---	07:00 PM	0	0	0	0	1	1	0	3	***5***
HOURLY TOTALS											
04:00 PM	---	05:00 PM	3	2	1	0	0	5	5	3	***19***
04:15 PM	---	05:15 PM	3	2	1	2	1	7	2	5	***23***
04:30 PM	---	05:30 PM	2	0	0	2	3	8	7	5	***27***
04:45 PM	---	05:45 PM	2	1	0	3	7	7	9	6	***35***
05:00 PM	---	06:00 PM	3	1	2	3	12	7	18	4	***50***
05:15 PM	---	06:15 PM	1	2	4	2	16	8	18	4	***55***
05:30 PM	---	06:30 PM	5	2	6	2	17	9	14	8	***63***
05:45 PM	---	06:45 PM	6	1	6	2	16	9	16	7	***63***
06:00 PM	---	07:00 PM	5	1	4	2	12	6	7	9	***46***

Tel : (510) 232-1271 ***Fax: (510) 232-1272***

5:15 PM to 6:15 PM

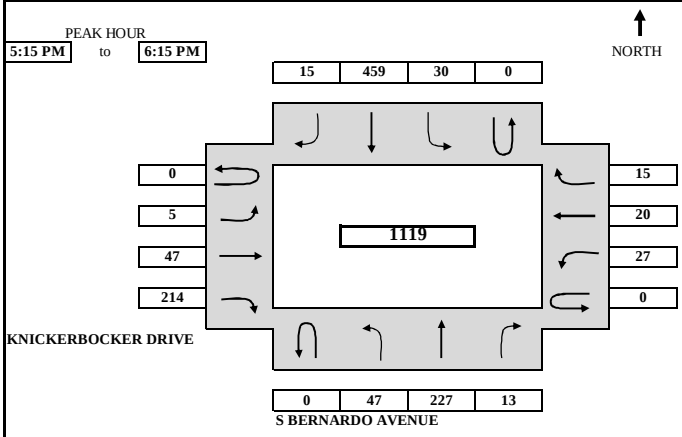
VOLUME BY DIRECTION	NB	SB	EB	WB	TOTAL
PEDESTRIAN	20	8	9	18	**55**
VOLUME BY LEG	**N-LEG**	**S-LEG**	**E-LEG**	**W-LEG**	**TOTAL**
PEDESTRIAN	3	24	6	22	**55**

B.A.Y.M.E.T.R.I.C.S.

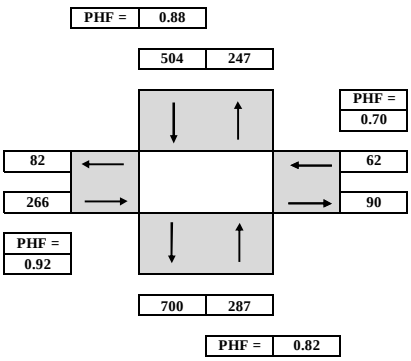
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**KNICKERBOCKER DRIVE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-6PM**

PEAK HOUR **5:15 PM** to **6:15 PM**



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM		6	59	3		8	66	0		2	6	28		4	6	5	**193**
4:15 PM	to	4:30 PM		13	105	9		12	135	5		5	16	57		6	11	10	**384**
4:30 PM	to	4:45 PM		25	146	9		21	209	6		5	17	83		14	11	16	**562**
4:45 PM	to	5:00 PM		32	176	14		27	300	8		6	25	115		19	14	21	**757**
5:00 PM	to	5:15 PM		37	220	17		32	387	14		8	34	170		21	16	23	**979**
5:15 PM	to	5:30 PM		49	273	21		41	502	18		9	39	230		26	21	24	**1253**
5:30 PM	to	5:45 PM		61	323	25		47	620	21		11	54	285		33	26	26	**1532**
5:45 PM	to	6:00 PM		67	379	27		56	750	25		12	69	334		41	33	33	**1826**
6:00 PM	to	6:15 PM		84	447	30		62	846	29		13	81	384		48	36	38	**2098**
6:15 PM	to	6:30 PM		92	498	32		66	953	33		15	92	419		53	39	44	**2336**
6:30 PM	to	6:45 PM		98	550	38		74	1039	37		18	102	449		56	44	45	**2550**
6:45 PM	to	7:00 PM		105	589	38		77	1117	40		21	107	482		62	49	46	**2733**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	6	59	3	0	8	66	0	0	2	6	28	0	4	6	5	**193**
4:15 PM	to	4:30 PM	0	7	46	6	0	4	69	5	0	3	10	29	0	2	5	5	**191**
4:30 PM	to	4:45 PM	0	12	41	0	0	9	74	1	0	0	1	26	0	8	0	6	**178**
4:45 PM	to	5:00 PM	0	7	30	5	0	6	91	2	0	1	8	32	0	5	3	5	**195**
5:00 PM	to	5:15 PM	0	5	44	3	0	5	87	6	0	2	9	55	0	2	2	2	**222**
5:15 PM	to	5:30 PM	0	12	53	4	0	9	115	4	0	1	5	60	0	5	5	1	**274**
5:30 PM	to	5:45 PM	0	12	50	4	0	6	118	3	0	2	15	55	0	7	5	2	**279**
5:45 PM	to	6:00 PM	0	6	56	2	0	9	130	4	0	1	15	49	0	8	7	7	**294**
6:00 PM	to	6:15 PM	0	17	68	3	0	6	96	4	0	1	12	50	0	7	3	5	**272**
6:15 PM	to	6:30 PM	0	8	51	2	0	4	107	4	0	2	11	35	0	5	3	6	**238**
6:30 PM	to	6:45 PM	0	6	52	6	0	8	86	4	0	3	10	30	0	3	5	1	**214**
6:45 PM	to	7:00 PM	0	7	39	0	0	3	78	3	0	3	5	33	0	6	5	1	**183**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	32	176	14	0	27	300	8	0	6	25	115	0	19	14	21	**757**
4:15 PM	to	5:15 PM	0	31	161	14	0	24	321	14	0	6	28	142	0	17	10	18	**786**
4:30 PM	to	5:30 PM	0	36	168	12	0	29	367	13	0	4	23	173	0	20	10	14	**869**
4:45 PM	to	5:45 PM	0	36	177	16	0	26	411	15	0	6	37	202	0	19	15	10	**970**
5:00 PM	to	6:00 PM	0	35	203	13	0	29	450	17	0	6	44	219	0	22	19	12	**1069**
5:15 PM	to	6:15 PM	0	47	227	13	0	30	459	15	0	5	47	214	0	27	20	15	**1119**
5:30 PM	to	6:30 PM	0	43	225	11	0	25	451	15	0	6	53	189	0	27	18	20	**1083**
5:45 PM	to	6:45 PM	0	37	227	13	0	27	419	16	0	7	48	164	0	23	18	19	**1018**
6:00 PM	to	7:00 PM	0	38	210	11	0	21	367	15	0	9	38	148	0	21	16	13	**907**

PEAK HOUR SUMMARY

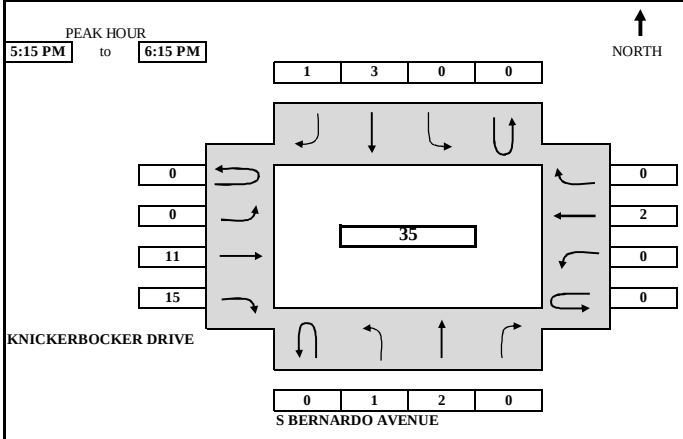
5:15 PM to 6:15 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	47	227	13	0	30	459	15	0	5	47	214	0	27	20	15	**1119**
PHF BY MOVEMENT	0.00	0.69	0.83	0.81	0.00	0.83	0.88	0.94	0.00	0.63	0.78	0.89	0.00	0.84	0.71	0.54	OVERALL
PHF BY APPROACH	0.82				0.88				0.92				0.70				**0.95**
BICYCLE	3				4				26				2				**35**
PEDESTRIAN	4				8				3				3				**18**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	2				4				8				4				**18**

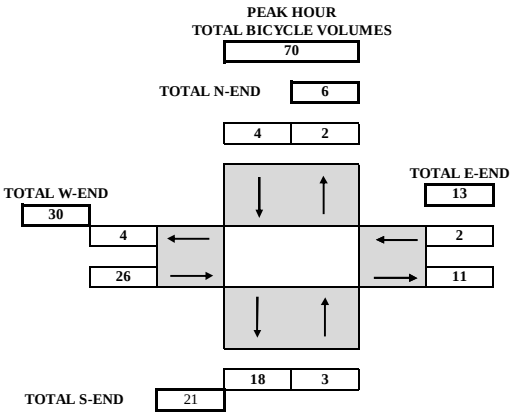
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**	**DAY:**	**TUESDAY**
N-S APPROACH:	**S BERNARDO AVENUE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**7:00 PM**
E-W APPROACH:	**KNICKERBOCKER DRIVE**	**JURISDICTION:**	**SUNNYVALE**	**FILE:**	**3805027-6PM**





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:15 PM	to	4:30 PM	0	2	1	0	0	0	1	1	0	0	0	0	0	0	0	0	**5**
4:30 PM	to	4:45 PM	0	2	1	0	0	0	1	1	0	0	0	0	0	0	1	1	**7**
4:45 PM	to	5:00 PM	0	2	1	0	0	0	1	1	0	0	2	2	0	0	1	1	**11**
5:00 PM	to	5:15 PM	0	3	1	0	0	0	1	1	0	0	3	6	0	0	1	1	**17**
5:15 PM	to	5:30 PM	0	3	1	0	0	0	2	2	0	0	4	7	0	0	1	1	**21**
5:30 PM	to	5:45 PM	0	3	2	0	0	0	3	2	0	0	9	14	0	0	1	1	**35**
5:45 PM	to	6:00 PM	0	3	2	0	0	0	4	2	0	0	12	19	0	0	1	1	**44**
6:00 PM	to	6:15 PM	0	4	3	0	0	0	4	2	0	0	14	21	0	0	3	1	**52**
6:15 PM	to	6:30 PM	0	4	4	0	0	0	4	2	0	0	17	25	0	0	4	1	**61**
6:30 PM	to	6:45 PM	0	5	4	0	0	0	4	2	0	0	19	29	0	0	5	1	**69**
6:45 PM	to	7:00 PM	0	6	4	0	0	0	5	2	0	0	20	31	0	0	6	1	**75**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:15 PM	to	4:30 PM	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	**3**
4:30 PM	to	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	**2**
4:45 PM	to	5:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	**4**
5:00 PM	to	5:15 PM	0	1	0	0	0	0	0	0	0	0	1	4	0	0	0	0	**6**
5:15 PM	to	5:30 PM	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	**4**
5:30 PM	to	5:45 PM	0	0	1	0	0	0	1	0	0	0	5	7	0	0	0	0	**14**
5:45 PM	to	6:00 PM	0	0	0	0	0	0	1	0	0	0	3	5	0	0	0	0	**9**
6:00 PM	to	6:15 PM	0	1	1	0	0	0	0	0	0	0	2	2	0	0	2	0	**8**
6:15 PM	to	6:30 PM	0	0	1	0	0	0	0	0	0	0	3	4	0	0	1	0	**9**
6:30 PM	to	6:45 PM	0	1	0	0	0	0	0	0	0	0	2	4	0	0	1	0	**8**
6:45 PM	to	7:00 PM	0	1	0	0	0	0	1	0	0	0	1	2	0	0	1	0	**6**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	2	1	0	0	0	1	1	0	0	2	2	0	0	1	1	**11**
4:15 PM	to	5:15 PM	0	2	0	0	0	0	1	1	0	0	3	6	0	0	1	1	**15**
4:30 PM	to	5:30 PM	0	1	0	0	0	0	1	1	0	0	4	7	0	0	1	1	**16**
4:45 PM	to	5:45 PM	0	1	1	0	0	0	2	1	0	0	9	14	0	0	0	0	**28**
5:00 PM	to	6:00 PM	0	1	1	0	0	0	3	1	0	0	10	17	0	0	0	0	**33**
5:15 PM	to	6:15 PM	0	1	2	0	0	0	3	1	0	0	11	15	0	0	2	0	**35**
5:30 PM	to	6:30 PM	0	1	3	0	0	0	2	0	0	0	13	18	0	0	3	0	**40**
5:45 PM	to	6:45 PM	0	2	2	0	0	0	1	0	0	0	10	15	0	0	4	0	**34**
6:00 PM	to	7:00 PM	0	3	2	0	0	0	1	0	0	0	8	12	0	0	5	0	**31**

TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

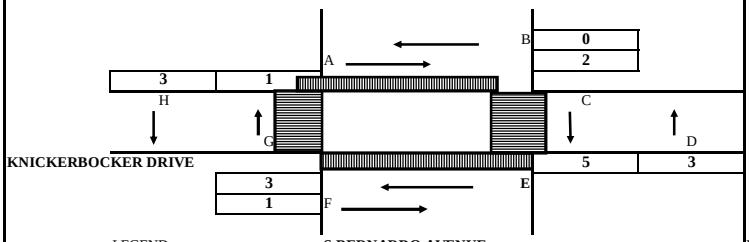
5:15 PM to 6:15 PM					
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	3	4	26	2	**35**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN SUNNYVALE**	**SURVEY DATE:**	**5/15/2018**
N-S APPROACH:	**S BERNARDO AVENUE**	**DAY:**	**TUESDAY**
E-W APPROACH:	**KNICKERBOCKER DRIVE**	**JURISDICTION:**	**SUNNYVALE**
SURVEY PERIOD:	**4:00 PM TO 7:00 PM**	**FILE:**	**3805027-6PM**

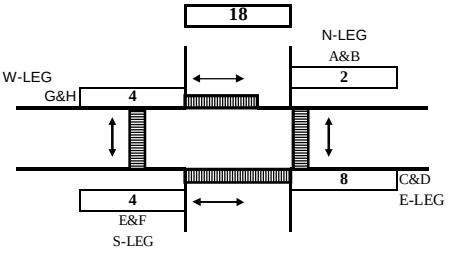
PEAK HOUR **5:15 PM** TO **6:15 PM**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR TOTAL PEDESTRIAN VOLUMES

18



BY LEG:		**BY DIRECTION:**	
N-LEG	**2**	**NB**(D+G)	**4**
S-LEG	**4**	**SB**(C+H)	**8**
E-LEG	**8**	**EB**(A+F)	**3**
W-LEG	**4**	**WB**(B+E)	**3**

TIME PERIOD			**NORTH X-WALK**		**EAST X-WALK**		**SOUTH X-WALK**		**WEST X-WALK**		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
04:00 PM	---	04:15 PM	0	0	0	0	0	0	1	0	***1***
04:15 PM	---	04:30 PM	0	0	0	0	0	1	1	1	***3***
04:30 PM	---	04:45 PM	0	0	0	0	0	1	1	1	***3***
04:45 PM	---	05:00 PM	0	0	0	0	0	1	1	2	***4***
05:00 PM	---	05:15 PM	1	1	1	2	0	2	1	2	***10***
05:15 PM	---	05:30 PM	1	1	1	2	0	2	2	2	***11***
05:30 PM	---	05:45 PM	2	1	1	3	3	3	2	3	***18***
05:45 PM	---	06:00 PM	3	1	4	4	3	3	2	5	***25***
06:00 PM	---	06:15 PM	3	1	6	5	3	3	2	5	***28***
06:15 PM	---	06:30 PM	3	3	6	7	3	4	2	6	***34***
06:30 PM	---	06:45 PM	3	3	6	8	4	4	2	6	***36***
06:45 PM	---	07:00 PM	3	3	6	9	5	6	4	6	***42***
TOTAL BY PERIOD											
04:00 PM	---	04:15 PM	0	0	0	0	0	0	1	0	***1***
04:15 PM	---	04:30 PM	0	0	0	0	0	1	0	1	***2***
04:30 PM	---	04:45 PM	0	0	0	0	0	0	0	0	***0***
04:45 PM	---	05:00 PM	0	0	0	0	0	0	0	1	***1***
05:00 PM	---	05:15 PM	1	1	1	2	0	1	0	0	***6***
05:15 PM	---	05:30 PM	0	0	0	0	0	0	1	0	***1***
05:30 PM	---	05:45 PM	1	0	0	1	3	1	0	1	***7***
05:45 PM	---	06:00 PM	1	0	3	1	0	0	0	2	***7***
06:00 PM	---	06:15 PM	0	0	2	1	0	0	0	0	***3***
06:15 PM	---	06:30 PM	0	2	0	2	0	1	0	1	***6***
06:30 PM	---	06:45 PM	0	0	0	1	1	0	0	0	***2***
06:45 PM	---	07:00 PM	0	0	0	1	1	2	2	0	***6***
HOURLY TOTALS											
04:00 PM	---	05:00 PM	0	0	0	0	0	1	1	2	***4***
04:15 PM	---	05:15 PM	1	1	1	2	0	2	0	2	***9***
04:30 PM	---	05:30 PM	1	1	1	2	0	1	1	1	***8***
04:45 PM	---	05:45 PM	2	1	1	3	3	2	1	2	***15***
05:00 PM	---	06:00 PM	3	1	4	4	3	2	1	3	***21***
05:15 PM	---	06:15 PM	2	0	5	3	3	1	1	3	***18***
05:30 PM	---	06:30 PM	2	2	5	5	3	2	0	4	***23***
05:45 PM	---	06:45 PM	1	2	5	5	1	1	0	3	***18***
06:00 PM	---	07:00 PM	0	2	2	5	2	3	2	1	***17***

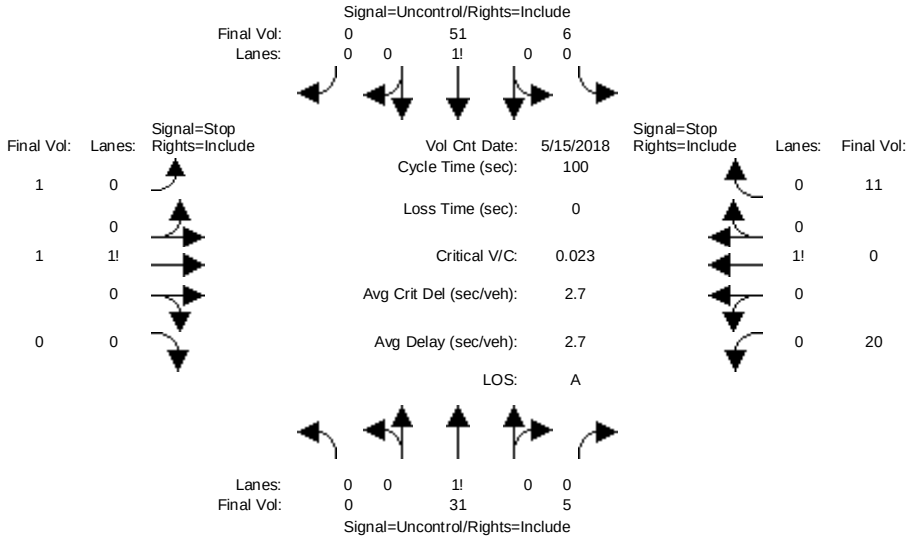
Tel : (510) 232-1271 ***Fax: (510) 232-1272***

5:15 PM	to	6:15 PM				
VOLUME BY DIRECTION		NB	SB	EB	WB	TOTAL
PEDESTRIAN		4	8	3	3	**18**
VOLUME BY LEG		N-LEG	S-LEG	E-LEG	W-LEG	TOTAL
PEDESTRIAN		2	4	8	4	**18**

Appendix C
Existing Conditions Analysis

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

Intersection #1: S Knickerbocker Dr / Brookfield Ave




```
Street Name:         S Knickerbocker Dr                  Brookfield Ave
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM
Base Vol:       0   31     5     6   51     0     1    1     0    20    0    11
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0   31     5     6   51     0     1    1     0    20    0    11
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0   31     5     6   51     0     1    1     0    20    0    11
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0   31     5     6   51     0     1    1     0    20    0    11
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0   31     5     6   51     0     1    1     0    20    0    11
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5 xxxxx   7.1  6.5   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0 xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    36 xxxx xxxxx   102   99 xxxxx    97   97    34
Potent Cap.: xxxx xxxx xxxxx  1588 xxxx xxxxx   884  795 xxxxx   890  797  1046
Move Cap.:   xxxx xxxx xxxxx  1588 xxxx xxxxx   872  792 xxxxx   887  794  1046
Volume/Cap:  xxxx xxxx  xxxx  0.00 xxxx  xxxx  0.00 0.00  xxxx  0.02 0.00  0.01
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.3 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   7.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx   830 xxxx xxxxx  xxxx  937 xxxxx
SharedQueue:xxxxx xxxx xxxxx   0.0 xxxx xxxxx   0.0 xxxx xxxxx xxxxx  0.1 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx   7.3 xxxx xxxxx   9.3 xxxx xxxxx xxxxx  9.0 xxxxx
Shared LOS:     *    *     *     A    *     *     A    *     *     *    A     *
ApproachDel:    xxxxxx           xxxxxx               9.3              9.0
ApproachLOS:         *                *                 A                A
Note: Queue reported is the distance per lane in feet.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 S Knickerbocker Dr / Brookfield Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 0			0 0 1! 0 0		
Initial Vol:	0	31	5	6	51	0	1	1	0	20	0	11
ApproachDel:	xxxxxx			xxxxxx			9.3			9.0		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=126]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=31]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=126]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 S Knickerbocker Dr / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 0			0 0 1! 0 0		
Initial Vol:	0	31	5	6	51	0	1	1	0	20	0	11

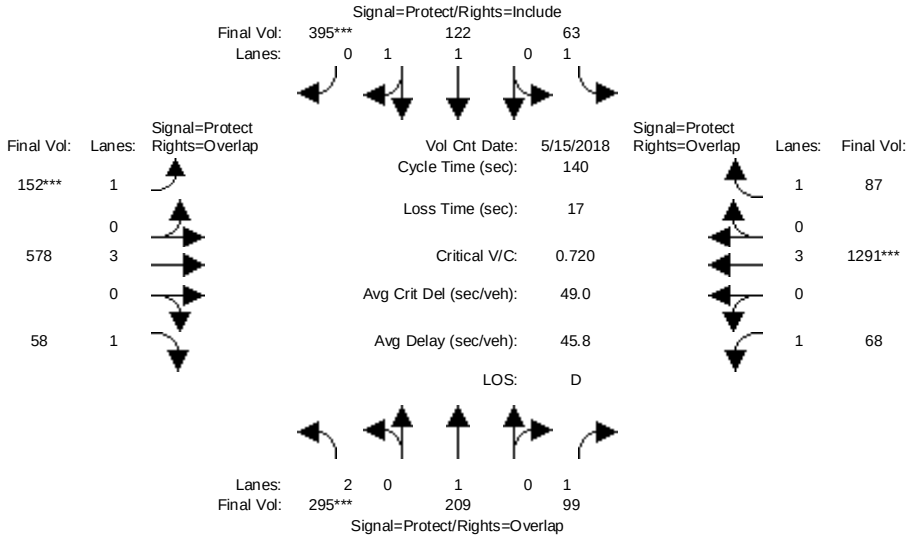
Major Street Volume: 93
Minor Approach Volume: 31
Minor Approach Volume Threshold: 853

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #2: S Bernardo Ave / W El Camino Real

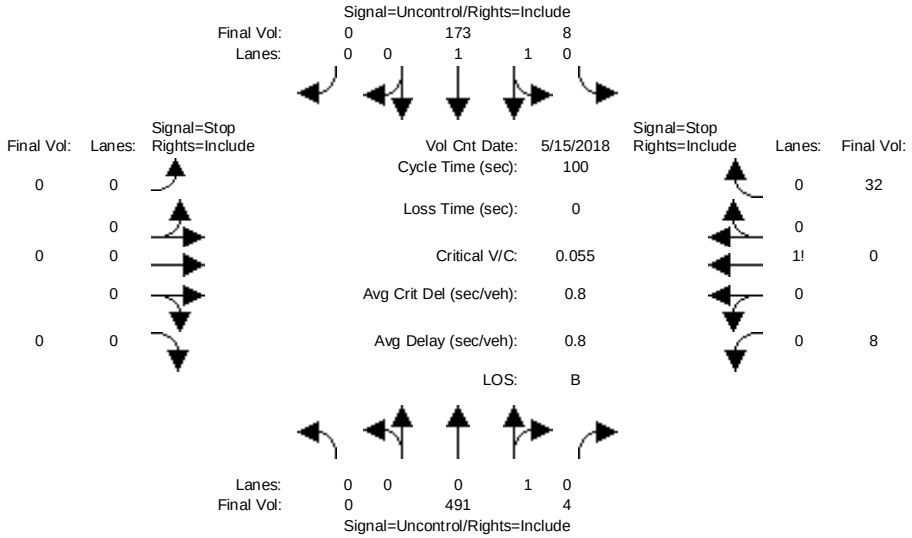


Street Name:	S Bernardo Ave						W El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	14	14	14	14	14	12	15	15	12	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM												
Base Vol:	295	209	99	63	122	395	152	578	58	68	1291	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	295	209	99	63	122	395	152	578	58	68	1291	87
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	295	209	99	63	122	395	152	578	58	68	1291	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	295	209	99	63	122	395	152	578	58	68	1291	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	295	209	99	63	122	395	152	578	58	68	1291	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	295	209	99	63	122	395	152	578	58	68	1291	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	1900	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.09	0.11	0.06	0.04	0.06	0.23	0.09	0.10	0.03	0.04	0.23	0.05
Crit Moves:	****					****	****				****	
Green Time:	18.2	32.5	59.6	29.6	43.9	43.9	16.9	33.8	52.0	27.1	44.0	73.6
Volume/Cap:	0.72	0.47	0.13	0.17	0.20	0.72	0.72	0.42	0.09	0.20	0.72	0.09
Uniform Del:	58.5	46.4	24.5	45.2	35.3	42.6	59.3	44.8	28.6	47.4	42.5	16.6
IncremntDel:	6.1	0.8	0.1	0.2	0.0	3.6	11.4	0.2	0.1	0.3	1.5	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	64.6	47.2	24.6	45.4	35.3	46.2	70.7	45.0	28.6	47.7	44.0	16.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.6	47.2	24.6	45.4	35.3	46.2	70.7	45.0	28.6	47.7	44.0	16.6
LOS by Move:	E	D	C	D	D+	D	E	D	C	D	D	B
HCM2kAvgQ:	187	187	66	60	93	428	206	176	42	66	429	48

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

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

Intersection #3: S Bernardo Ave / Blair Ave



Street Name:	S Bernardo Ave						Blair Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM												
Base Vol:	0	491	4	8	173	0	0	0	0	8	0	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	491	4	8	173	0	0	0	0	8	0	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	491	4	8	173	0	0	0	0	8	0	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	491	4	8	173	0	0	0	0	8	0	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	491	4	8	173	0	0	0	0	8	0	32
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	495	xxxx	xxxxx	xxxx	xxxx	xxxxx	596	682	493
Potent Cap.:	xxxx	xxxx	xxxxx	1079	xxxx	xxxxx	xxxx	xxxx	xxxxx	470	375	580
Move Cap.:	xxxx	xxxx	xxxxx	1079	xxxx	xxxxx	xxxx	xxxx	xxxxx	467	372	580
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.06
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	553	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.0	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			12.0		
ApproachLOS:	*			*			*			B		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #3 S Bernardo Ave / Blair Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 1 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	491	4	8	173	0	0	0	0	8	0	32
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			12.0		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=40]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=716]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 S Bernardo Ave / Blair Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 1 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	491	4	8	173	0	0	0	0	8	0	32

Major Street Volume: 676
Minor Approach Volume: 40
Minor Approach Volume Threshold: 420

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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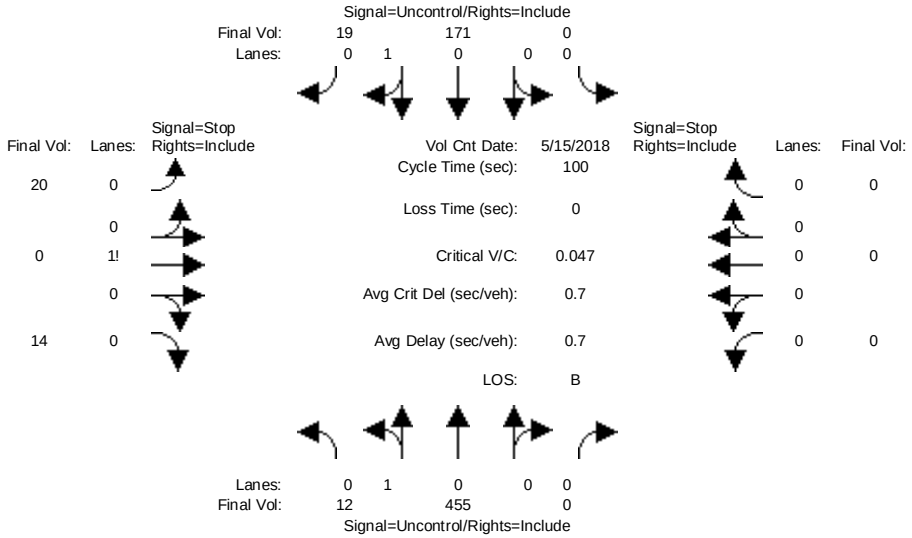
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #4: S Bernardo Ave / Brookfield Ave




```
Street Name:          S Bernardo Ave                    Brookfield Ave
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM
Base Vol:      12  455     0     0  171    19    20    0    14     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   12  455     0     0  171    19    20    0    14     0    0     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   12  455     0     0  171    19    20    0    14     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    12  455     0     0  171    19    20    0    14     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   12  455     0     0  171    19    20    0    14     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  190 xxxx xxxxx  xxxx xxxx xxxxx   660  660   181  xxxx xxxx xxxxx
Potent Cap.: 1396 xxxx xxxxx  xxxx xxxx xxxxx   431  386   867  xxxx xxxx xxxxx
Move Cap.:   1396 xxxx xxxxx  xxxx xxxx xxxxx   429  383   867  xxxx xxxx xxxxx
Volume/Cap:  0.01 xxxx  xxxx  xxxx xxxx  xxxx  0.05 0.00  0.02  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.7 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  541 xxxxx  xxxx xxxx xxxxx
SharedQueue:  0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.2 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.1 xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx             12.1           xxxxxx
ApproachLOS:         *                *                B                *
Note: Queue reported is the distance per lane in feet.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 S Bernardo Ave / Brookfield Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	12	455	0	0	171	19	20	0	14	0	0	0
ApproachDel:	xxxxxx			xxxxxx			12.1			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=34]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=691]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 S Bernardo Ave / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	12	455	0	0	171	19	20	0	14	0	0	0

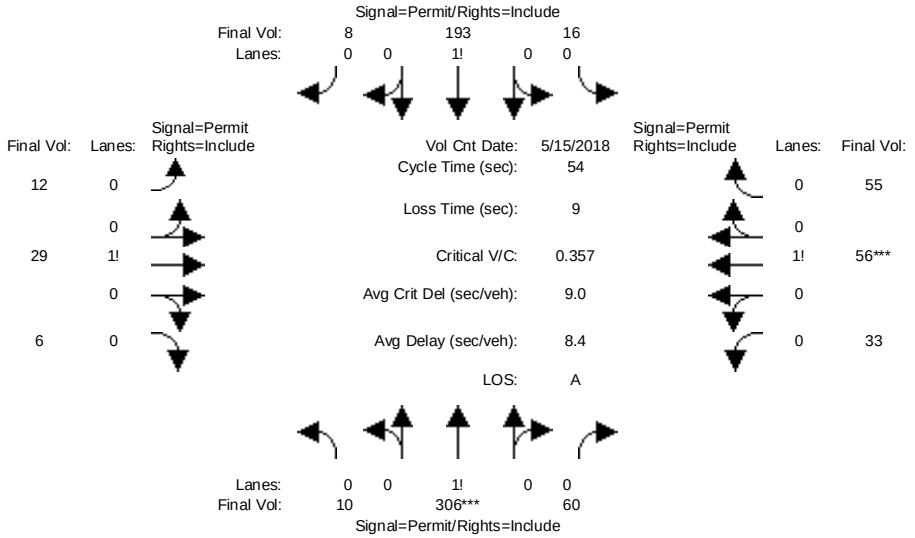
Major Street Volume: 657
Minor Approach Volume: 34
Minor Approach Volume Threshold: 331

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #5: S Bernardo Ave / Heatherstone Wy

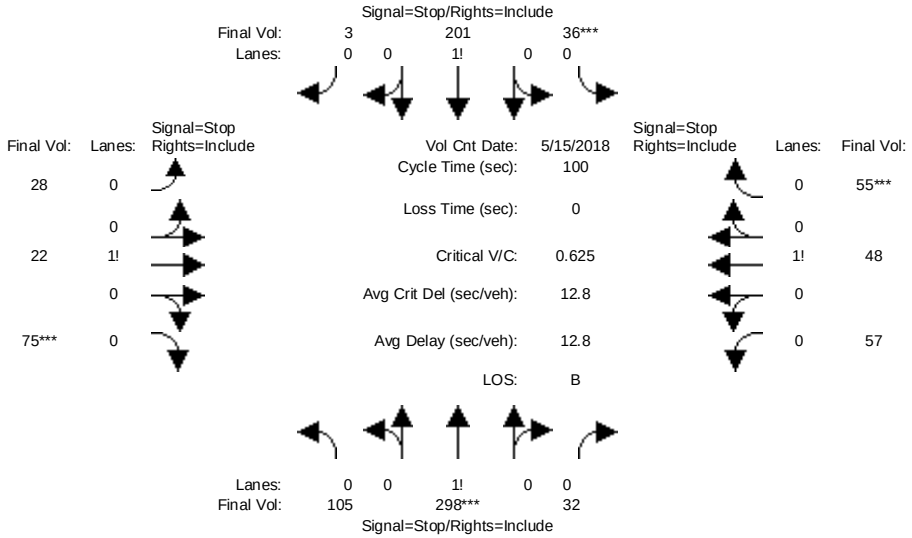


Street Name:	S Bernardo Ave						Heatherstone Wy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	15	15	15	15	15	6	6	6	6	6	6
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 May 2018 << 7:45 AM - 8:45 AM												
Base Vol:	10	306	60	16	193	8	12	29	6	33	56	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	306	60	16	193	8	12	29	6	33	56	55
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	306	60	16	193	8	12	29	6	33	56	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	306	60	16	193	8	12	29	6	33	56	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	306	60	16	193	8	12	29	6	33	56	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	306	60	16	193	8	12	29	6	33	56	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	0.03	0.81	0.16	0.07	0.89	0.04	0.25	0.62	0.13	0.23	0.39	0.38
Final Sat.:	47	1424	279	129	1556	65	447	1080	223	401	681	668
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.12	0.12	0.12	0.03	0.03	0.03	0.08	0.08	0.08
Crit Moves:		****									****	
Green Time:	32.5	32.5	32.5	32.5	32.5	32.5	12.5	12.5	12.5	12.5	12.5	12.5
Volume/Cap:	0.36	0.36	0.36	0.21	0.21	0.21	0.12	0.12	0.12	0.36	0.36	0.36
Uniform Del:	5.4	5.4	5.4	4.9	4.9	4.9	16.4	16.4	16.4	17.4	17.4	17.4
IncremntDel:	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	5.6	5.6	5.6	5.0	5.0	5.0	16.5	16.5	16.5	18.0	18.0	18.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.6	5.6	5.6	5.0	5.0	5.0	16.5	16.5	16.5	18.0	18.0	18.0
LOS by Move:	A	A	A	A	A	A	B	B	B	B	B	B
HCM2kAvgQ:	56	56	56	24	24	24	18	18	18	51	51	51

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

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing AM

Intersection #6: S Bernardo Ave / S Knickerbocker Dr



Street Name:	S Bernardo Ave						S Knickerbocker Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module: >> Count Date: 15 May 2018 << 7:45 AM - 8:45 AM												
Base Vol:	105	298	32	36	201	3	28	22	75	57	48	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	105	298	32	36	201	3	28	22	75	57	48	55
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	105	298	32	36	201	3	28	22	75	57	48	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	105	298	32	36	201	3	28	22	75	57	48	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	298	32	36	201	3	28	22	75	57	48	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	105	298	32	36	201	3	28	22	75	57	48	55
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.24	0.69	0.07	0.15	0.84	0.01	0.22	0.18	0.60	0.36	0.30	0.34
Final Sat.:	168	477	51	97	540	8	130	102	347	206	173	198
Capacity Analysis Module:												
Vol/Sat:	0.62	0.62	0.62	0.37	0.37	0.37	0.22	0.22	0.22	0.28	0.28	0.28
Crit Moves:		****		****					****			****
Delay/Veh:	15.5	15.5	15.5	11.1	11.1	11.1	9.8	9.8	9.8	10.5	10.5	10.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.5	15.5	15.5	11.1	11.1	11.1	9.8	9.8	9.8	10.5	10.5	10.5
LOS by Move:	C	C	C	B	B	B	A	A	A	B	B	B
ApproachDel:		15.5			11.1			9.8			10.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		15.5			11.1			9.8			10.5	
LOS by Appr:		C			B			A			B	
AllWayAvgQ:	36.1	36.1	36.1	12.8	12.8	12.8	5.2	5.2	5.2	7.5	7.5	7.5

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 S Bernardo Ave / S Knickerbocker Dr

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	105	298	32	36	201	3	28	22	75	57	48	55

Major Street Volume: 675
Minor Approach Volume: 160
Minor Approach Volume Threshold: 324

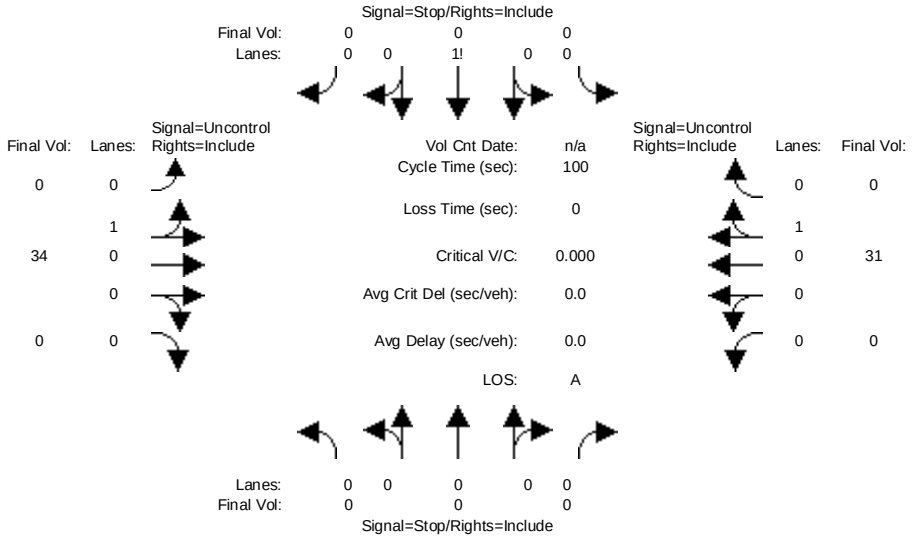
SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #7: Project Driveway/ Brookfield Ave



Street Name:	Project Driveway						Brookfield Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:AM												
Base Vol:	0	0	0	0	0	0	0	34	0	0	31	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	34	0	0	31	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	34	0	0	31	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	0	34	0	0	31	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	34	0	0	31	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	65	65	31	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	946	830	1049	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	946	830	1049	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Project Driveway/ Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	0	0	0	0	0	0	0	34	0	0	31	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Project Driveway/ Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	0	0	0	0	0	0	0	34	0	0	31	0

Major Street Volume: 65
Minor Approach Volume: 0
Minor Approach Volume Threshold: 948

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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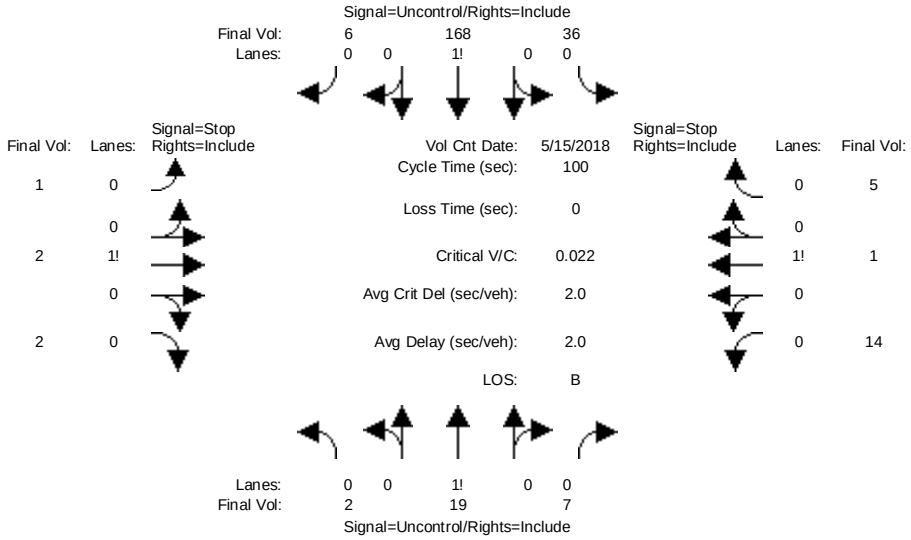
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #1: S Knickerbocker Dr / Brookfield Ave




```
Street Name:         S Knickerbocker Dr                  Brookfield Ave
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM
Base Vol:       2   19     7    36  168     6     1    2     2    14    1     5
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2   19     7    36  168     6     1    2     2    14    1     5
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    2   19     7    36  168     6     1    2     2    14    1     5
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2   19     7    36  168     6     1    2     2    14    1     5
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    2   19     7    36  168     6     1    2     2    14    1     5
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  174 xxxx xxxxx    26 xxxx xxxxx   273  273   171   272  273    23
Potent Cap.: 1415 xxxx xxxxx  1601 xxxx xxxxx   684  637   878   685  638  1060
Move Cap.:   1415 xxxx xxxxx  1601 xxxx xxxxx   667  622   878   669  622  1060
Volume/Cap:  0.00 xxxx  xxxx  0.02 xxxx  xxxx  0.00 0.00  0.00  0.02 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.1 xxxx xxxxx   1.7 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.5 xxxx xxxxx   7.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  715 xxxxx  xxxx  734 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.0 xxxxx xxxxx  0.1 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 10.1 xxxxx xxxxx 10.0 xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx             10.1             10.0
ApproachLOS:         *                *                B                B
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 S Knickerbocker Dr / Brookfield Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	2	19	7	36	168	6	1	2	2	14	1	5
ApproachDel:	xxxxxx			xxxxxx			10.1			10.0		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=5]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=263]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=20]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=263]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 S Knickerbocker Dr / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	2	19	7	36	168	6	1	2	2	14	1	5

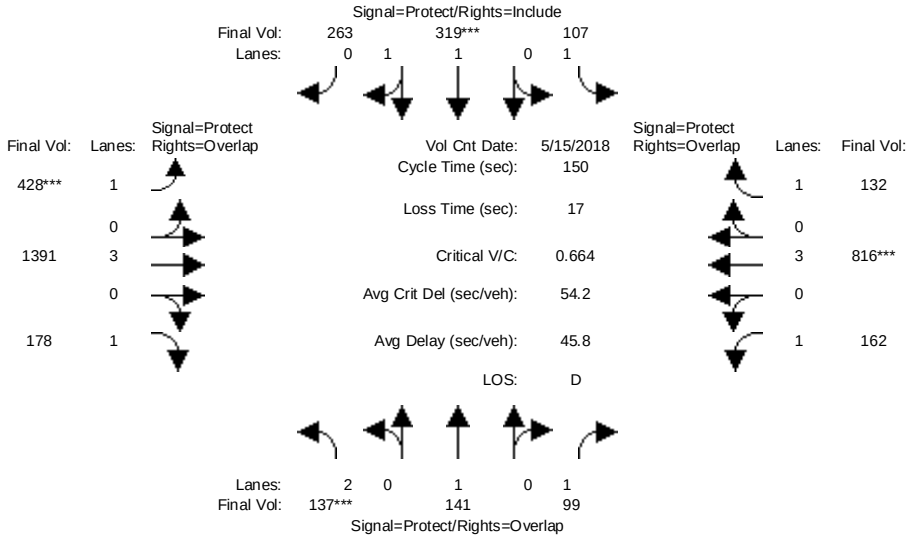
Major Street Volume: 238
Minor Approach Volume: 20
Minor Approach Volume Threshold: 602

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #2: S Bernardo Ave / W El Camino Real

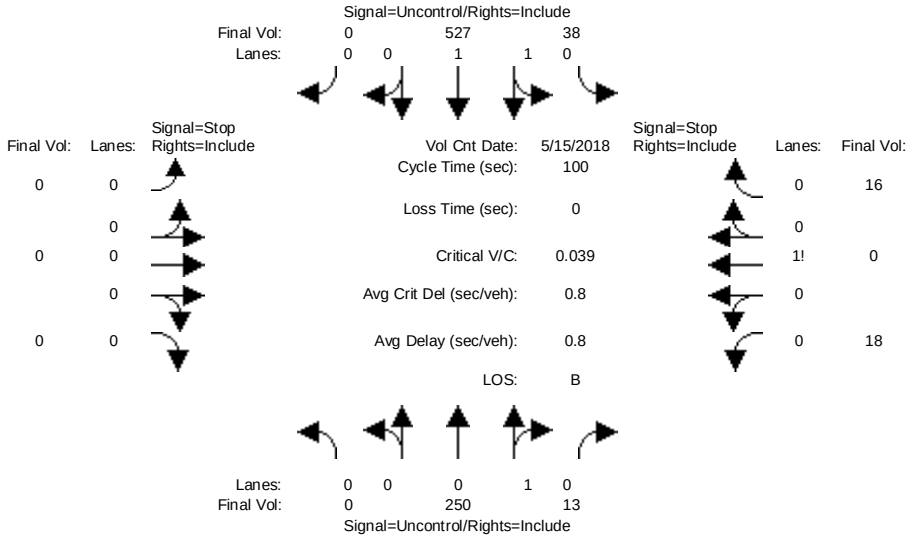


Street Name:	S Bernardo Ave						W El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	14	14	14	14	14	12	15	15	12	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Volume Module: >> Count Date: 15 May 2018 << 5:45 PM - 6:45 PM												
Base Vol:	137	141	99	107	319	263	428	1391	178	162	816	132
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	137	141	99	107	319	263	428	1391	178	162	816	132
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	137	141	99	107	319	263	428	1391	178	162	816	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	137	141	99	107	319	263	428	1391	178	162	816	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	137	141	99	107	319	263	428	1391	178	162	816	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	137	141	99	107	319	263	428	1391	178	162	816	132
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.07	0.93	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	2027	1671	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.07	0.06	0.06	0.16	0.16	0.24	0.24	0.10	0.09	0.14	0.08
Crit Moves:	****				****		****				****	
Green Time:	14.0	24.2	47.5	24.2	34.4	34.4	53.4	61.4	75.4	23.3	31.3	55.4
Volume/Cap:	0.47	0.46	0.18	0.38	0.69	0.69	0.69	0.60	0.20	0.60	0.69	0.20
Uniform Del:	64.5	57.0	37.2	56.2	52.9	52.9	41.2	34.6	20.7	59.0	54.9	32.2
IncremntDel:	1.2	1.1	0.2	0.9	2.4	2.4	3.2	0.4	0.1	3.6	1.7	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.6	58.1	37.3	57.1	55.3	55.3	44.4	35.1	20.8	62.6	56.6	32.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.6	58.1	37.3	57.1	55.3	55.3	44.4	35.1	20.8	62.6	56.6	32.4
LOS by Move:	E	E+	D+	E+	E+	E+	D	D+	C+	E	E+	C-
HCM2kAvgQ:	89	143	85	123	334	334	464	413	118	204	311	108

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

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

Intersection #3: S Bernardo Ave / Blair Ave



Street Name:	S Bernardo Ave						Blair Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	0	250	13	38	527	0	0	0	0	18	0	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	250	13	38	527	0	0	0	0	18	0	16
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	250	13	38	527	0	0	0	0	18	0	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	250	13	38	527	0	0	0	0	18	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	250	13	38	527	0	0	0	0	18	0	16
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	263	xxxx	xxxxx	xxxx	xxxx	xxxxx	596	860	257
Potent Cap.:	xxxx	xxxx	xxxxx	1313	xxxx	xxxxx	xxxx	xxxx	xxxxx	470	296	787
Move Cap.:	xxxx	xxxx	xxxxx	1313	xxxx	xxxxx	xxxx	xxxx	xxxxx	459	287	787
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	0.00	0.02
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	-	LTR - RT	LT	-	LTR - RT	LT	-	LTR - RT	LT	-	LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	571	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.7	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			11.7		
ApproachLOS:	*			*			*			B		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #3 S Bernardo Ave / Blair Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 1 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	250	13	38	527	0	0	0	0	18	0	16
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			11.7		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=34]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=862]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 S Bernardo Ave / Blair Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 1 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	250	13	38	527	0	0	0	0	18	0	16

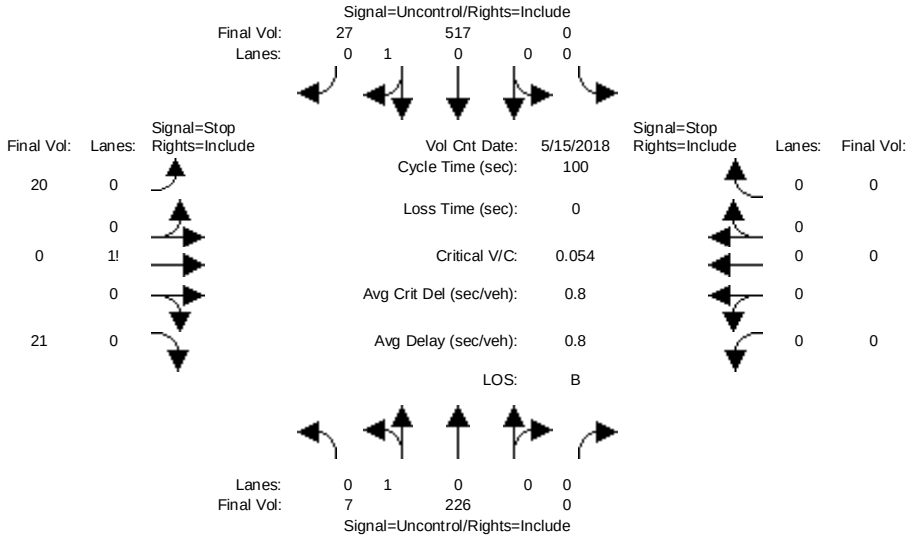
Major Street Volume: 828
Minor Approach Volume: 34
Minor Approach Volume Threshold: 350

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #4: S Bernardo Ave / Brookfield Ave



Street Name:	S Bernardo Ave						Brookfield Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	7	226	0	0	517	27	20	0	21	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	226	0	0	517	27	20	0	21	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	226	0	0	517	27	20	0	21	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	226	0	0	517	27	20	0	21	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	7	226	0	0	517	27	20	0	21	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	544	xxxx	xxxxx	xxxx	xxxx	xxxxx	771	771	531	xxxx	xxxx	xxxxx
Potent Cap.:	1035	xxxx	xxxxx	xxxx	xxxx	xxxxx	371	333	552	xxxx	xxxx	xxxxx
Move Cap.:	1035	xxxx	xxxxx	xxxx	xxxx	xxxxx	370	331	552	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	0.00	0.04	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	445	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.9	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			13.9			xxxxxx		
ApproachLOS:	*			*			B			*		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #4 S Bernardo Ave / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	7	226	0	0	517	27	20	0	21	0	0	0
ApproachDel:	xxxxxx			xxxxxx			13.9			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=818]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 S Bernardo Ave / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	7	226	0	0	517	27	20	0	21	0	0	0

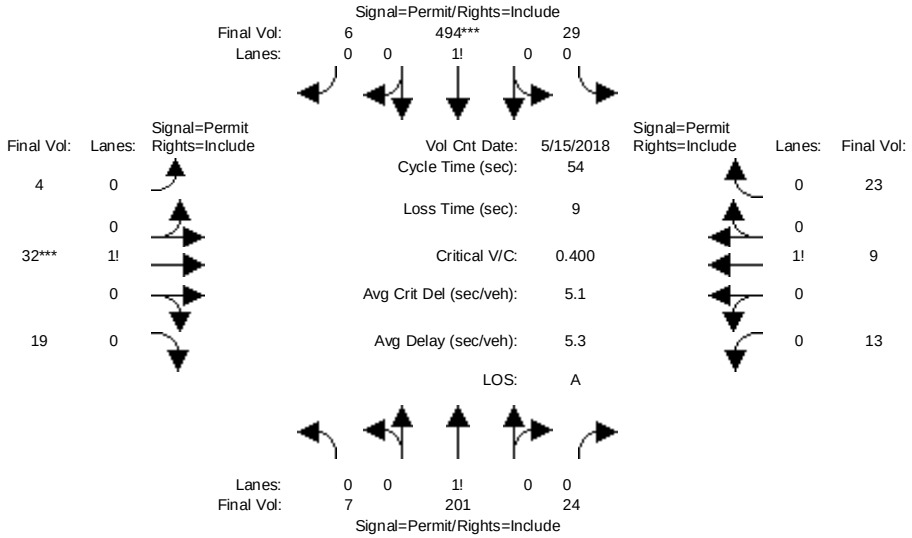
Major Street Volume: 777
Minor Approach Volume: 41
Minor Approach Volume Threshold: 287

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #5: S Bernardo Ave / Heatherstone Wy

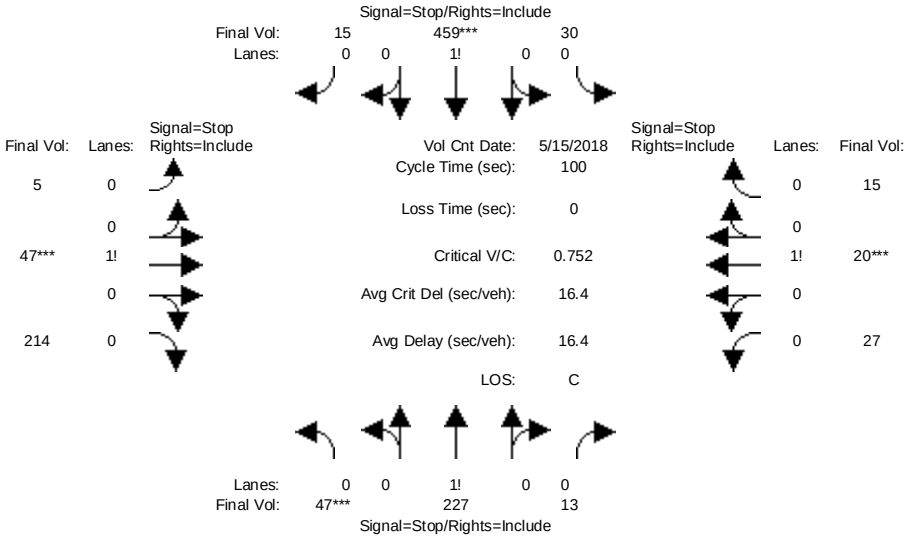


Street Name:	S Bernardo Ave						Heatherstone Wy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	15	15	15	15	15	6	6	6	6	6	6
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	7	201	24	29	494	6	4	32	19	13	9	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	201	24	29	494	6	4	32	19	13	9	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	201	24	29	494	6	4	32	19	13	9	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	201	24	29	494	6	4	32	19	13	9	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	201	24	29	494	6	4	32	19	13	9	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	201	24	29	494	6	4	32	19	13	9	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	0.03	0.87	0.10	0.05	0.94	0.01	0.07	0.58	0.35	0.29	0.20	0.51
Final Sat.:	53	1516	181	96	1634	20	127	1018	605	506	350	894
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.13	0.30	0.30	0.30	0.03	0.03	0.03	0.03	0.03	0.03
Crit Moves:					****			****				
Green Time:	39.0	39.0	39.0	39.0	39.0	39.0	6.0	6.0	6.0	6.0	6.0	6.0
Volume/Cap:	0.18	0.18	0.18	0.42	0.42	0.42	0.28	0.28	0.28	0.23	0.23	0.23
Uniform Del:	2.4	2.4	2.4	3.0	3.0	3.0	22.0	22.0	22.0	21.9	21.9	21.9
IncremntDel:	0.1	0.1	0.1	0.2	0.2	0.2	0.8	0.8	0.8	0.6	0.6	0.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	2.5	2.5	2.5	3.2	3.2	3.2	22.8	22.8	22.8	22.5	22.5	22.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	2.5	2.5	2.5	3.2	3.2	3.2	22.8	22.8	22.8	22.5	22.5	22.5
LOS by Move:	A	A	A	A	A	A	C+	C+	C+	C+	C+	C+
HCM2kAvgQ:	6	6	6	93	93	93	30	30	30	24	24	24

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

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing PM

Intersection #6: S Bernardo Ave / S Knickerbocker Dr



Street Name:	S Bernardo Ave						S Knickerbocker Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	47	227	13	30	459	15	5	47	214	27	20	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	227	13	30	459	15	5	47	214	27	20	15
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	227	13	30	459	15	5	47	214	27	20	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	227	13	30	459	15	5	47	214	27	20	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	227	13	30	459	15	5	47	214	27	20	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	227	13	30	459	15	5	47	214	27	20	15
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.16	0.79	0.05	0.06	0.91	0.03	0.02	0.18	0.80	0.44	0.32	0.24
Final Sat.:	101	486	28	40	611	20	11	106	482	209	155	116
Capacity Analysis Module:												
Vol/Sat:	0.47	0.47	0.47	0.75	0.75	0.75	0.44	0.44	0.44	0.13	0.13	0.13
Crit Moves:	****			****			****			****		
Delay/Veh:	12.9	12.9	12.9	21.4	21.4	21.4	12.2	12.2	12.2	10.1	10.1	10.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	12.9	12.9	21.4	21.4	21.4	12.2	12.2	12.2	10.1	10.1	10.1
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B
ApproachDel:	12.9			21.4			12.2			10.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.9			21.4			12.2			10.1		
LOS by Appr:	B			C			B			B		
AllWayAvgQ:	18.5	18.5	18.5	61.2	61.2	61.2	15.5	15.5	15.5	2.6	2.6	2.6

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

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #6 S Bernardo Ave / S Knickerbocker Dr

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	47	227	13	30	459	15	5	47	214	27	20	15

Major Street Volume: 791
Minor Approach Volume: 266
Minor Approach Volume Threshold: 282

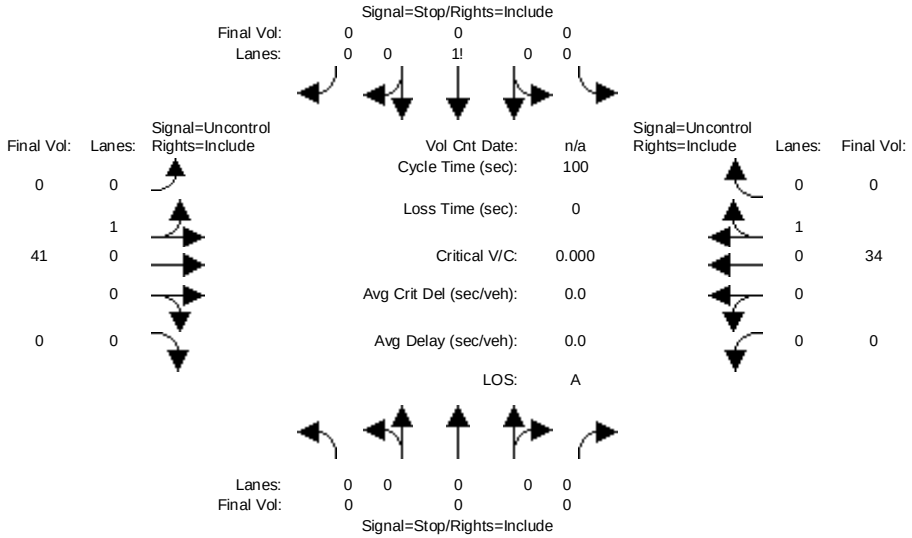
SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #7: Project Driveway/ Brookfield Ave



Street Name:	Project Driveway						Brookfield Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:PM												
Base Vol:	0	0	0	0	0	0	0	41	0	0	34	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	41	0	0	34	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	41	0	0	34	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	0	41	0	0	34	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	41	0	0	34	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	75	75	34	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	933	819	1045	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	933	819	1045	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Project Driveway/ Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0		0 0 1!	0 0		0 0 1	0 0		0 0 1	0 0	
Initial Vol:	0	0	0	0	0	0	0	41	0	0	34	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Project Driveway/ Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0		0 0 1!	0 0		0 0 1	0 0		0 0 1	0 0	
Initial Vol:	0	0	0	0	0	0	0	41	0	0	34	0

Major Street Volume: 75
Minor Approach Volume: 0
Minor Approach Volume Threshold: 910

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Appendix D
Approved Project Trips

Approved Project Trip Generation - 803 W. El Camino Real

Land Use	Size	Unit	Daily Rate	Daily Trips	AM Peak Hour						PM Peak Hour					
					Rate	In%	In	Out%	Out	Total	Rate	In%	In	Out%	Out	Total
Existing Commercial	Not in Use...Under construction															
Proposed																
Single Family Homes[2]	9	dwelling units	9.44	85	0.74	25%	2	75%	5	7	0.99	63%	6	37%	3	9
Hotel Rooms[3]	51	rooms	8.36	426	0.47	59%	14	41%	10	24	0.60	51%	16	49%	15	31
Apartments[4]	40	dwelling units	5.44	218	0.36	26%	4	74%	11	14	0.44	61%	11	39%	7	18
Commercial[1]	5,662	sq ft	37.75	214	0.94	62%	3	38%	2	5	3.81	48%	10	52%	11	22
Total Proposed Trips				943			23		28	50			42		36	79
Proposed with Trip Reduction																
Single Family Homes[2]				76			1		5	6			5		3	8
Hotel Rooms[3]				418			14		10	23			15		15	30
Apartments[4]				209			4		11	14			10		7	17
Commercial[1]				205			3		2	5			10		11	21
Total Proposed Trips with reduction				909			22		26	48			40		35	75
Net New Trips				909			22		26	48			40		35	75

Notes:

All rates are from Institute of Tranpsortation Engineers, Trip Generation, 10th Edition

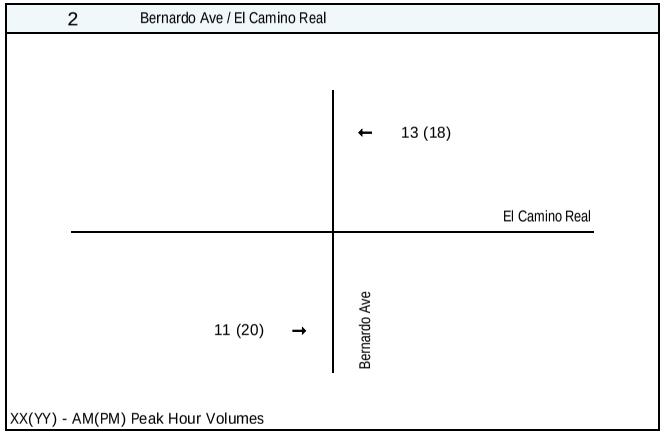
1. Land Use Code 820: Shopping Center (average rates, expressed in trips per 1000 sq ft).
2. Land Use Code 210: Single-Family Detached Housing (average rates, expressed in trips per dwelling unit).
3. Land Use Code 310: Hotel (average rates, expressed in trips per room).
4. Land Use Code 221: Multifamily Housing (Mid-Rise) (average rates, expressed in trips per dewlling unit).

The project is eligible for Trip reductions according to VTA TIA Guidelines...the min reduction of 10% is used for this calculation

approved project trips

2	Bernardo Ave	El Camino Real	0	0	0	0	0	0	0	11	0	0	13	0	0	0	0	0	0	0	0	20	0	0	18	0

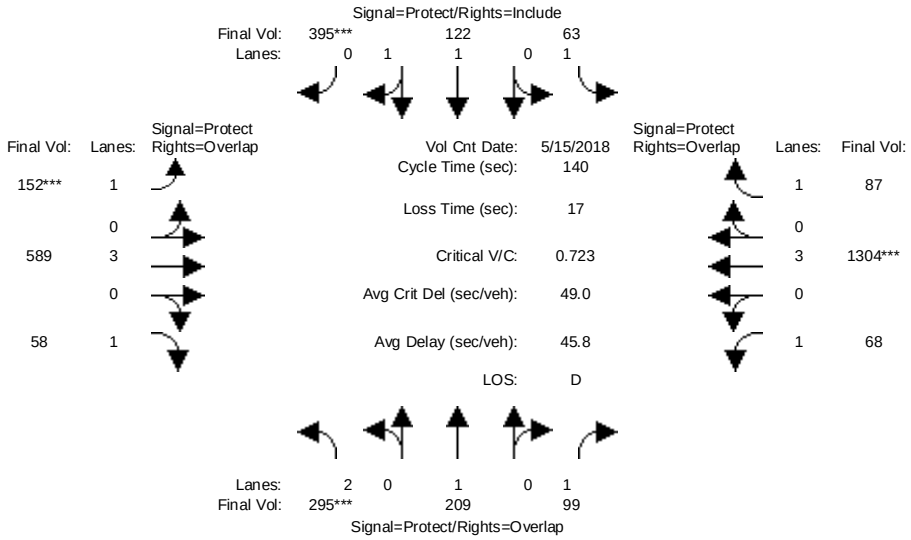
It is assumed that half of the trips generated by the approved project will go to/from east and half go to/from west from the approved project...therefore, the study intersection gets only half of the trips generated from the approved project.



Appendix E
Background Conditions Analysis

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Background AM

Intersection #2: S Bernardo Ave / W El Camino Real

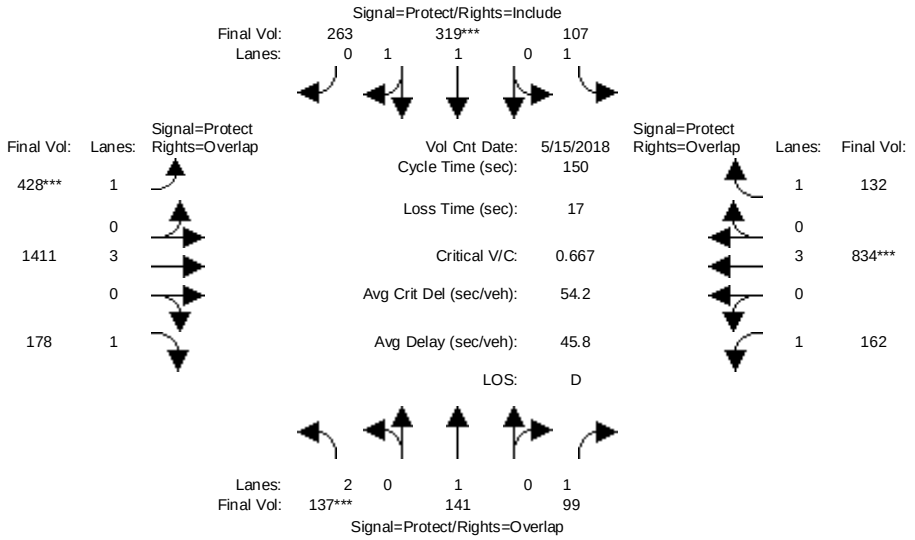


Street Name:	S Bernardo Ave						W El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	14	14	14	14	14	14	12	15	15	12	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM												
Base Vol:	295	209	99	63	122	395	152	578	58	68	1291	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	295	209	99	63	122	395	152	578	58	68	1291	87
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
approved:	0	0	0	0	0	0	0	11	0	0	13	0
Initial Fut:	295	209	99	63	122	395	152	589	58	68	1304	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	295	209	99	63	122	395	152	589	58	68	1304	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	295	209	99	63	122	395	152	589	58	68	1304	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	295	209	99	63	122	395	152	589	58	68	1304	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	1900	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.09	0.11	0.06	0.04	0.06	0.23	0.09	0.10	0.03	0.04	0.23	0.05
Crit Moves:	****					****	****				****	
Green Time:	18.1	32.4	59.6	29.5	43.7	43.7	16.8	34.0	52.1	27.2	44.3	73.8
Volume/Cap:	0.72	0.48	0.13	0.17	0.21	0.72	0.72	0.43	0.09	0.20	0.72	0.09
Uniform Del:	58.5	46.5	24.5	45.3	35.4	42.8	59.3	44.8	28.5	47.3	42.4	16.5
IncremntDel:	6.3	0.8	0.1	0.2	0.0	3.6	11.7	0.2	0.1	0.3	1.5	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	64.8	47.3	24.6	45.5	35.4	46.4	71.0	45.0	28.6	47.6	43.9	16.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.8	47.3	24.6	45.5	35.4	46.4	71.0	45.0	28.6	47.6	43.9	16.5
LOS by Move:	E	D	C	D	D+	D	E	D	C	D	D	B
HCM2kAvgQ:	188	187	66	60	94	429	206	179	42	66	433	48

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Background PM

Intersection #2: S Bernardo Ave / W El Camino Real



Street Name:	S Bernardo Ave						W El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	14	14	14	14	14	12	15	15	12	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Volume Module: >> Count Date: 15 May 2018 << 5:45 PM - 6:45 PM												
Base Vol:	137	141	99	107	319	263	428	1391	178	162	816	132
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	137	141	99	107	319	263	428	1391	178	162	816	132
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
approved:	0	0	0	0	0	0	0	20	0	0	18	0
Initial Fut:	137	141	99	107	319	263	428	1411	178	162	834	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	137	141	99	107	319	263	428	1411	178	162	834	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	137	141	99	107	319	263	428	1411	178	162	834	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	137	141	99	107	319	263	428	1411	178	162	834	132
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.07	0.93	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	2027	1671	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.07	0.06	0.06	0.16	0.16	0.24	0.25	0.10	0.09	0.15	0.08
Crit Moves:	****				****		****				****	
Green Time:	14.0	24.1	47.2	24.1	34.2	34.2	53.1	61.7	75.7	23.1	31.8	55.8
Volume/Cap:	0.47	0.46	0.18	0.38	0.69	0.69	0.69	0.60	0.20	0.60	0.69	0.20
Uniform Del:	64.5	57.1	37.4	56.3	53.1	53.1	41.4	34.5	20.5	59.2	54.6	32.0
IncremntDel:	1.2	1.1	0.2	0.9	2.5	2.5	3.3	0.4	0.1	3.8	1.7	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.6	58.2	37.5	57.2	55.6	55.6	44.8	34.9	20.6	62.9	56.3	32.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.6	58.2	37.5	57.2	55.6	55.6	44.8	34.9	20.6	62.9	56.3	32.1
LOS by Move:	E	E+	D+	E+	E+	E+	D	C-	C+	E	E+	C-
HCM2kAvgQ:	89	143	85	123	335	335	466	419	117	205	317	108

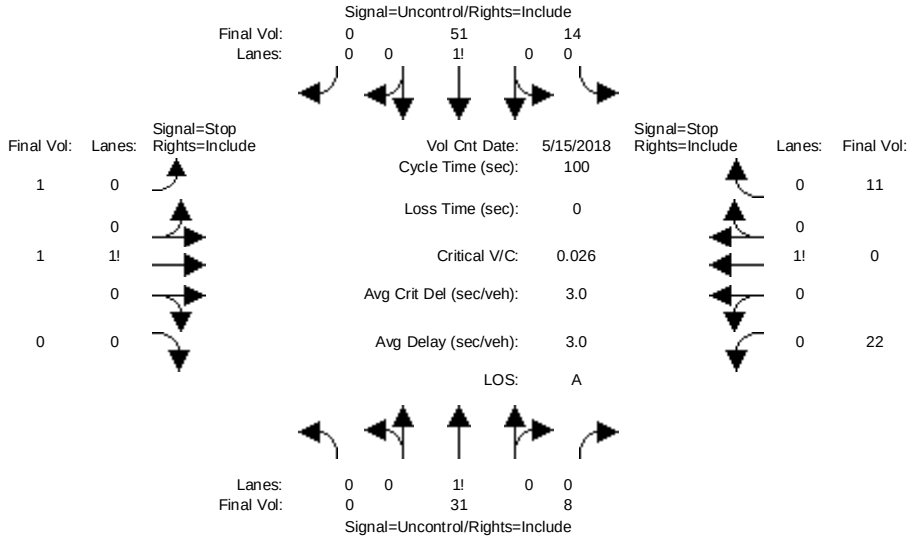
Note: Queue reported is the distance per lane in feet.

Appendix F

Existing + Project Conditions Analysis

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project AM

Intersection #1: S Knickerbocker Dr / Brookfield Ave




```
Street Name:         S Knickerbocker Dr                  Brookfield Ave
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM
Base Vol:       0   31     5     6   51     0     1    1     0    20    0    11
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0   31     5     6   51     0     1    1     0    20    0    11
Added Vol:      0    0     3     8    0     0     0    0     0     2    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0   31     8    14   51     0     1    1     0    22    0    11
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0   31     8    14   51     0     1    1     0    22    0    11
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0   31     8    14   51     0     1    1     0    22    0    11
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5 xxxxx   7.1  6.5   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0 xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    39 xxxx xxxxx   120  118 xxxxx   115  114    35
Potent Cap.: xxxx xxxx xxxxx  1584 xxxx xxxxx   861  776 xxxxx   867  780  1044
Move Cap.:   xxxx xxxx xxxxx  1584 xxxx xxxxx   846  769 xxxxx   860  773  1044
Volume/Cap:  xxxx xxxx  xxxx  0.01 xxxx  xxxx  0.00 0.00  xxxx  0.03 0.00  0.01
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.7 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   7.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx   806 xxxx xxxxx  xxxx  914 xxxxx
SharedQueue:xxxxx xxxx xxxxx   0.0 xxxx xxxxx   0.0 xxxx xxxxx xxxxx  0.1 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx   7.3 xxxx xxxxx   9.5 xxxx xxxxx xxxxx  9.1 xxxxx
Shared LOS:     *    *     *     A    *     *     A    *     *     *    A     *
ApproachDel:    xxxxxx           xxxxxx              9.5             9.1
ApproachLOS:         *                *                A               A
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 S Knickerbocker Dr / Brookfield Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 0			0 0 1! 0 0		
Initial Vol:	0	31	8	14	51	0	1	1	0	22	0	11
ApproachDel:	xxxxxx			xxxxxx			9.5			9.1		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=139]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=139]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 S Knickerbocker Dr / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 0			0 0 1! 0 0		
Initial Vol:	0	31	8	14	51	0	1	1	0	22	0	11

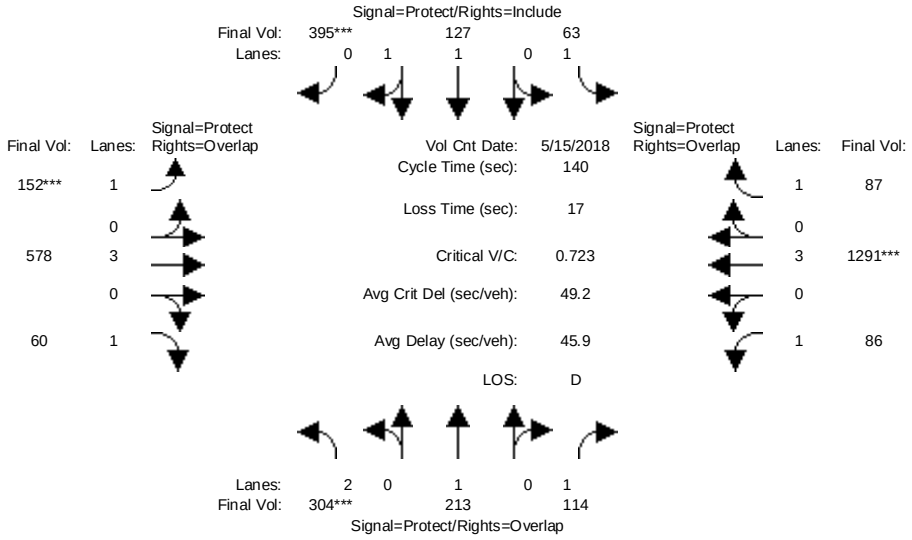
Major Street Volume: 104
Minor Approach Volume: 33
Minor Approach Volume Threshold: 823

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #2: S Bernardo Ave / W El Camino Real

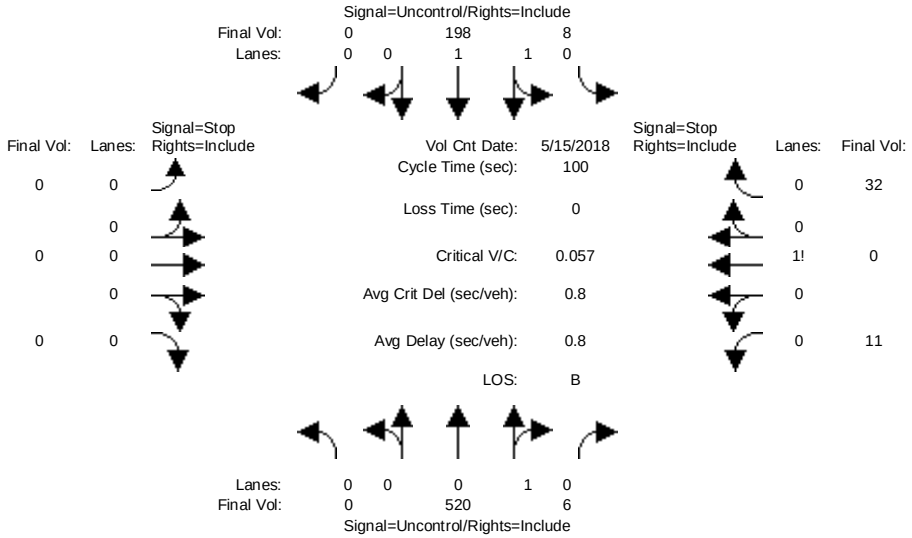


Street Name:	S Bernardo Ave						W El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	14	14	14	14	14	12	15	15	12	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM												
Base Vol:	295	209	99	63	122	395	152	578	58	68	1291	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	295	209	99	63	122	395	152	578	58	68	1291	87
Added Vol:	9	4	15	0	5	0	0	0	2	18	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	304	213	114	63	127	395	152	578	60	86	1291	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	304	213	114	63	127	395	152	578	60	86	1291	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	304	213	114	63	127	395	152	578	60	86	1291	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	304	213	114	63	127	395	152	578	60	86	1291	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	1900	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.11	0.07	0.04	0.07	0.23	0.09	0.10	0.03	0.05	0.23	0.05
Crit Moves:	****					****	****				****	
Green Time:	18.7	33.0	59.9	29.4	43.7	43.7	16.8	33.7	52.4	27.0	43.8	73.2
Volume/Cap:	0.72	0.48	0.15	0.17	0.21	0.72	0.72	0.42	0.09	0.26	0.72	0.10
Uniform Del:	58.2	46.1	24.5	45.3	35.5	42.8	59.4	44.9	28.4	48.0	42.7	16.8
IncremntDel:	6.1	0.8	0.1	0.2	0.0	3.6	11.7	0.2	0.1	0.4	1.5	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	64.3	46.9	24.6	45.5	35.6	46.4	71.1	45.1	28.5	48.4	44.2	16.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.3	46.9	24.6	45.5	35.6	46.4	71.1	45.1	28.5	48.4	44.2	16.8
LOS by Move:	E	D	C	D	D+	D	E	D	C	D	D	B
HCM2kAvgQ:	193	190	77	60	98	429	206	176	44	86	430	49

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project AM

Intersection #3: S Bernardo Ave / Blair Ave



Street Name:	S Bernardo Ave						Blair Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM												
Base Vol:	0	491	4	8	173	0	0	0	0	8	0	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	491	4	8	173	0	0	0	0	8	0	32
Added Vol:	0	29	2	0	25	0	0	0	0	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	520	6	8	198	0	0	0	0	11	0	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	520	6	8	198	0	0	0	0	11	0	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	520	6	8	198	0	0	0	0	11	0	32
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	526	xxxx	xxxxx	xxxx	xxxx	xxxxx	638	737	523
Potent Cap.:	xxxx	xxxx	xxxxx	1051	xxxx	xxxxx	xxxx	xxxx	xxxxx	444	348	558
Move Cap.:	xxxx	xxxx	xxxxx	1051	xxxx	xxxxx	xxxx	xxxx	xxxxx	441	346	558
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.06
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	523	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.5	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			12.5		
ApproachLOS:	*			*			*			B		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #3 S Bernardo Ave / Blair Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 1 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	520	6	8	198	0	0	0	0	11	0	32
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			12.5		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=43]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=775]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 S Bernardo Ave / Blair Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 1 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	520	6	8	198	0	0	0	0	11	0	32

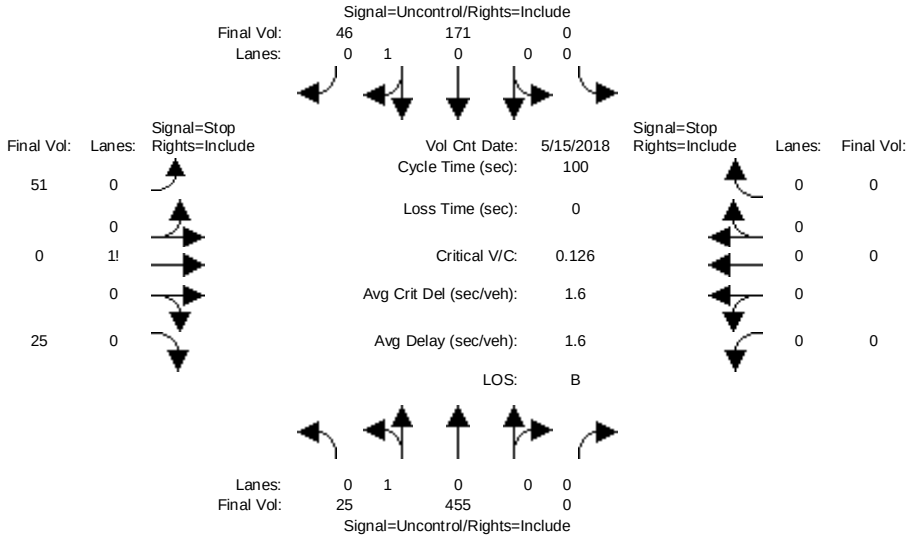
Major Street Volume: 732
Minor Approach Volume: 43
Minor Approach Volume Threshold: 392

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project AM

Intersection #4: S Bernardo Ave / Brookfield Ave



Street Name:	S Bernardo Ave						Brookfield Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM												
Base Vol:	12	455	0	0	171	19	20	0	14	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	455	0	0	171	19	20	0	14	0	0	0
Added Vol:	13	0	0	0	0	27	31	0	11	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	455	0	0	171	46	51	0	25	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	25	455	0	0	171	46	51	0	25	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	455	0	0	171	46	51	0	25	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	217	xxxx	xxxxx	xxxx	xxxx	xxxxx	699	699	194	xxxx	xxxx	xxxxx
Potent Cap.:	1365	xxxx	xxxxx	xxxx	xxxx	xxxxx	409	366	853	xxxx	xxxx	xxxxx
Move Cap.:	1365	xxxx	xxxxx	xxxx	xxxx	xxxxx	403	360	853	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	0.13	0.00	0.03	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	488	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.7	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			13.7			xxxxxx		
ApproachLOS:	*			*			B			*		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #4 S Bernardo Ave / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	25	455	0	0	171	46	51	0	25	0	0	0
ApproachDel:	xxxxxx			xxxxxx			13.7			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=76]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=773]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #4 S Bernardo Ave / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	25	455	0	0	171	46	51	0	25	0	0	0

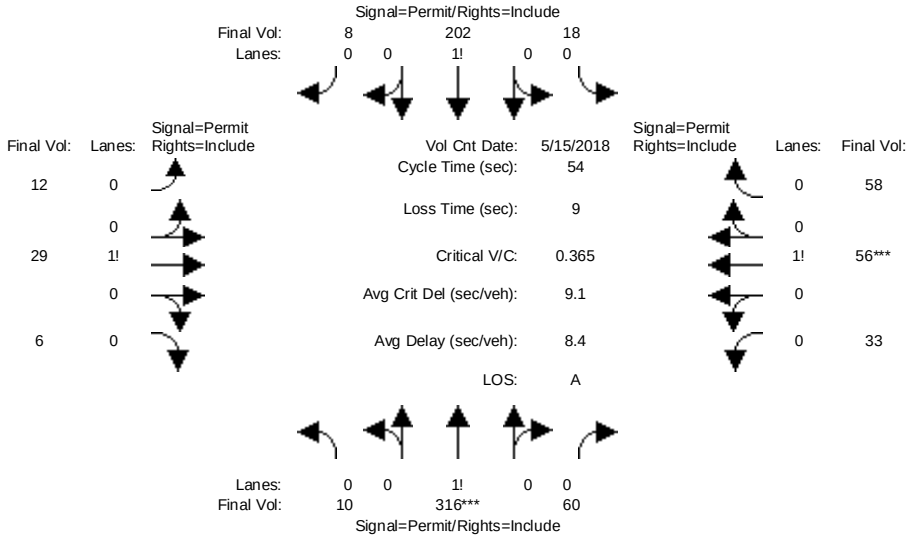
Major Street Volume: 697
Minor Approach Volume: 76
Minor Approach Volume Threshold: 316

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #5: S Bernardo Ave / Heatherstone Wy

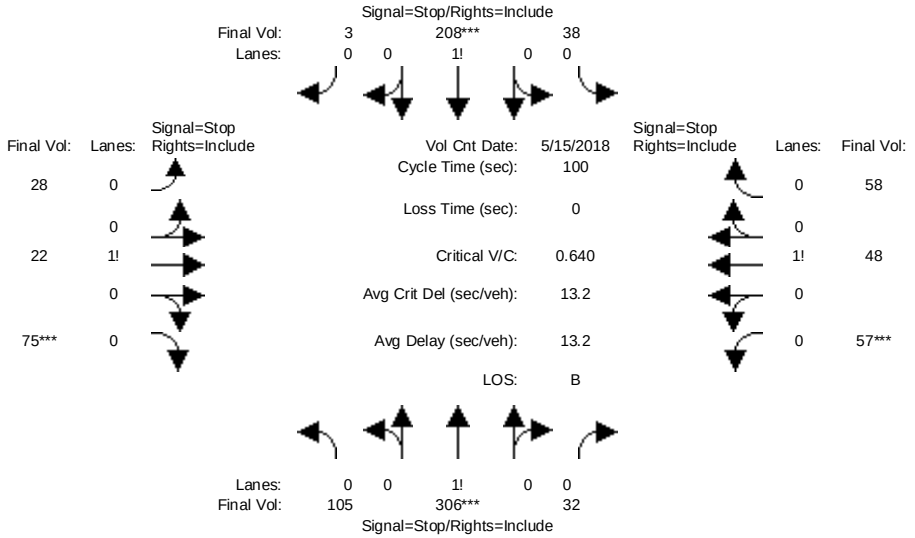


Street Name:	S Bernardo Ave						Heatherstone Wy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	15	15	15	15	15	6	6	6	6	6	6
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 May 2018 << 7:45 AM - 8:45 AM												
Base Vol:	10	306	60	16	193	8	12	29	6	33	56	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	306	60	16	193	8	12	29	6	33	56	55
Added Vol:	0	10	0	2	9	0	0	0	0	0	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	316	60	18	202	8	12	29	6	33	56	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	316	60	18	202	8	12	29	6	33	56	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	316	60	18	202	8	12	29	6	33	56	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	316	60	18	202	8	12	29	6	33	56	58
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	0.03	0.82	0.15	0.08	0.89	0.03	0.25	0.62	0.13	0.22	0.38	0.40
Final Sat.:	45	1433	272	138	1550	61	447	1080	223	393	667	690
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.22	0.13	0.13	0.13	0.03	0.03	0.03	0.08	0.08	0.08
Crit Moves:		****									****	
Green Time:	32.6	32.6	32.6	32.6	32.6	32.6	12.4	12.4	12.4	12.4	12.4	12.4
Volume/Cap:	0.37	0.37	0.37	0.22	0.22	0.22	0.12	0.12	0.12	0.37	0.37	0.37
Uniform Del:	5.4	5.4	5.4	4.9	4.9	4.9	16.5	16.5	16.5	17.5	17.5	17.5
IncremntDel:	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.6	0.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	5.7	5.7	5.7	5.0	5.0	5.0	16.6	16.6	16.6	18.0	18.0	18.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.7	5.7	5.7	5.0	5.0	5.0	16.6	16.6	16.6	18.0	18.0	18.0
LOS by Move:	A	A	A	A	A	A	B	B	B	B-	B-	B-
HCM2kAvgQ:	58	58	58	26	26	26	18	18	18	53	53	53

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

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing plus Project AM

Intersection #6: S Bernardo Ave / S Knickerbocker Dr



Street Name:	S Bernardo Ave						S Knickerbocker Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module: >> Count Date: 15 May 2018 << 7:45 AM - 8:45 AM												
Base Vol:	105	298	32	36	201	3	28	22	75	57	48	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	105	298	32	36	201	3	28	22	75	57	48	55
Added Vol:	0	8	0	2	7	0	0	0	0	0	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	105	306	32	38	208	3	28	22	75	57	48	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	105	306	32	38	208	3	28	22	75	57	48	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	306	32	38	208	3	28	22	75	57	48	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	105	306	32	38	208	3	28	22	75	57	48	58
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.24	0.69	0.07	0.15	0.84	0.01	0.22	0.18	0.60	0.35	0.29	0.36
Final Sat.:	164	478	50	98	535	8	128	100	342	200	169	204
Capacity Analysis Module:												
Vol/Sat:	0.64	0.64	0.64	0.39	0.39	0.39	0.22	0.22	0.22	0.28	0.28	0.28
Crit Moves:		****			****				****	****		
Delay/Veh:	16.0	16.0	16.0	11.4	11.4	11.4	9.9	9.9	9.9	10.6	10.6	10.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.0	16.0	16.0	11.4	11.4	11.4	9.9	9.9	9.9	10.6	10.6	10.6
LOS by Move:	C	C	C	B	B	B	A	A	A	B	B	B
ApproachDel:		16.0			11.4			9.9			10.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		16.0			11.4			9.9			10.6	
LOS by Appr:		C			B			A			B	
AllWayAvgQ:	38.3	38.3	38.3	13.7	13.7	13.7	5.3	5.3	5.3	7.7	7.7	7.7

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 S Bernardo Ave / S Knickerbocker Dr

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	105	306	32	38	208	3	28	22	75	57	48	58

Major Street Volume: 692
Minor Approach Volume: 163
Minor Approach Volume Threshold: 318

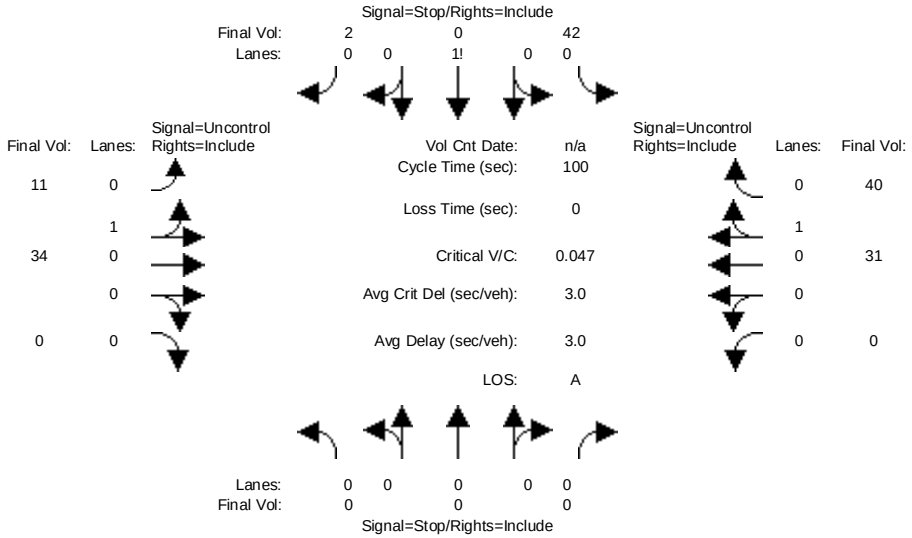
SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project AM

Intersection #7: Project Driveway/ Brookfield Ave



Street Name:	Project Driveway						Brookfield Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:AM												
Base Vol:	0	0	0	0	0	0	0	34	0	0	31	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	34	0	0	31	0
Added Vol:	0	0	0	42	0	2	11	0	0	0	0	40
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	42	0	2	11	34	0	0	31	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	42	0	2	11	34	0	0	31	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	42	0	2	11	34	0	0	31	40
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	107	107	51	71	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	895	787	1023	1542	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	890	781	1023	1542	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.05	0.00	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	896	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Project Driveway/ Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Initial Vol:	0	0	0	42	0	2	11	34	0	0	31	40
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=160]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Project Driveway/ Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Initial Vol:	0	0	0	42	0	2	11	34	0	0	31	40

Major Street Volume: 116
Minor Approach Volume: 44
Minor Approach Volume Threshold: 794

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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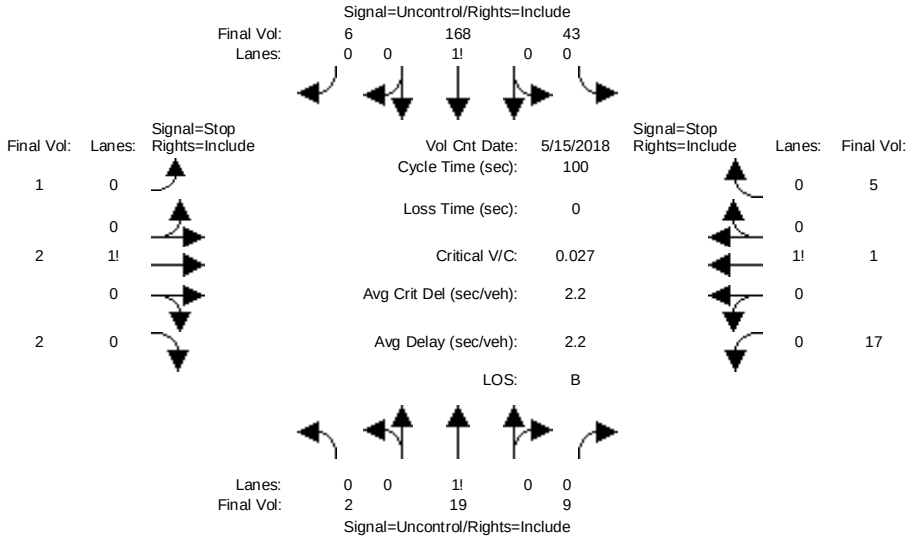
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project PM

Intersection #1: S Knickerbocker Dr / Brookfield Ave



Street Name:	S Knickerbocker Dr						Brookfield Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	2	19	7	36	168	6	1	2	2	14	1	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	19	7	36	168	6	1	2	2	14	1	5
Added Vol:	0	0	2	7	0	0	0	0	0	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	19	9	43	168	6	1	2	2	17	1	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	19	9	43	168	6	1	2	2	17	1	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	19	9	43	168	6	1	2	2	17	1	5
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	174	xxxx	xxxxx	28	xxxx	xxxxx	288	289	171	287	288	24
Potent Cap.:	1415	xxxx	xxxxx	1599	xxxx	xxxxx	669	624	878	670	626	1059
Move Cap.:	1415	xxxx	xxxxx	1599	xxxx	xxxxx	650	606	878	652	608	1059
Volume/Cap:	0.00	xxxx	xxxx	0.03	xxxx	xxxx	0.00	0.00	0.00	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	2.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	703	xxxxx	xxxx	709	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.2	xxxxx	xxxxx	10.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			10.2			10.2		
ApproachLOS:	*			*			B			B		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #1 S Knickerbocker Dr / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	2	19	9	43	168	6	1	2	2	17	1	5
ApproachDel:	xxxxxx			xxxxxx			10.2			10.2		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=5]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=275]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=275]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 S Knickerbocker Dr / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	2	19	9	43	168	6	1	2	2	17	1	5

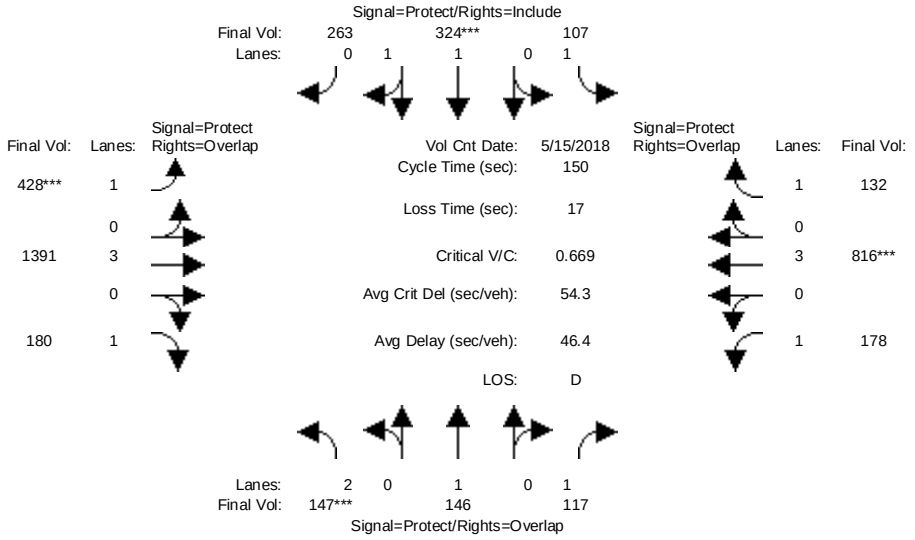
Major Street Volume: 247
Minor Approach Volume: 23
Minor Approach Volume Threshold: 592

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

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

Intersection #2: S Bernardo Ave / W El Camino Real

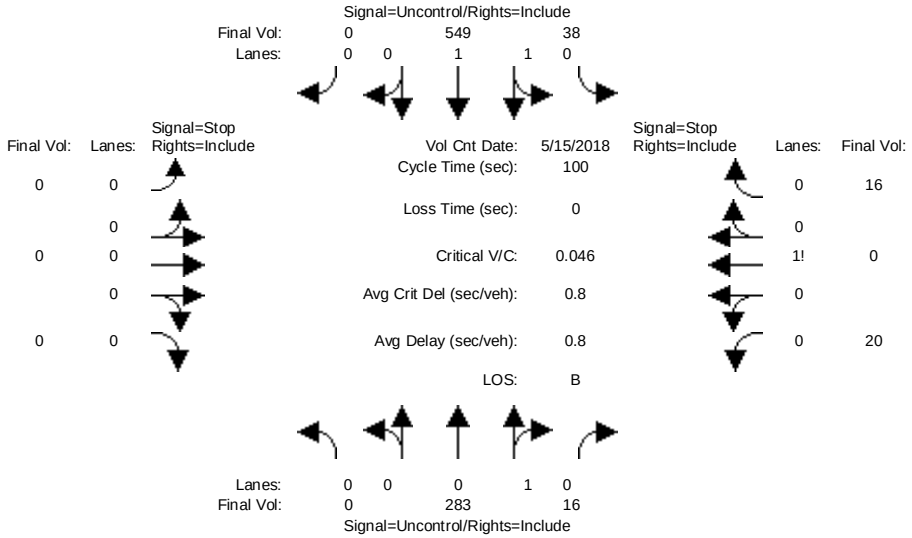


Street Name:	S Bernardo Ave						W El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	14	14	14	14	14	12	15	15	12	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Volume Module: >> Count Date: 15 May 2018 << 5:45 PM - 6:45 PM												
Base Vol:	137	141	99	107	319	263	428	1391	178	162	816	132
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	137	141	99	107	319	263	428	1391	178	162	816	132
Added Vol:	10	5	18	0	5	0	0	0	2	16	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	147	146	117	107	324	263	428	1391	180	178	816	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	147	146	117	107	324	263	428	1391	180	178	816	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	147	146	117	107	324	263	428	1391	180	178	816	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	147	146	117	107	324	263	428	1391	180	178	816	132
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.08	0.92	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	2041	1657	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.08	0.07	0.06	0.16	0.16	0.24	0.24	0.10	0.10	0.14	0.08
Crit Moves:	****				****		****				****	
Green Time:	14.0	24.3	49.1	24.3	34.6	34.6	53.3	59.6	73.6	24.8	31.2	55.5
Volume/Cap:	0.50	0.47	0.20	0.38	0.69	0.69	0.69	0.61	0.21	0.61	0.69	0.20
Uniform Del:	64.7	57.1	36.4	56.1	52.8	52.8	41.3	36.0	21.7	58.1	54.9	32.2
IncremntDel:	1.3	1.2	0.2	0.8	2.4	2.4	3.3	0.5	0.1	3.9	1.7	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	66.0	58.2	36.5	57.0	55.2	55.2	44.6	36.5	21.8	62.0	56.7	32.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	66.0	58.2	36.5	57.0	55.2	55.2	44.6	36.5	21.8	62.0	56.7	32.4
LOS by Move:	E	E+	D+	E+	E+	E+	D	D+	C+	E	E+	C-
HCM2kAvgQ:	96	148	100	123	337	337	465	423	122	223	311	108

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project PM

Intersection #3: S Bernardo Ave / Blair Ave



Street Name:	S Bernardo Ave						Blair Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	0	250	13	38	527	0	0	0	0	18	0	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	250	13	38	527	0	0	0	0	18	0	16
Added Vol:	0	33	3	0	22	0	0	0	0	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	283	16	38	549	0	0	0	0	20	0	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	283	16	38	549	0	0	0	0	20	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	283	16	38	549	0	0	0	0	20	0	16
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	299	xxxx	xxxxx	xxxx	xxxx	xxxxx	642	916	291
Potent Cap.:	xxxx	xxxx	xxxxx	1274	xxxx	xxxxx	xxxx	xxxx	xxxxx	442	274	753
Move Cap.:	xxxx	xxxx	xxxxx	1274	xxxx	xxxxx	xxxx	xxxx	xxxxx	432	266	753
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	0.00	0.02
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	533	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.2	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			12.2		
ApproachLOS:	*			*			*			B		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #3 S Bernardo Ave / Blair Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 1 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	283	16	38	549	0	0	0	0	20	0	16
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			12.2		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=36]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=922]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #3 S Bernardo Ave / Blair Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 1 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	283	16	38	549	0	0	0	0	20	0	16

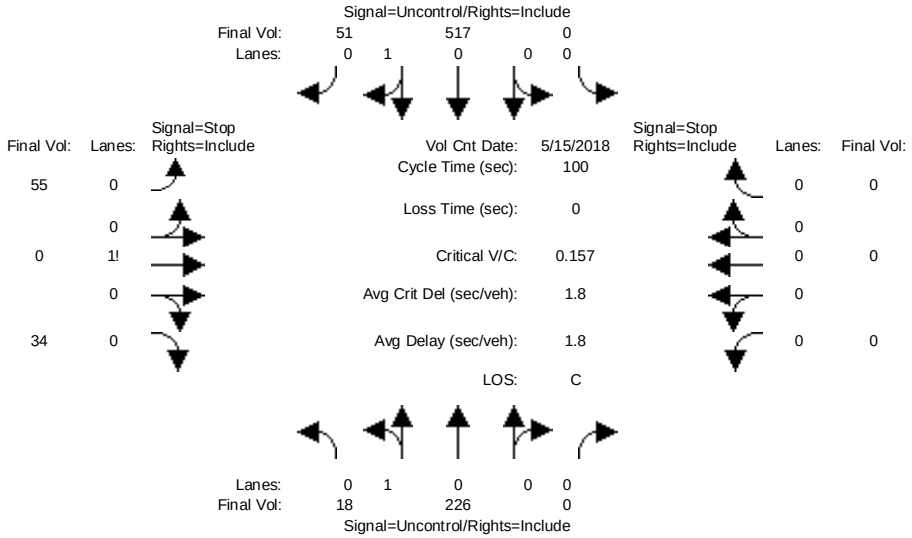
Major Street Volume: 886
Minor Approach Volume: 36
Minor Approach Volume Threshold: 327

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project PM

Intersection #4: S Bernardo Ave / Brookfield Ave



Street Name:	S Bernardo Ave						Brookfield Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	7	226	0	0	517	27	20	0	21	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	226	0	0	517	27	20	0	21	0	0	0
Added Vol:	11	0	0	0	0	24	35	0	13	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	226	0	0	517	51	55	0	34	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	226	0	0	517	51	55	0	34	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	18	226	0	0	517	51	55	0	34	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	568	xxxx	xxxxx	xxxx	xxxx	xxxxx	805	805	543	xxxx	xxxx	xxxxx
Potent Cap.:	1014	xxxx	xxxxx	xxxx	xxxx	xxxxx	355	319	544	xxxx	xxxx	xxxxx
Move Cap.:	1014	xxxx	xxxxx	xxxx	xxxx	xxxxx	350	313	544	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	0.16	0.00	0.06	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	405	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.8	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	16.4	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	C	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			16.4			xxxxxx		
ApproachLOS:	*			*			C			*		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #4 S Bernardo Ave / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	18	226	0	0	517	51	55	0	34	0	0	0
ApproachDel:	xxxxxx			xxxxxx			16.4			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=89]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=901]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 S Bernardo Ave / Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	18	226	0	0	517	51	55	0	34	0	0	0

Major Street Volume: 812
Minor Approach Volume: 89
Minor Approach Volume Threshold: 275

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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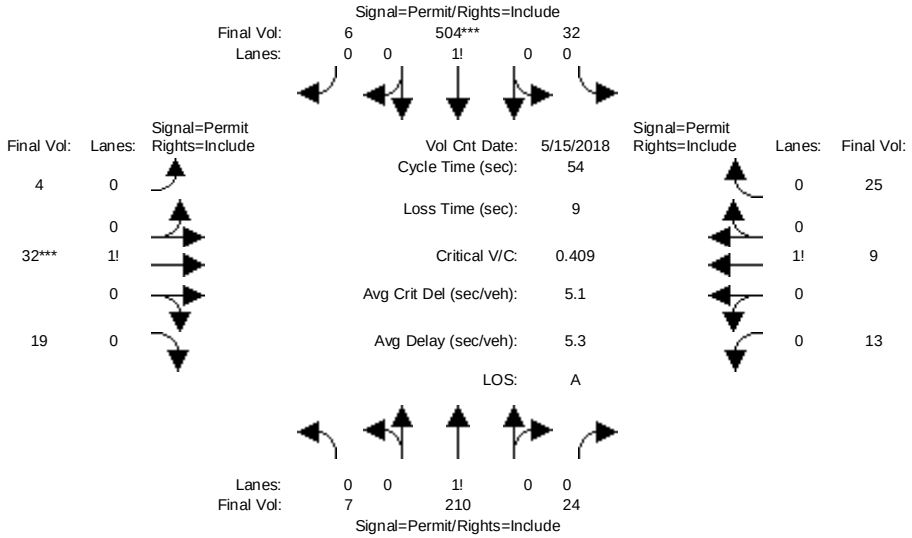
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Project PM

Intersection #5: S Bernardo Ave / Heatherstone Wy

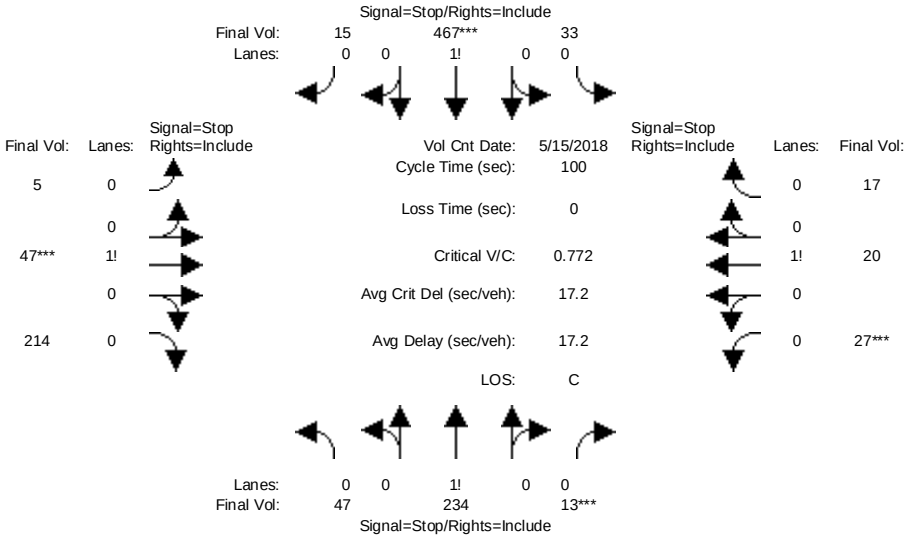


Street Name:	S Bernardo Ave						Heatherstone Wy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	15	15	15	15	15	6	6	6	6	6	6
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	7	201	24	29	494	6	4	32	19	13	9	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	201	24	29	494	6	4	32	19	13	9	23
Added Vol:	0	9	0	3	10	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	210	24	32	504	6	4	32	19	13	9	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	210	24	32	504	6	4	32	19	13	9	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	210	24	32	504	6	4	32	19	13	9	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	210	24	32	504	6	4	32	19	13	9	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	0.03	0.87	0.10	0.06	0.93	0.01	0.07	0.58	0.35	0.28	0.19	0.53
Final Sat.:	51	1525	174	103	1627	19	127	1018	605	484	335	931
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.31	0.31	0.31	0.03	0.03	0.03	0.03	0.03	0.03
Crit Moves:					****			****				
Green Time:	39.0	39.0	39.0	39.0	39.0	39.0	6.0	6.0	6.0	6.0	6.0	6.0
Volume/Cap:	0.19	0.19	0.19	0.43	0.43	0.43	0.28	0.28	0.28	0.24	0.24	0.24
Uniform Del:	2.4	2.4	2.4	3.0	3.0	3.0	22.0	22.0	22.0	21.9	21.9	21.9
IncremntDel:	0.1	0.1	0.1	0.2	0.2	0.2	0.8	0.8	0.8	0.6	0.6	0.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	2.5	2.5	2.5	3.3	3.3	3.3	22.8	22.8	22.8	22.6	22.6	22.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	2.5	2.5	2.5	3.3	3.3	3.3	22.8	22.8	22.8	22.6	22.6	22.6
LOS by Move:	A	A	A	A	A	A	C+	C+	C+	C+	C+	C+
HCM2kAvgQ:	6	6	6	96	96	96	30	30	30	25	25	25

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

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing plus Project PM

Intersection #6: S Bernardo Ave / S Knickerbocker Dr



Street Name:	S Bernardo Ave						S Knickerbocker Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module: >> Count Date: 15 May 2018 << 5:15 PM - 6:15 PM												
Base Vol:	47	227	13	30	459	15	5	47	214	27	20	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	227	13	30	459	15	5	47	214	27	20	15
Added Vol:	0	7	0	3	8	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	234	13	33	467	15	5	47	214	27	20	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	234	13	33	467	15	5	47	214	27	20	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	234	13	33	467	15	5	47	214	27	20	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	234	13	33	467	15	5	47	214	27	20	17
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.16	0.80	0.04	0.06	0.91	0.03	0.02	0.18	0.80	0.42	0.31	0.27
Final Sat.:	98	486	27	43	605	19	11	104	476	203	150	128
Capacity Analysis Module:												
Vol/Sat:	0.48	0.48	0.48	0.77	0.77	0.77	0.45	0.45	0.45	0.13	0.13	0.13
Crit Moves:			****		****			****			****	
Delay/Veh:	13.2	13.2	13.2	22.8	22.8	22.8	12.4	12.4	12.4	10.2	10.2	10.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.2	13.2	13.2	22.8	22.8	22.8	12.4	12.4	12.4	10.2	10.2	10.2
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B
ApproachDel:	13.2			22.8			12.4			10.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.2			22.8			12.4			10.2		
LOS by Appr:	B			C			B			B		
AllWayAvgQ:	19.6	19.6	19.6	67.0	67.0	67.0	15.8	15.8	15.8	2.7	2.7	2.7

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

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #6 S Bernardo Ave / S Knickerbocker Dr

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	47	234	13	33	467	15	5	47	214	27	20	17

Major Street Volume: 809
Minor Approach Volume: 266
Minor Approach Volume Threshold: 276

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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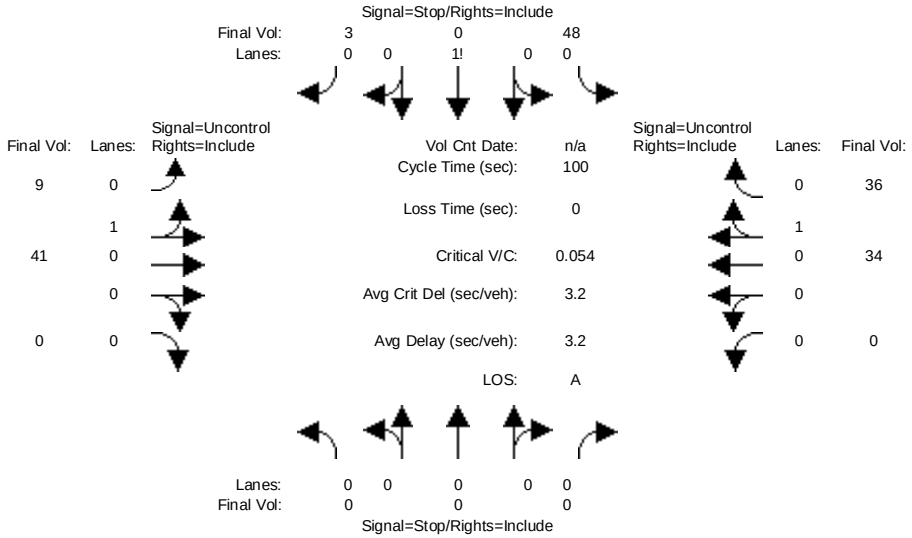
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project PM

Intersection #7: Project Driveway/ Brookfield Ave



Street Name:	Project Driveway						Brookfield Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: PM												
Base Vol:	0	0	0	0	0	0	0	41	0	0	34	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	41	0	0	34	0
Added Vol:	0	0	0	48	0	3	9	0	0	0	0	36
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	48	0	3	9	41	0	0	34	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	48	0	3	9	41	0	0	34	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	48	0	3	9	41	0	0	34	36
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	111	111	52	70	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	891	783	1021	1544	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	887	778	1021	1544	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.05	0.00	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	894	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.3			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Project Driveway/ Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Initial Vol:	0	0	0	48	0	3	9	41	0	0	34	36
ApproachDel:	xxxxxx			9.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=51]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=171]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Project Driveway/ Brookfield Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Initial Vol:	0	0	0	48	0	3	9	41	0	0	34	36

Major Street Volume: 120
Minor Approach Volume: 51
Minor Approach Volume Threshold: 785

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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

Appendix G

Queuing Summary

existing am q
Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#1	[2Way95thQ]:	xxxx	xxxx	xxxx	0.3	0.3	xxxx	0.2	0.2	xxxx	2.6	2.6	2.6
#2	[HCM2kAvgQ]:	187	187	66	60	93	428	206	176	42	66	429	48
#3	[2Way95thQ]:	xxxx	xxxx	xxxx	0.6	0.6	xxxx	xxxx	xxxx	xxxx	5.8	5.8	5.8
#4	[2Way95thQ]:	0.7	0.7	xxxx	xxxx	xxxx	xxxx	5.0	5.0	5.0	xxxx	xxxx	xxxx
#5	[HCM2kAvgQ]:	56	56	56	24	24	24	18	18	18	51	51	51
#6	[AllWayAvgQ]	36.1	36.1	36.1	12.8	12.8	12.8	5.2	5.2	5.2	7.5	7.5	7.5
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

existing pm q
Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#1	[2Way95thQ]:	0.1	xxxx	xxxx	1.7	xxxx	xxxx	0.5	0.5	0.5	2.1	2.1	2.1
#2	[HCM2kAvgQ]:	89	143	85	123	334	334	464	413	118	204	311	108
#3	[2Way95thQ]:	xxxx	xxxx	xxxx	2.2	2.2	xxxx	xxxx	xxxx	xxxx	4.7	4.7	4.7
#4	[2Way95thQ]:	0.5	0.5	xxxx	xxxx	xxxx	xxxx	7.6	7.6	7.6	xxxx	xxxx	xxxx
#5	[HCM2kAvgQ]:	6	6	6	93	93	93	30	30	30	24	24	24
#6	[AllWayAvgQ]	18.5	18.5	18.5	61.2	61.2	61.2	15.5	15.5	15.5	2.6	2.6	2.6
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

existing+prj am q
Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#1	[2Way95thQ]:	xxxx	xxxx	xxxx	0.7	0.7	xxxx	0.2	0.2	xxxx	2.8	2.8	2.8
#2	[HCM2kAvgQ]:	193	190	77	60	98	429	206	176	44	86	430	49
#3	[2Way95thQ]:	xxxx	xxxx	xxxx	0.6	0.6	xxxx	xxxx	xxxx	xxxx	6.7	6.7	6.7
#4	[2Way95thQ]:	1.4	1.4	xxxx	xxxx	xxxx	xxxx	13.7	13.7	13.7	xxxx	xxxx	xxxx
#5	[HCM2kAvgQ]:	58	58	58	26	26	26	18	18	18	53	53	53
#6	[AllWayAvgQ]	38.3	38.3	38.3	13.7	13.7	13.7	5.3	5.3	5.3	7.7	7.7	7.7
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	3.9	3.9	3.9	0.5	0.5	xxxx	xxxx	xxxx	xxxx

existing+prj pm q
Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#1	[2Way95thQ]:	0.1	xxxx	xxxx	2.1	xxxx	xxxx	0.5	0.5	0.5	2.5	2.5	2.5
#2	[HCM2kAvgQ]:	96	148	100	123	337	337	465	423	122	223	311	108
#3	[2Way95thQ]:	xxxx	xxxx	xxxx	2.3	2.3	xxxx	xxxx	xxxx	xxxx	5.4	5.4	5.4
#4	[2Way95thQ]:	1.4	1.4	xxxx	xxxx	xxxx	xxxx	20.7	20.7	20.7	xxxx	xxxx	xxxx
#5	[HCM2kAvgQ]:	6	6	6	96	96	96	30	30	30	25	25	25
#6	[AllWayAvgQ]	19.6	19.6	19.6	67.0	67.0	67.0	15.8	15.8	15.8	2.7	2.7	2.7
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	4.5	4.5	4.5	0.4	0.4	xxxx	xxxx	xxxx	xxxx

background am q
Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#1	[2Way95thQ]:	xxxx	xxxx	xxxx	0.3	0.3	xxxx	0.2	0.2	xxxx	2.6	2.6	2.6
#2	[HCM2kAvgQ]:	188	187	66	60	94	429	206	179	42	66	433	48
#3	[2Way95thQ]:	xxxx	xxxx	xxxx	0.6	0.6	xxxx	xxxx	xxxx	xxxx	5.8	5.8	5.8
#4	[2Way95thQ]:	0.7	0.7	xxxx	xxxx	xxxx	xxxx	5.0	5.0	5.0	xxxx	xxxx	xxxx
#5	[HCM2kAvgQ]:	56	56	56	24	24	24	18	18	18	51	51	51
#6	[AllWayAvgQ]	36.1	36.1	36.1	12.8	12.8	12.8	5.2	5.2	5.2	7.5	7.5	7.5
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

background pm q
Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#1	[2Way95thQ]:	0.1	xxxx	xxxx	1.7	xxxx	xxxx	0.5	0.5	0.5	2.1	2.1	2.1
#2	[HCM2kAvgQ]:	89	143	85	123	335	335	466	419	117	205	317	108
#3	[2Way95thQ]:	xxxx	xxxx	xxxx	2.2	2.2	xxxx	xxxx	xxxx	xxxx	4.7	4.7	4.7
#4	[2Way95thQ]:	0.5	0.5	xxxx	xxxx	xxxx	xxxx	7.6	7.6	7.6	xxxx	xxxx	xxxx
#5	[HCM2kAvgQ]:	6	6	6	93	93	93	30	30	30	24	24	24
#6	[AllWayAvgQ]	18.5	18.5	18.5	61.2	61.2	61.2	15.5	15.5	15.5	2.6	2.6	2.6
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

background+prj am q
Future Queue Length Report (feet)

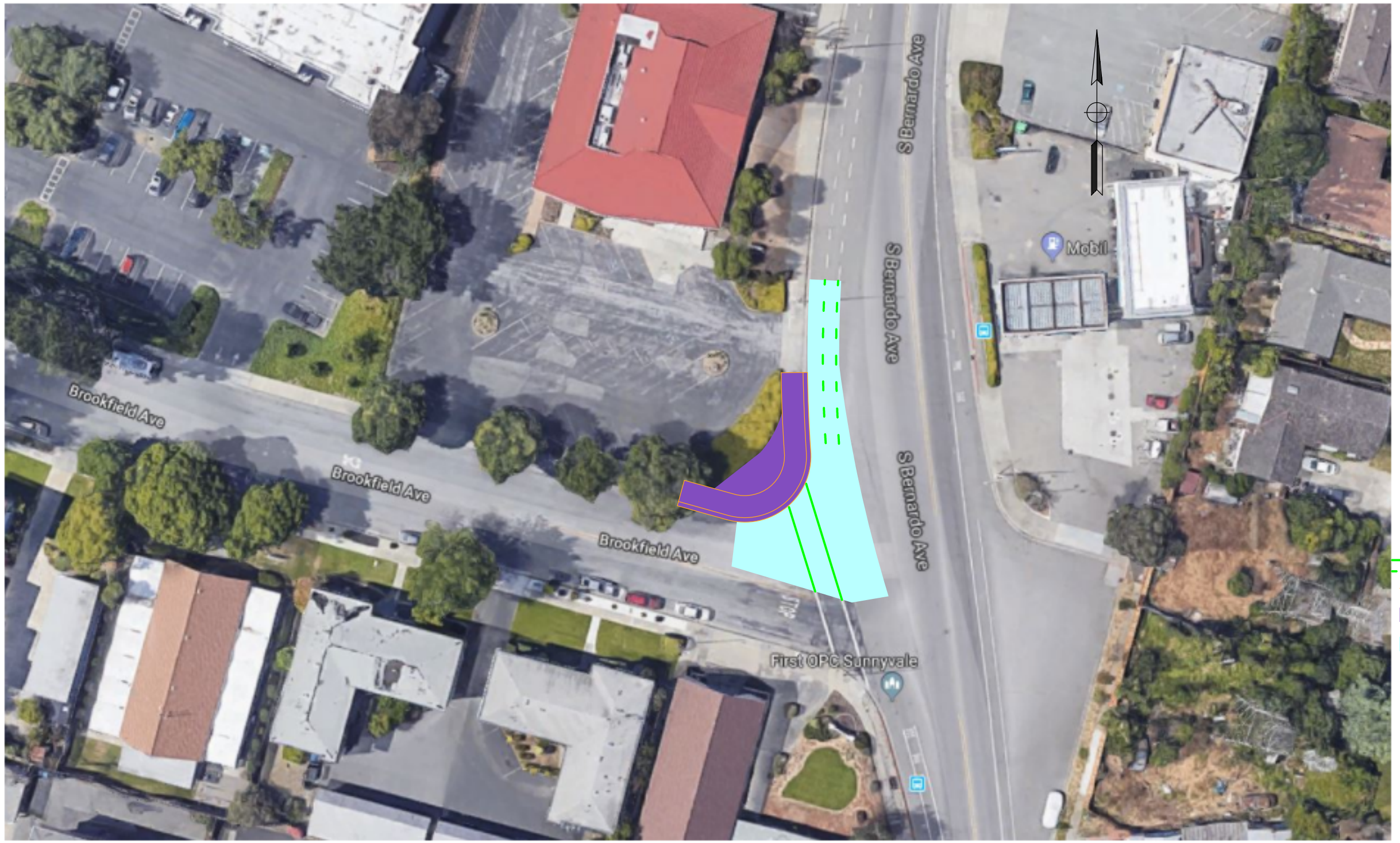
Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#1	[2Way95thQ]:	xxxx	xxxx	xxxx	0.7	0.7	xxxx	0.2	0.2	xxxx	2.8	2.8	2.8
#2	[HCM2kAvgQ]:	193	190	77	60	98	430	207	180	44	85	435	49
#3	[2Way95thQ]:	xxxx	xxxx	xxxx	0.6	0.6	xxxx	xxxx	xxxx	xxxx	6.7	6.7	6.7
#4	[2Way95thQ]:	1.4	1.4	xxxx	xxxx	xxxx	xxxx	13.7	13.7	13.7	xxxx	xxxx	xxxx
#5	[HCM2kAvgQ]:	58	58	58	26	26	26	18	18	18	53	53	53
#6	[AllWayAvgQ]	38.3	38.3	38.3	13.7	13.7	13.7	5.3	5.3	5.3	7.7	7.7	7.7
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	3.9	3.9	3.9	0.5	0.5	xxxx	xxxx	xxxx	xxxx

background+prj pm q
Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#1	[2Way95thQ]:	0.1	xxxx	xxxx	2.1	xxxx	xxxx	0.5	0.5	0.5	2.5	2.5	2.5
#2	[HCM2kAvgQ]:	96	148	100	123	338	338	467	430	122	224	317	108
#3	[2Way95thQ]:	xxxx	xxxx	xxxx	2.3	2.3	xxxx	xxxx	xxxx	xxxx	5.4	5.4	5.4
#4	[2Way95thQ]:	1.4	1.4	xxxx	xxxx	xxxx	xxxx	20.7	20.7	20.7	xxxx	xxxx	xxxx
#5	[HCM2kAvgQ]:	6	6	6	96	96	96	30	30	30	25	25	25
#6	[AllWayAvgQ]	19.6	19.6	19.6	67.0	67.0	67.0	15.8	15.8	15.8	2.7	2.7	2.7
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	4.5	4.5	4.5	0.4	0.4	xxxx	xxxx	xxxx	xxxx

Appendix H

Intersection #4 Proposed Improvements



Appendix H

PRELIMINARY
FOR DISCUSSION PURPOSES ONLY
July 09, 2018

Intersection #4 Proposed Improvements

Sunnyvale

AECOM

Select Current Vehicle

Group Vehicles By:

- (•) Library
- ( ) Region
- ( ) Class
- ( ) Country
- ( ) # of Parts
- ( ) No Group
- ( ) Recent 5

CALTRANS 2012 (US)
CALTRANSM 2005 (US)
CALTRANSM 2008 (US)
CEREMA 2014 (FR)
CERTU-AFNOR 2013 (FR)
CET-SP BT33 1983 (BR)
CROW (NL)
CROW 2004 (NL)
CROW 2012 (NL)
CROW Advieslijst LZV

Units: feet

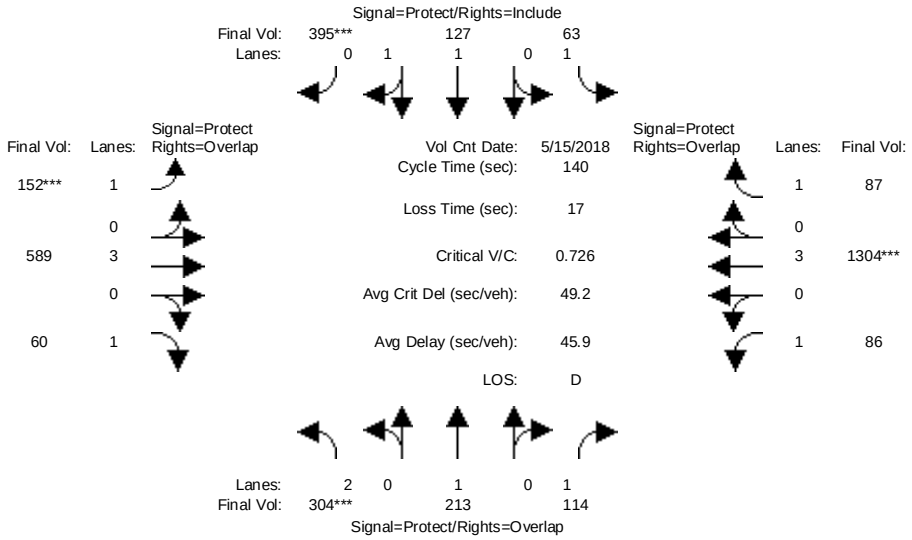
Library	Vehicle Name	Class	Region	Lock	# Parts	Length	Wheelbase	Trailer Len.
CALTRANS 2012 (US)	40' BUS	Bus	North A...	41.0	1	40.00	25.00	N/A
CALTRANS 2012 (US)	45' BUS	Bus	North A...	44.3	1	45.00	28.50	N/A
CALTRANS 2012 (US)	ARTICULATED BUS	Bus	North A...	38.3	2	60.00	22.00	21.20
CALTRANS 2012 (US)	CA LEGAL - 65 FT (60 F...	Transport Truck	North A...	20.9	2	65.00	20.00	45.00
CALTRANS 2012 (US)	CA LEGAL - 65 FT	Transport Truck	North A...	26.3	2	65.00	20.00	45.00
CALTRANS 2012 (US)	STAA - STANDARD	Transport Truck	North A...	26.3	2	72.00	23.00	48.00

Appendix I

Background + Project Conditions Analysis

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

Intersection #2: S Bernardo Ave / W El Camino Real

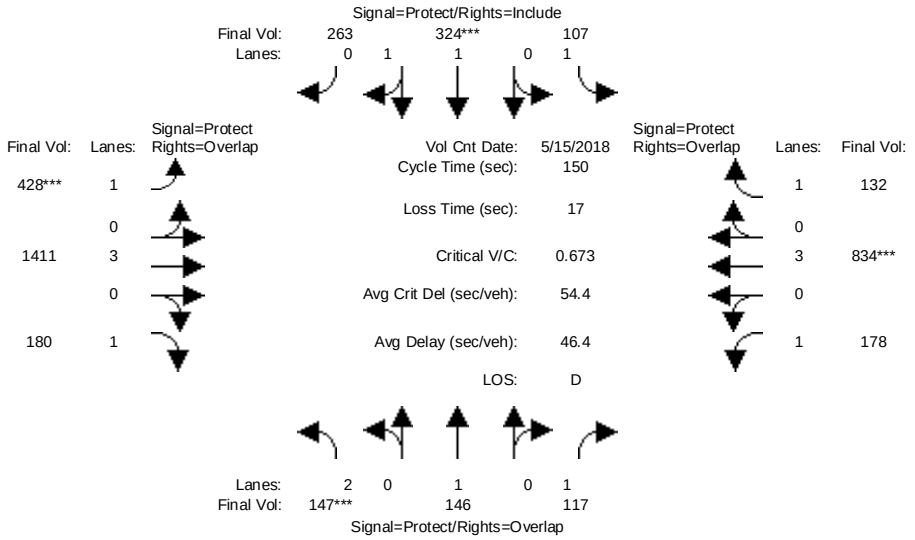


Street Name:	S Bernardo Ave						W El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	14	14	14	14	14	12	15	15	12	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Volume Module: >> Count Date: 15 May 2018 << 8:00 AM - 9:00 AM												
Base Vol:	295	209	99	63	122	395	152	578	58	68	1291	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	295	209	99	63	122	395	152	578	58	68	1291	87
Added Vol:	9	4	15	0	5	0	0	0	2	18	0	0
approved:	0	0	0	0	0	0	0	11	0	0	13	0
Initial Fut:	304	213	114	63	127	395	152	589	60	86	1304	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	304	213	114	63	127	395	152	589	60	86	1304	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	304	213	114	63	127	395	152	589	60	86	1304	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	304	213	114	63	127	395	152	589	60	86	1304	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	1900	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.11	0.07	0.04	0.07	0.23	0.09	0.10	0.03	0.05	0.23	0.05
Crit Moves:	****					****	****				****	
Green Time:	18.6	32.8	59.9	29.3	43.5	43.5	16.7	33.8	52.4	27.1	44.1	73.4
Volume/Cap:	0.73	0.48	0.15	0.17	0.21	0.73	0.73	0.43	0.09	0.25	0.73	0.09
Uniform Del:	58.2	46.2	24.5	45.4	35.6	42.9	59.4	44.9	28.4	47.9	42.6	16.7
IncremntDel:	6.2	0.8	0.1	0.2	0.0	3.7	12.0	0.2	0.1	0.4	1.5	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	64.5	47.0	24.6	45.6	35.7	46.6	71.4	45.1	28.4	48.3	44.1	16.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.5	47.0	24.6	45.6	35.7	46.6	71.4	45.1	28.4	48.3	44.1	16.7
LOS by Move:	E	D	C	D	D+	D	E	D	C	D	D	B
HCM2kAvgQ:	193	190	77	60	98	430	207	180	44	85	435	49

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

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

Intersection #2: S Bernardo Ave / W El Camino Real



Street Name:	S Bernardo Ave						W El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	14	14	14	14	14	14	12	15	15	12	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Volume Module: >> Count Date: 15 May 2018 << 5:45 PM - 6:45 PM												
Base Vol:	137	141	99	107	319	263	428	1391	178	162	816	132
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	137	141	99	107	319	263	428	1391	178	162	816	132
Added Vol:	10	5	18	0	5	0	0	0	2	16	0	0
approved:	0	0	0	0	0	0	0	20	0	0	18	0
Initial Fut:	147	146	117	107	324	263	428	1411	180	178	834	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	147	146	117	107	324	263	428	1411	180	178	834	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	147	146	117	107	324	263	428	1411	180	178	834	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	147	146	117	107	324	263	428	1411	180	178	834	132
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.00	1.08	0.92	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	2041	1657	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.08	0.07	0.06	0.16	0.16	0.24	0.25	0.10	0.10	0.15	0.08
Crit Moves:	****				****		****				****	
Green Time:	14.0	24.2	48.8	24.2	34.4	34.4	53.0	60.0	74.0	24.6	31.7	55.9
Volume/Cap:	0.50	0.48	0.21	0.38	0.69	0.69	0.69	0.62	0.21	0.62	0.69	0.20
Uniform Del:	64.7	57.2	36.6	56.2	53.0	53.0	41.6	35.9	21.5	58.3	54.7	31.9
IncremntDel:	1.3	1.2	0.2	0.9	2.5	2.5	3.4	0.5	0.1	4.1	1.8	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	66.0	58.3	36.7	57.1	55.5	55.5	44.9	36.4	21.6	62.4	56.4	32.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	66.0	58.3	36.7	57.1	55.5	55.5	44.9	36.4	21.6	62.4	56.4	32.1
LOS by Move:	E	E+	D+	E+	E+	E+	D	D+	C+	E	E+	C-
HCM2kAvgQ:	96	148	100	123	338	338	467	430	122	224	317	108

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

