



Final Traffic Memo

San Pedro Widening -
Alameda Boulevard to Carmel Avenue
COA# - 570491

May 18, 2021



2155 Louisiana Blvd NE, Suite 9500

Albuquerque, NM 87710-5483

505.830.5400

FINAL TRAFFIC MEMO

for

**SAN PEDRO WIDENING – ALAMEDA BOULEVARD TO
CARMEL AVENUE**

CN 570491

Prepared for:



CITY OF ALBUQUERQUE

Prepared by:

HDR ENGINEERING, INC.
2155 Louisiana Boulevard, N.E., Suite 9500
Albuquerque, New Mexico 87110

May 18, 2021





Date: Tuesday, May 18, 2021

Project: San Pedro Drive Widening

To: Bridgette Garrett

From: Paul Molina, PE

Subject: **Final Traffic and Safety Analysis Memo**

Introduction

The purpose of this study is to assess the future traffic and safety operations along San Pedro Drive in Albuquerque, New Mexico. The analysis compares the safety and operations of the existing conditions, future conditions with no improvements, and future conditions with improvements along the entirety of the corridor.

The traffic analysis performed for this corridor included assessing two proposed alternatives for reconstructing San Pedro Drive. The two proposed alternatives are:

- Design 01: Construct a two-lane section with a raised median and left turn lanes.
- Design 02: Construct a four-lane section with a two-way left turn lane (TWLTL).

Both the two and four lane sections will include bicycle lanes and sidewalk/ramp improvements.

Existing safety conditions were also evaluated to develop further understanding of potential issues to be addressed in the corridor. The trends identified in the safety analysis will be used to identify potential safety improvements to include in the analysis of alternatives.

A. Project Location

This study proposes improvements along San Pedro Drive between Alameda Boulevard and Carmel Avenue. The corridor and study area intersections are shown in **Figure 1**. The area includes five non-signalized at-grade intersections:

- Carmel Avenue and San Pedro Drive
- Anaheim Avenue and San Pedro Drive
- Corona Avenue and San Pedro Drive
- Wilshire Avenue and San Pedro Drive
- Signal Avenue and San Pedro Drive

The study also includes one signalized at-grade intersection:

- Alameda Boulevard and San Pedro Drive



Figure 1. Project Location and Vicinity Map



Existing Conditions

A. Traffic Data

Historical 24-hour count data was obtained from Mid-Region Council of Governments (MRCOG) for all available years through 2019 at various locations in and around the study area. Complete volume information can be found in **Appendix A**.



AM and PM peak hour turning movement counts were obtained for San Pedro Drive and Alameda Boulevard, and San Pedro Drive and Signal Avenue in 2019. Due to the COVID-19 pandemic, traffic counts at the remaining four intersections were not done and therefore the turning movements were estimated. The estimates were done by comparing land uses and densities along Wilshire Avenue, Corona Avenue, Anaheim Avenue, and Carmel Avenue to the land uses along Signal Avenue. Then using the ITE Trip Generation Manual the difference in traffic between Signal Avenue and the other cross streets was estimated. In general, developments to the west of San Pedro Drive have more commercial and retail establishments, while there are mostly residential developments to the east. Based on these observations the difference in traffic along each of the four cross streets is as follows (as compared to Signal Avenue):

- East of San Pedro Drive:
 - Wilshire Avenue – 20% greater
 - Corona Avenue – 15% greater
 - Anaheim Avenue – 5% greater
 - Carmel Avenue – 20% greater
- West of San Pedro Drive:
 - Wilshire Avenue – 15% less
 - Corona Avenue – 10% less
 - Anaheim Avenue – 5% greater
 - Carmel Avenue – 0% (no difference)

By applying these percentages to the applicable volumes on Signal Avenue, the turning movement counts at each intersection were determined as shown in **Table 1**.

Table 1. Existing Turning Movement Counts

Intersection	TOD	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Alameda Blvd ¹	AM	313	61	30	11	31	149	71	430	293	47	962	26
	PM	230	56	57	19	54	149	94	885	426	45	498	11
Signal Ave ¹	AM	6	367	9	24	326	13	14	2	12	7	1	27
	PM	33	292	9	57	440	22	24	1	42	8	2	15
Wilshire Ave	AM	6	342	11	29	304	12	17	3	15	6	1	23
	PM	29	292	11	69	402	19	29	2	51	7	2	13
Corona Ave	AM	6	317	11	28	285	12	17	3	14	7	1	25
	PM	30	290	11	66	374	20	28	2	49	8	2	14
Anaheim Ave	AM	7	290	10	26	266	14	15	3	13	8	2	29
	PM	35	289	10	60	347	24	26	2	45	9	3	16
Carmel Ave	AM	6	263	11	29	245	13	17	3	15	7	1	27
	PM	33	290	11	69	310	22	29	2	51	8	2	15

1.TMCs for these intersections obtained from "SEC of Alameda Blvd / San Pedro Drive Traffic Impact Study", 2019.



B. Development of Design Year and Traffic Volumes

The design year (2040) Average Annual Daily Traffic (AADT) volumes were projected by increasing existing year (2019) AADT volumes by a growth rate obtained from the historical data provided by MRCOG Traffic Flow Maps. Historical data, shown in **Table 2**, from the last 10 years was used to calculate the average annual growth rate.

Table 2. Historical AADT Data

San Pedro Drive Between Paseo Del Norte and Alameda Boulevard										
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
AADT	13700	13400	16900	16900	16750	16700	9200	9200	9400	12100

The annual growth rate was calculated for each year and then averaged to get the average annual growth rate. The future (2040) volumes were calculated by growing the 2019 volumes at an assumed average annual growth rate of one percent.

C. Existing Transportation Network

The existing roadway along San Pedro Drive between Carmel Avenue and Alameda Boulevard is generally described as a two-lane undivided collector with no left or right turn lanes at the intersections. The exceptions to this are a southbound right turn lane at Signal Avenue, and northbound left and right turn lanes at Alameda Boulevard. There is currently no sidewalk or sidewalk ramps along most of the corridor. There are currently no defined bicycle lanes along the corridor.

D. Existing Geometry and Operations

The intersection of Alameda Boulevard and San Pedro Drive is the only signalized intersection within the study area and is maintained by the City of Albuquerque. The current signal operates with free signal timing and is uncoordinated with any other traffic signal. Complete existing signal timing information can be found in **Appendix B**.

An existing year (2019) Synchro model was developed to identify any operational deficiencies along the corridor. The intersection level of service (LOS) was then determined based on Highway Capacity Manual 6th Edition methodology. The signalized intersection of Alameda Boulevard and San Pedro Drive LOS is based on the total delay of the intersection because it is a signalized intersection. The LOS for all unsignalized intersections are based on the worst movement at the intersection. **Table 3** shows the intersection LOS for each intersection within the study area for the AM and PM peak periods.



Table 3. Existing Intersection Analysis

Intersection	Existing 2019	
	AM Peak LOS	PM Peak LOS
Alameda Boulevard and San Pedro Drive	B	B
Signal Avenue and San Pedro Drive	A	A
Wilshire Avenue and San Pedro Drive	A	A
Corona Avenue and San Pedro Drive	A	A
Anaheim Avenue and San Pedro Drive	A	A
Carmel Avenue and San Pedro Drive	A	A

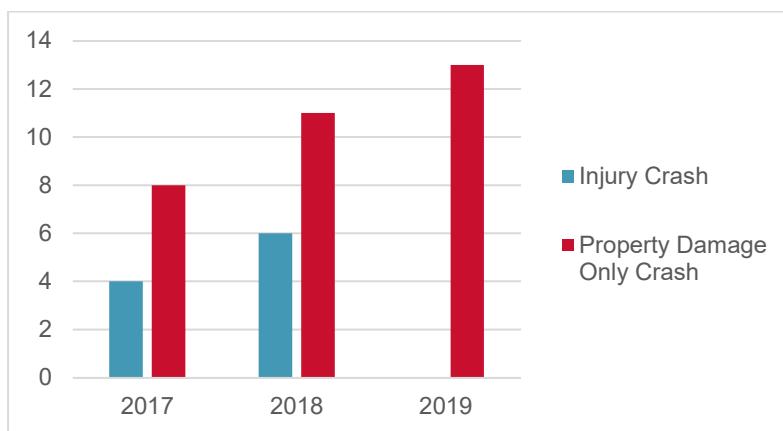
This indicates that the corridor operates satisfactorily when considering total intersection LOS under existing conditions.

E. Safety

The safety analysis is based on crash data obtained from the New Mexico Department of Transportation (NMDOT) for 2017 through 2019. The data was analyzed to determine the severity of crashes and any patterns in crash types and locations. Based on this, specific types of crashes were identified and evaluated in more detail to determine potential crash mitigation measures.

From 2017 through 2019, there were a total of 42 crashes on San Pedro Drive from Alameda Boulevard to Carmel Avenue. Of the total crashes, 76 percent resulted in property damage only, and there were no fatalities. The severity of crashes by year can be seen in **Figure 2**.

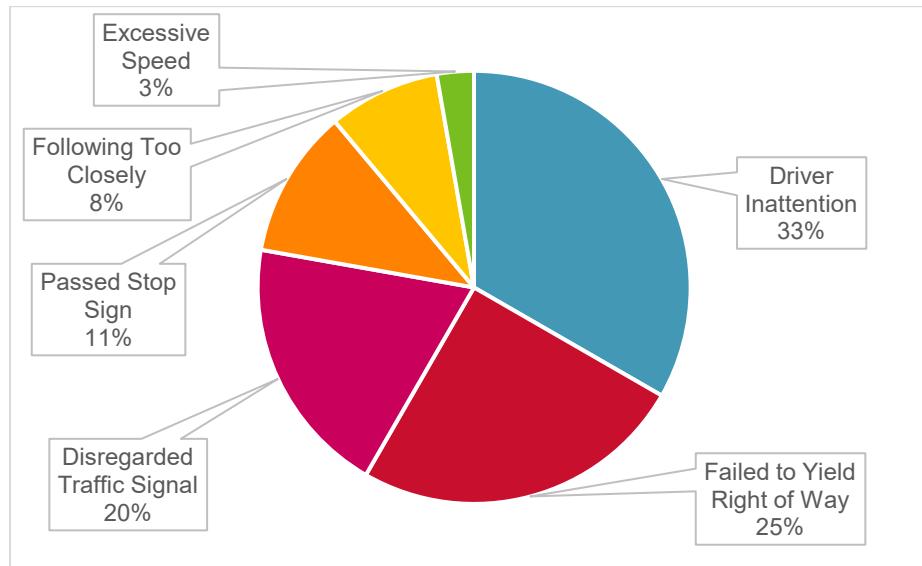
Figure 2. Crash Severity by Year



Property damage only crashes appear to be increasing each year, and there were no injury crashes in 2019. The frequency of crash factors was also analyzed to determine what the most common causes for crashes were, as can be seen in **Figure 3**.



Figure 3. Crash Factors



Overall, most of the crashes on this corridor were low severity, occurred under clear weather conditions and daylight lighting conditions, and at the peak periods throughout the day. The most common crash factor along the corridor was driver inattention; this crash factor does not have design solutions to substantially mitigate crashes. Complete crash data can be found in **Appendix C**.

Design Alternatives

Improvements along San Pedro Drive are proposed to increase capacity along the corridor and facilitate flow through the network. The alternatives being considered are a two-lane cross section with a raised median and left turn lanes on San Pedro Drive at the intersections and a four-lane cross section with TWLTL. The two alternatives were evaluated in Synchro to ensure that the corridor continued to operate efficiently through 2040 with either alternative.

A. No-Build

The No-Build scenario assumes no geometric improvements within the study area and no signal timing adjustments at the intersection of San Pedro Drive and Alameda Boulevard.

As can be seen in **Table 4**, the LOS of the no-build 2040 condition is A and therefore no improvements are needed for the corridor to operate under acceptable levels. The LOS, as expected remained at an A for both alternatives. Crashes, however, are expected to increase by 2040, since it is assumed that as traffic volumes increase the number of crashes will also increase.



B. Two-Lane Build

This alternative proposes the cross-section of San Pedro Drive to be two lanes (one lane in each direction) between Alameda Boulevard and Carmel Avenue with left turn lanes along San Pedro Drive at each of the study area intersections. The two lanes would be separated by a raised median between left turn pocket openings, with the exception of the segment between Corona Avenue and Anaheim Avenue, which would have a TWLTL to allow access to Karlson Drive and Caramel Drive. Signal timing was optimized at the intersection of San Pedro Drive and Alameda Boulevard.

To assess the potential safety benefits of installing a raised median in the two-lane build condition, crash reduction factors from the CMF Clearinghouse website were referenced. A crash reduction factor of 71% (Source: <http://www.cmfclearinghouse.org/detail.cfm?facid=2219>) corresponds to the change in crashes associated with adding a raised median and a crash reduction factor of 8% (Source: <http://www.cmfclearinghouse.org/detail.cfm?facid=1285>) for adding a TWLTL. This means that crashes are expected to be reduced by 71% and 8% respectively with this alternative. Therefore, it is estimated that there will be a much greater reduction in crashes in the segments with raised median, and in the two-lane build condition overall when compared to the four-lane alternative. This is because raised medians provide a physical barrier with opposing traffic and prevent vehicles from crossing over into on-coming traffic.

C. Four-Lane Build

This alternative proposes the cross-section of San Pedro Drive to be four lanes (two lanes in each direction) between Alameda Boulevard and Carmel Avenue. The four lanes would be separated by a TWLTL. Signal timing was optimized at the intersection of San Pedro Drive and Alameda Boulevard.

To assess the potential safety benefits of adding a TWLTL in the four-lane build condition, the same 8% crash reduction factor from the CMF Clearinghouse was used, as in the two-lane build alternative analysis. This means that crashes are expected to be reduced by 8% with this alternative.

D. Left-Turn Lanes

In both the two-lane and four-lane build conditions, left turn lanes will be added on San Pedro at the five study area intersections. The crash reduction factor associated with adding left turn lanes is 47% for crashes occurring at the intersection (Source: <http://www.cmfclearinghouse.org/detail.cfm?facid=269>). This means that intersection crashes are expected to decrease 47% with the installation of left turn lanes. The benefit will be slightly greater for the two-lane build condition, because the four-lane build condition has more width for left-turning vehicles to cross, and therefore, more potential conflict points as well.



E. Pedestrian/Bicyclist Considerations

In both the two-lane and four-lane build conditions, sidewalk and ramp improvements will be made along the corridor. All reconstruction will be compliant with the Americans with Disabilities Act (ADA) and Public Right-Of-Way Accessibility Guidelines (PROWAG). Bicycle lanes will also be added along the length of the corridor for both the two-lane and four-lane alternatives. By adding sidewalk and bike lane infrastructure, vehicular, bicycle, and pedestrian users are separated, which has been shown to significantly reduce multi-modal collisions. Safety is also enhanced for pedestrians who benefit from ADA/PROWAG facilities.

F. Results

The intersection LOS results for AM and PM peak periods for no-build, two-lane, and four-lane alternatives are shown in **Table 4**. Refer to **Appendix D** to see detailed results for all existing and future models.

Table 4. Design Year (2040) Alternative Analysis

Intersection	No-Build		Two-Lane		Four-Lane	
	AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS
Alameda Boulevard and San Pedro Drive	C	B	C	B	C	B
Signal Avenue and San Pedro Drive	A	A	A	A	A	A
Wilshire Avenue and San Pedro Drive	A	A	A	A	A	A
Corona Avenue and San Pedro Drive	A	A	A	A	A	A
Anaheim Avenue and San Pedro Drive	A	A	A	A	A	A
Carmel Avenue and San Pedro Drive	A	A	A	A	A	A

The LOS table indicates that LOS remains constant throughout the study area for the no-build, two-lane, and four-lane alternatives. This indicates that the corridor will operate satisfactorily in 2040 for any of the three alternatives.



Recommendations

The purpose of this study is to assess the future traffic and safety operations along San Pedro Drive. The analysis compares results between existing conditions, future no-build conditions, and future build conditions. Two-lane and four-lane build alternatives were evaluated as part of this study. LOS and safety data were compared for each scenario.

LOS has been shown to remain constant for all three alternatives in 2040. However, crash reduction in the two-lane alternative is much greater than that of the four-lane alternative, providing significant safety improvement by 2040. Therefore, based on the LOS and safety analysis, the two-lane alternative is the preliminary recommended improvement along San Pedro Drive. Additional considerations such as ROW, drainage, cost, access, constructability, pedestrian/bicycle safety, etc., will be evaluated in the Design Analysis Report for the final recommended improvement.

Appendix A. Historic Volume Data

Historic Volume from MRCOG Traffic Flow Maps

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
San Pedro Dr Between Paseo Del Norte and Alameda Blvd	11500	13900	13700	13400	16900	16900	16750	16700	9200	9200	9400	12100

MRCOG Traffic Counts

Summary Statistics

See notes, bottom of report

2/10/2021 11:55:48 AM

COGID	Route Name	Location Description	Count Date	Direction 1		Direction 2		AM Peak Hour					PM Peak Hour					Count Quality	Count Type	
				Total Volume	Daily Volume	Dir	Daily Volume	Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir		
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	7/1/2010	10,969	5,196	W	5,773	E	715	696	6.35	0.65	W	1645	1,003	9.14	0.62	E	T	VC
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	2/1/2002	5,262	2,955	E	2,307	W	700	448	8.51	0.67	E	1630	737	14.01	0.84	E	Q	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	2/1/1992	4,554	2,139	W	2,415	E	700	639	14.03	0.67	W	1645	542	11.90	0.73	E	T	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	5/1/1997	8,612	4,478	E	4,134	W	715	803	9.32	0.67	W	1715	974	11.31	0.68	E	T	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	7/1/2003	9,757	4,868	E	4,889	W	715	925	9.48	0.72	W	1645	900	9.22	0.67	E	T	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	5/1/1999	9,915	4,263	E	5,652	W	715	845	8.52	0.76	W	1645	1,030	10.39	0.51	W	Q	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	6/1/1999	10,274	5,055	E	5,219	W	700	963	9.37	0.69	W	1700	1,025	9.98	0.63	E	T	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	4/1/1995	7,081	3,569	E	3,512	W	700	815	11.51	0.70	W	1700	828	11.69	0.69	E	T	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	7/1/2008	10,274	5,329	W	4,945	E	730	664	6.46	0.72	W	1700	891	8.67	0.59	E	T	VC
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	7/17/2012	9,738	4,576	E	5,162	W	730	689	7.08	0.65	W	1715	775	7.96	0.61	E	T	VC
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	7/23/2013	8,884	4,452	E	4,432	W	745	664	7.47	0.58	W	1700	775	8.72	0.56	E	T	VC
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	8/18/2020	13,862	7,228	E	6,634	W	715	941	6.79	0.62	W	1645	1,317	9.50	0.61	E	T	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	12/1/2020	11,157	5,816	E	5,341	W	730	799	7.16	0.61	W	1645	1,046	9.38	0.62	E	T	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	7/19/2016	13,424	6,744	E	6,680	W	730	975	7.26	0.69	W	1645	1,291	9.62	0.65	E	T	Vol
204921	ALAMEDA BLVD.	EAST OF SAN PEDRO	7/1/2019	16,605	8,720	E	7,885	W	730	1,370	8.25	0.65	W	1645	1,562	9.41	0.69	E	T	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	10/1/2002	17,183	8,611	E	8,572	W	715	1,697	9.88	0.62	W	1645	1,758	10.23	0.65	E	T	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	4/1/1994	9,067	4,360	E	4,707	W	715	949	10.47	0.61	W	1645	980	10.81	0.55	E	T	VC
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	3/1/1999	18,387	8,776	E	9,611	W	715	1,932	10.51	0.65	W	1645	1,821	9.90	0.56	E	T	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	1/1/1991	7,606	4,114	E	3,492	W	700	944	12.41	0.51	E	1630	768	10.10	0.62	E	Q	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	3/1/1997	13,369	5,853	E	7,516	W	715	1,142	8.54	0.67	W	1645	1,387	10.37	0.54	E	Q	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	9/1/2008	24,782	10,794	E	13,988	W	715	2,297	9.27	0.67	W	1630	2,326	9.39	0.57	E	Q	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	9/1/2005	23,882	10,371	E	13,511	W	715	2,564	10.74	0.68	W	1630	2,422	10.14	0.51	E	Q	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	10/24/2011	20,920	9,122	E	11,798	W	715	1,910	9.13	0.66	W	1645	1,990	9.51	0.58	E	T	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	10/14/2014	31,606	14,842	E	16,764	W	715	2,762	8.74	0.65	W	1645	2,848	9.01	0.57	E	T	Vol
205041	ALAMEDA BLVD.	EAST OF PAN AM. EAST	10/31/2017	25,203	12,779	E	12,424	W	730	2,077	8.24	0.61	W	1645	2,382	9.45	0.65	E	T	Vol
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	10/1/2009	15,045	6,449	N	8,596	S	715	1,067	7.09	0.52	S	1645	1,377	9.15	0.61	S	Q	Vol
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	10/1/2004	11,854	5,880	N	5,974	S	730	945	7.97	0.56	N	1700	1,299	10.96	0.52	N	T	Vol
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	10/1/2001	8,186	4,225	N	3,961	S	715	716	8.75	0.51	N	1645	890	10.87	0.58	S	T	Vol
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	11/1/1993	4,465	2,409	S	2,056	N	645	289	6.47	0.60	S	1645	500	11.20	0.57	S	T	Vol
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	5/1/1990	6,044	2,759	N	3,285	S	630	467	7.73	0.62	N	1630	531	8.79	0.66	S	Q	Vol

MRCOG Traffic Counts

Summary Statistics

See notes, bottom of report

2/10/2021 11:55:48 AM

COGID	Route Name	Location Description	Count Date	Direction 1		Direction 2		AM Peak Hour					PM Peak Hour					Count Quality	Count Type	
				Total Volume	Daily Volume	Dir	Daily Volume	Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir		
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	10/1/1996	5,348	2,668	N	2,680	S	715	421	7.87	0.59	S	1730	568	10.62	0.58	S	T	Vol
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	10/30/2012	18,438	9,308	N	9,130	S	745	1,290	7.00	0.56	N	1645	1,545	8.38	0.55	S	T	Vol
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	10/21/2014	19,118	10,908	N	8,210	S	730	1,337	6.99	0.66	N	1545	1,470	7.69	0.59	N	T	Vol
207081	SAN PEDRO	NORTH OF PASEO DEL NORTE	10/16/2017	18,816	9,010	N	9,006	S	730	1,283	6.82	0.55	N	1645	1,554	8.26	0.59	S	Q	VC
207101	SAN PEDRO	NORTH OF ALAMEDA	2/1/1992	1,379	813	S	566	N	900	128	9.28	0.54	N	1700	152	11.02	0.87	S	Q	Vol
207101	SAN PEDRO	NORTH OF ALAMEDA	7/1/2003	2,893	1,321	N	1,572	S	700	201	6.95	0.64	S	1615	281	9.71	0.62	S	T	Vol
207101	SAN PEDRO	NORTH OF ALAMEDA	7/1/1998	3,130	1,284	N	1,846	S	900	157	5.02	0.62	S	1615	251	8.02	0.71	S	Q	Vol
207101	SAN PEDRO	NORTH OF ALAMEDA	12/1/1994	2,152	1,272	S	880	N	745	165	7.67	0.65	N	1630	247	11.48	0.80	S	Q	Vol
207101	SAN PEDRO	NORTH OF ALAMEDA	7/1/2008	3,684	1,537	E	2,147	W	715	357	9.69	0.72	W	1515	301	8.17	0.58	W	Q	Vol
207101	SAN PEDRO	NORTH OF ALAMEDA	7/18/2011	3,733	1,559	N	2,174	S	715	374	10.02	0.79	S	1630	344	9.22	0.50	N	T	VC
207101	SAN PEDRO	NORTH OF ALAMEDA	7/29/2014	5,085	2,219	N	2,866	S	730	434	8.53	0.69	S	1615	422	8.30	0.56	S	T	Vol
207101	SAN PEDRO	NORTH OF ALAMEDA	8/24/2015	5,545	2,404	N	3,141	S	730	494	8.91	0.67	S	1630	477	8.60	0.57	S	T	Vol
207101	SAN PEDRO	NORTH OF ALAMEDA	11/13/2018	5,006	2,202	N	2,804	S	700	379	7.57	0.64	S	1615	470	9.39	0.63	S	T	Vol
201781	HOLLY AVE.	EAST OF SAN PEDRO	8/23/2016	5,732	2,462	E	3,270	W	900	311	5.43	0.61	W	1645	415	7.24	0.58	W	T	Vol
201781	HOLLY AVE.	EAST OF SAN PEDRO	9/10/2019	6,613	2,865	E	3,748	W	730	340	5.14	0.60	W	1815	434	6.56	0.64	W	T	Vol
201882	SAN PEDRO	SOUTH OF ALAMEDA	1/26/2016	9,273	4,582	N	4,691	S	715	739	7.97	0.55	N	1630	891	9.61	0.63	S	T	Vol
201882	SAN PEDRO	SOUTH OF ALAMEDA	1/15/2019	11,057	5,771	N	5,286	S	1000	682	6.17	0.60	N	1645	1,110	10.04	0.55	S	T	Vol

Notes:

1. Daily volumes are averages for a 24 hour period.

2. AM Peak Period: 6 AM to 9 AM; PM Peak Period: 3 PM to 6 PM.

3. Peak hours are defined by the maximum hourly 2-way volume occurring during the peak period.

Appendix B. Existing Signal Timing

Intersection No.: System:
Address: Intersection Name: Revision Date

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:	W-S	EB	S-E	NB	E-N	WB	N-W	SB
Min Grn:	3	16	3	8	3	16	3	8
Walk:	0	7	0	7	0	7	0	7
Ped Clr:	0	19	0	21	0	19	0	28
Veh Ext:	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Veh Ext2:								
Max 1:	16	32	16	24	16	32	16	24
Max 2:								
Max 3:								
Yellow:	3.0	4.0	3.0	3.5	3.0	4.0	3.0	3.5
Red Clr:	0.5	1.0	0.5	2.0	0.5	1.0	0.5	2.0

Recall Data

Locking Memory:							
Vehicle Recall:							
Ped Recall:							
Recall To Max:		X				X	

Flash Mode:

Start Up Mode:	<input type="text" value="ALL RED"/>
Time:	<input type="text" value="8 SEC."/>
First Phases:	<input type="text" value="2 & 6"/>
Start In:	<input type="text" value="GREEN"/>

Overlap Phases:

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:	1. Timing sheet created by BB 9-23-13.
	2. Clearance intervals updated to NMDOT standard by BB, 1/20/14.

Appendix C. Crash Data

FID	DATE	YEAR	MONTH	HOUR	ASTREET	BSTREET	KILLED	CLASSA	CLASSB	CLASSC	INJURED	UNHURT	TOTAL	NVEH	SEVERITY	CLASS	ANALYSIS	TOPCFACC	WEATHER	LIGHT	GIS LAT	GIS LONG	
90386	1/13/2017	2017	January	7 a.m.	SAN PEDRO DR NE	CORONA AVE	0	0	0	2	2	0	2	2	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Failed to Yield Right of Way	Clear	Daylight	35.18009	-106.578	
91287	1/19/2017	2017	January	5 p.m.	SAN PEDRO DR NE	KARLSON NE	0	0	0	0	0	3	3	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Driver Inattention	Raining	Dark-Light	35.17961	-106.578	
76127	2/9/2017	2017	February	6 a.m.	SAN PEDRO NE	CARMEL	0	0	0	0	0	2	2	2	Property Damage Only Crash	Vehicle on Other Road	Left Blank	Passed Stop Sign	Clear	Dawn	35.17718	-106.578	
80423	3/30/2017	2017	March	7 a.m.	ANAHEIM AVE NE		0	0	0	0	0	2	2	2	Property Damage Only Crash	Parked Vehicle	Left Blank	Missing Data	Clear	Daylight	35.17864	-106.578	
92657	4/1/2017	2017	April	12 p.m.	ALAMEDA BLVD	SAN PEDRO DR NF	0	0	0	0	0	5	5	3	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Disregarded Traffic Signal	Clear	Dark-Light	35.18444	-106.578	
90882	5/6/2017	2017	May	2 p.m.	SAN PEDRO DR NE	KARLSON NE	0	0	0	1	1	3	4	3	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Excessive Speed	Clear	Daylight	35.17961	-106.578	
90757	5/18/2017	2017	May	1 p.m.	SAN PEDRO DR NE	ANAHEIM AVE NE	0	0	0	0	0	4	4	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Driver Inattention	Clear	Daylight	35.17864	-106.578	
87152	6/2/2017	2017	June	1 p.m.	ALAMEDA AVE NE	SAN PEDRO DR NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	None	Clear	Daylight	35.18444	-106.578	
94974	8/29/2017	2017	August	9 a.m.	ALAMEDA BLVD NE	SAN PEDRO DR NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Disregarded Traffic Signal	Clear	Daylight	35.18444	-106.578	
93520	10/6/2017	2017	October	3 p.m.	ALAMEDA BLVD NE	SAN PEDRO DR NE	0	0	0	0	2	2	1	3	2	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Disregarded Traffic Signal	Clear	Daylight	35.18444	-106.578
76257	11/14/2017	2017	November	Left Blank	ALIMEDA AND SAN PEDRO		0	0	0	0	0	1	1	1	1	Property Damage Only Crash	Other Vehicle	Left Blank	Missing Data	Clear	Dark-Not L	35.18444	-106.578
97673	12/4/2017	2017	December	1 p.m.	SAN PEDRO DR NE	8311 SAN PEDRO DR NE	0	0	0	1	1	2	3	2	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Driver Inattention	Clear	Daylight	35.17864	-106.578	
117631	1/5/2018	2018	January	8 a.m.	ALAMEDA	SAN PEDRO	0	0	0	0	0	2	2	2	Property Damage Only Crash	Left Blank	Left Blank	Missing Data	Clear	Daylight	35.18444	-106.578	
117104	1/24/2018	2018	January	12 p.m.	SAN PEDRO DR NE	CARMEL AVE NE	0	0	0	1	1	2	3	3	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Failed to Yield Right of Way	Clear	Daylight	35.17718	-106.578	
117105	3/6/2018	2018	March	11 a.m.	SAN PEDRO DR NE	CARMEL AVE NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Failed to Yield Right of Way	Clear	Daylight	35.17718	-106.578	
117632	3/7/2018	2018	March	9 a.m.	SAN PEDRO DR NE	ALAMEDA BLVD NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	None	Clear	Daylight	35.18444	-106.578	
117106	3/23/2018	2018	March	3 p.m.	SAN PEDRO DR NE	CARMEL AVE NE	0	0	0	1	1	1	2	2	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Driver Inattention	Clear	Daylight	35.17718	-106.578	
117634	5/8/2018	2018	May	3 p.m.	ALAMEDA BLV NE	SAN PEDRO DR NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Sideswipe Collision	Failed to Yield Right of Way	Clear	Daylight	35.18444	-106.578	
117629	7/9/2018	2018	July	3 p.m.	ALAMEDA BLVD NE	SAN PEDRO	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Left Blank	Disregarded Traffic Signal	Clear	Daylight	35.18444	-106.578	
117557	7/11/2018	2018	July	1 p.m.	SAN PEDRO DR NE	SIGNAL AVE NE	0	0	0	2	2	1	3	2	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Driver Inattention	Clear	Daylight	35.18298	-106.578	
117108	7/23/2018	2018	July	8 a.m.	SAN PEDRO AND CARNUEL AVE IN		0	0	0	0	0	2	2	2	Property Damage Only Crash	Left Blank	Left Blank	Passed Stop Sign	Clear	Daylight	35.17718	-106.578	
117556	8/4/2018	2018	August	11 a.m.	SAN PEDRO DR NE	SIGNAL AVE NE	0	0	0	0	0	3	3	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Driver Inattention	Clear	Daylight	35.18298	-106.578	
117555	9/5/2018	2018	September	6 p.m.	SAN PEDRO DR NE	SIGNAL AVE NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Driver Inattention	Clear	Daylight	35.18298	-106.578	
117102	9/21/2018	2018	September	7 p.m.	SAN PEDRO WAY	CARMEL AVE NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Left Blank	Left Blank	Driver Inattention	Clear	Daylight	35.17718	-106.578	
117633	10/6/2018	2018	October	6 p.m.	SAN PEDRO DR NE	ALAMEDA BLVD NE	0	0	0	1	0	1	4	5	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/One Left Turn	Driver Inattention	Clear	Daylight	35.18444	-106.578	
117633	11/26/2018	2018	November	4 p.m.	ALAMEDA BLVD NE	SAN PEDRO DR NE	0	0	0	2	2	1	3	2	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Failed to Yield Right of Way	Clear	Daylight	35.18444	-106.578	
117636	11/28/2018	2018	November	2 p.m.	ALAMEDA BLVD NE	SAN PEDRO DR NE	0	0	0	2	2	0	2	2	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Failed to Yield Right of Way	Clear	Daylight	35.18444	-106.578	
117637	11/28/2018	2018	November	5 p.m.	ALAMEDA	SAN PEDRO CT NE	0	0	0	0	0	4	4	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Failed to Yield Right of Way	Clear	Dark-Light	35.18444	-106.578	
117630	12/6/2018	2018	December	4 p.m.	ALAMEDA	SAN PEDRO	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Left Blank	Disregarded Traffic Signal	Raining	Dusk	35.18444	-106.578	
28056	3/2/2019	2019	March	12 p.m.	SAN PEDRO DR NE	CARMEL DR	0	0	0	0	0	5	5	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Following Too Closely	Clear	Daylight	35.17718	-106.578	
27066	4/18/2019	2019	April	4 a.m.	SAN PEDRO DR NE	ANAHEIM AVE NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Parked Vehicle	Parked Vehicle - Unknown/Not Stated	None	Clear	Dark-Not L	35.17864	-106.578	
25128	4/26/2019	2019	April	12 p.m.	ALAMEDA BLVD NE	SAN PEDRO	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Vehicle Backing	Driver Inattention	Clear	Daylight	35.18444	-106.578	
27124	5/6/2019	2019	May	7 a.m.	SAN PEDRO DR NE	ALAMEDA BLVD NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Driver Inattention	Clear	Daylight	35.18444	-106.578	
31422	7/1/2019	2019	July	5 p.m.	ALAMEDA AVE NE	SAN PEDRO DR NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Following Too Closely	Clear	Daylight	35.18444	-106.578	
29031	7/3/2019	2019	July	1 p.m.	SAN PEDRO DR NE	ALAMEDA BLVD NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Right Turn	Driver Inattention	Clear	Daylight	35.18444	-106.578	
4275	7/23/2019	2019	July	3 p.m.	SAN PEDRO	ALAMEDA (JUST S OF ALAMEDA)	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Left Blank	Following Too Closely	Clear	Daylight	35.18371	-106.578	
7421	8/5/2019	2019	August	12 p.m.	SAN PEDRO AND CARMEL	SAN PEDRO AND CARMEL	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Left Blank	Passed Stop Sign	Clear	Daylight	35.17718	-106.578	
65	9/16/2019	2019	September	1 p.m.	CARMEL AND SAN PEDRO		0	0	0	0	0	2	2	2	Property Damage Only Crash	Left Blank	Left Blank	Passed Stop Sign	Clear	Daylight	35.17911	-106.578	
14937	10/1/2019	2019	October	9 a.m.	ALAMEDA	SAN PEDRO	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Left Blank	Failed to Yield Right of Way	Clear	Daylight	35.18444	-106.578	
15136	11/6/2019	2019	November	7 p.m.	ALAMEDA	SAN PEDRO	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Left Blank	Disregarded Traffic Signal	Other	Dark-Light	35.18444	-106.578	
15176	11/1/2019	2019	November	5 p.m.	INTERSECTION OF SAN PEDRO NE AN		0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Left Blank	Failed to Yield Right of Way	Clear	Daylight	35.18009	-106.578	
32816	12/4/2019	2019	December	7 a.m.	SAN PEDRO DR NE	ALAMEDA BLVD NE	0	0	0	0	0	2	2	2	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Disregarded Traffic Signal	Raining	Daylight	35.18444	-106.578	

Appendix D. Intersection Reports

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	430	293	47	962	26	313	61	30	11	31	149
Future Volume (vph)	71	430	293	47	962	26	313	61	30	11	31	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	165		0	180		90	100	0
Storage Lanes	1			1	1		0	1		1	1	0
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t				0.850		0.996			0.950			0.876
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3525	0	1770	3362	0	1770	3100	0
Flt Permitted	0.122				0.473			0.476			0.690	
Satd. Flow (perm)	227	3539	1583	881	3525	0	887	3362	0	1285	3100	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)			318			2			33			162
Link Speed (mph)		35				35			35			35
Link Distance (ft)		409				465			524			328
Travel Time (s)		8.0				9.1			10.2			6.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	467	318	51	1046	28	340	66	33	12	34	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	467	318	51	1074	0	340	99	0	12	196	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12				12			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4			8		

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	16.0	16.0	3.0	16.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	9.5	31.0	31.0	9.5	31.0		9.5	33.5		9.5	40.5	
Total Split (s)	19.5	37.0	37.0	19.5	37.0		19.5	33.5		19.5	40.5	
Total Split (%)	16.7%	31.8%	31.8%	16.7%	31.8%		16.7%	28.8%		16.7%	34.8%	
Maximum Green (s)	16.0	32.0	32.0	16.0	32.0		16.0	28.0		16.0	35.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0		1.5	2.0		1.5	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		19.0	19.0		19.0			21.0			28.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	39.7	34.5	34.5	37.8	32.2		28.7	25.0		14.5	8.1	
Actuated g/C Ratio	0.52	0.45	0.45	0.49	0.42		0.37	0.33		0.19	0.11	
v/c Ratio	0.33	0.29	0.36	0.10	0.73		0.68	0.09		0.04	0.42	
Control Delay	12.8	15.1	3.3	9.3	23.1		27.2	15.0		18.0	12.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.8	15.1	3.3	9.3	23.1		27.2	15.0		18.0	12.2	
LOS	B	B	A	A	C		C	B		B	B	
Approach Delay		10.5			22.5			24.4			12.6	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 116.5

Actuated Cycle Length: 76.9

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 18.1

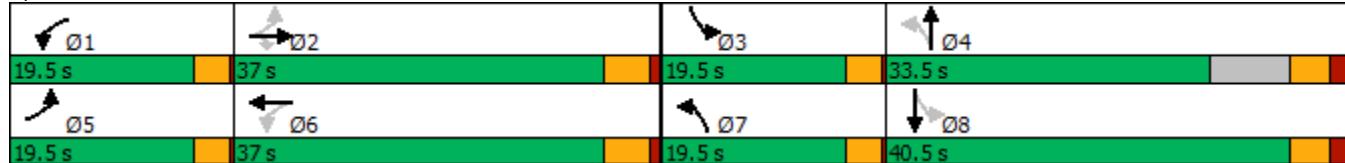
Intersection LOS: B

Intersection Capacity Utilization 70.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: San Pedro Drive & Alameda Blvd



Lanes, Volumes, Timings
2: San Pedro Drive & Signal Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	2	12	7	1	27	6	367	9	24	326	13
Future Volume (vph)	14	2	12	7	1	27	6	367	9	24	326	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.897			0.997			0.850
Flt Protected						0.990			0.999			0.997
Satd. Flow (prot)	0	1711	0	0	1654	0	0	1855	0	0	1857	1583
Flt Permitted						0.990			0.999			0.997
Satd. Flow (perm)	0	1711	0	0	1654	0	0	1855	0	0	1857	1583
Link Speed (mph)						25			35			35
Link Distance (ft)						338			529			524
Travel Time (s)						9.2			10.3			10.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	2	13	8	1	29	7	399	10	26	354	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	0	0	38	0	0	416	0	0	380	14
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 41.0%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
3: San Pedro Drive & Wilshire Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	3	15	6	1	23	6	342	11	29	304	12
Future Volume (vph)	17	3	15	6	1	23	6	342	11	29	304	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.898			0.996			0.995
Flt Protected						0.990			0.999			0.996
Satd. Flow (prot)	0	1713	0	0	1656	0	0	1853	0	0	1846	0
Flt Permitted						0.990			0.999			0.996
Satd. Flow (perm)	0	1713	0	0	1656	0	0	1853	0	0	1846	0
Link Speed (mph)						25			35			35
Link Distance (ft)						402			533			529
Travel Time (s)						11.0			10.4			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	3	16	7	1	25	7	372	12	32	330	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	33	0	0	391	0	0	375	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 44.2%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
4: San Pedro Drive & Corona Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	3	14	7	1	25	6	317	11	28	285	12
Future Volume (vph)	17	3	14	7	1	25	6	317	11	28	285	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.944			0.899			0.996			0.995	
Flt Protected		0.976			0.989			0.999			0.996	
Satd. Flow (prot)	0	1716	0	0	1656	0	0	1853	0	0	1846	0
Flt Permitted		0.976			0.989			0.999			0.996	
Satd. Flow (perm)	0	1716	0	0	1656	0	0	1853	0	0	1846	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		282			351			531			533	
Travel Time (s)		7.7			9.6			10.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	3	15	8	1	27	7	345	12	30	310	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	36	0	0	364	0	0	353	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 42.1%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
5: San Pedro Drive & Anaheim Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	3	13	8	2	29	7	290	10	26	266	14
Future Volume (vph)	15	3	13	8	2	29	7	290	10	26	266	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.943			0.900			0.996			0.994	
Flt Protected		0.976			0.990			0.999			0.996	
Satd. Flow (prot)	0	1714	0	0	1660	0	0	1853	0	0	1844	0
Flt Permitted		0.976			0.990			0.999			0.996	
Satd. Flow (perm)	0	1714	0	0	1660	0	0	1853	0	0	1844	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		285			303			527			531	
Travel Time (s)		7.8			8.3			10.3			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	3	14	9	2	32	8	315	11	28	289	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	0	0	43	0	0	334	0	0	332	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 38.5%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
6: San Pedro Drive & Carmel Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	3	15	7	1	27	6	263	11	29	245	13
Future Volume (vph)	17	3	15	7	1	27	6	263	11	29	245	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	55		0	0	0	0
Storage Lanes	0		0	1		0	1		1	0	0	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.942			0.855				0.850		0.994	
Flt Protected		0.976		0.950			0.950				0.995	
Satd. Flow (prot)	0	1713	0	1770	1593	0	1770	1863	1583	0	1842	0
Flt Permitted		0.976		0.950			0.950				0.995	
Satd. Flow (perm)	0	1713	0	1770	1593	0	1770	1863	1583	0	1842	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		479			412			279			527	
Travel Time (s)		10.9			11.2			5.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	3	16	8	1	29	7	286	12	32	266	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	8	30	0	7	286	12	0	312	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	47.8%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	885	426	45	498	11	230	56	57	19	54	149
Future Volume (vph)	94	885	426	45	498	11	230	56	57	19	54	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	165		0	180		90	100	0
Storage Lanes	1			1	1		0	1		1	1	0
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t				0.850		0.997			0.924			0.890
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	3270	0	1770	3150	0
Flt Permitted	0.367				0.204			0.460			0.674	
Satd. Flow (perm)	684	3539	1583	380	3529	0	857	3270	0	1255	3150	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)				429		2			62			162
Link Speed (mph)				35		35			35			35
Link Distance (ft)				409		465			524			328
Travel Time (s)				8.0		9.1			10.2			6.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	962	463	49	541	12	250	61	62	21	59	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	962	463	49	553	0	250	123	0	21	221	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)				12		12			12			12
Link Offset(ft)				0		0			0			0
Crosswalk Width(ft)				16		16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4			8		

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	16.0	16.0	3.0	16.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	9.5	31.0	31.0	9.5	31.0		9.5	33.5		9.5	40.5	
Total Split (s)	19.5	37.0	37.0	19.5	37.0		19.5	33.5		19.5	40.5	
Total Split (%)	16.7%	31.8%	31.8%	16.7%	31.8%		16.7%	28.8%		16.7%	34.8%	
Maximum Green (s)	16.0	32.0	32.0	16.0	32.0		16.0	28.0		16.0	35.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0		1.5	2.0		1.5	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		19.0	19.0		19.0			21.0			28.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	40.7	35.1	35.1	37.8	32.3		27.5	22.2		15.0	8.3	
Actuated g/C Ratio	0.53	0.46	0.46	0.50	0.42		0.36	0.29		0.20	0.11	
v/c Ratio	0.22	0.59	0.48	0.18	0.37		0.53	0.12		0.08	0.45	
Control Delay	10.0	18.4	4.3	10.2	17.1		23.4	13.3		18.5	14.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.0	18.4	4.3	10.2	17.1		23.4	13.3		18.5	14.4	
LOS	B	B	A	B	B		C	B		B	B	
Approach Delay		13.6			16.5			20.1			14.8	
Approach LOS		B			B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 116.5

Actuated Cycle Length: 76.3

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 15.2

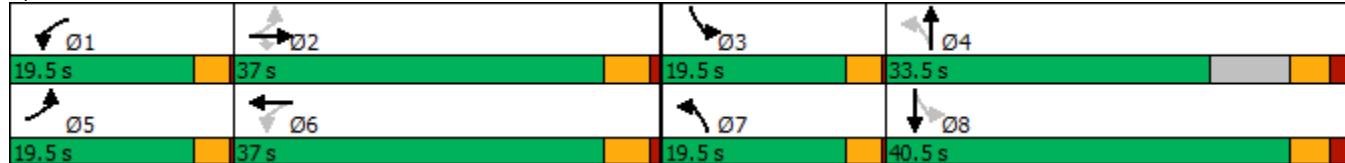
Intersection LOS: B

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: San Pedro Drive & Alameda Blvd



Lanes, Volumes, Timings
2: San Pedro Drive & Signal Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1	42	8	2	15	33	292	9	57	440	22
Future Volume (vph)	24	1	42	8	2	15	33	292	9	57	440	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.920			0.996			0.850
Flt Protected						0.984			0.995			0.994
Satd. Flow (prot)	0	1675	0	0	1686	0	0	1846	0	0	1852	1583
Flt Permitted						0.984			0.995			0.994
Satd. Flow (perm)	0	1675	0	0	1686	0	0	1846	0	0	1852	1583
Link Speed (mph)						25			35			35
Link Distance (ft)						338			529			524
Travel Time (s)						9.2			10.3			10.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	1	46	9	2	16	36	317	10	62	478	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	0	0	27	0	0	363	0	0	540	24
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 55.7%

ICU Level of Service B

Analysis Period (min) 15

Lanes, Volumes, Timings
3: San Pedro Drive & Wilshire Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	2	51	7	2	13	29	292	11	69	402	19
Future Volume (vph)	29	2	51	7	2	13	29	292	11	69	402	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.921			0.996			0.995
Flt Protected						0.984			0.996			0.993
Satd. Flow (prot)	0	1677	0	0	1688	0	0	1848	0	0	1840	0
Flt Permitted						0.984			0.996			0.993
Satd. Flow (perm)	0	1677	0	0	1688	0	0	1848	0	0	1840	0
Link Speed (mph)						25			35			35
Link Distance (ft)						402			533			529
Travel Time (s)						11.0			10.4			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	2	55	8	2	14	32	317	12	75	437	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	24	0	0	361	0	0	533	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.6%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
4: San Pedro Drive & Corona Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	2	49	8	2	14	30	290	11	66	374	20
Future Volume (vph)	28	2	49	8	2	14	30	290	11	66	374	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.922			0.995			0.994
Flt Protected						0.983			0.995			0.993
Satd. Flow (prot)	0	1677	0	0	1688	0	0	1844	0	0	1839	0
Flt Permitted						0.983			0.995			0.993
Satd. Flow (perm)	0	1677	0	0	1688	0	0	1844	0	0	1839	0
Link Speed (mph)					25			35			35	
Link Distance (ft)					282		351		531		533	
Travel Time (s)					7.7		9.6		10.3		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	2	53	9	2	15	33	315	12	72	407	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	26	0	0	360	0	0	501	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 50.6%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
5: San Pedro Drive & Anaheim Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	2	45	9	3	16	35	289	10	60	347	24
Future Volume (vph)	26	2	45	9	3	16	35	289	10	60	347	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.923			0.996			0.992
Flt Protected						0.984			0.995			0.993
Satd. Flow (prot)	0	1677	0	0	1692	0	0	1846	0	0	1835	0
Flt Permitted						0.984			0.995			0.993
Satd. Flow (perm)	0	1677	0	0	1692	0	0	1846	0	0	1835	0
Link Speed (mph)						25			35			35
Link Distance (ft)						303			527			531
Travel Time (s)						8.3			10.3			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	2	49	10	3	17	38	314	11	65	377	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	30	0	0	363	0	0	468	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 46.0%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
6: San Pedro Drive & Carmel Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	2	51	8	2	15	33	290	11	69	310	22
Future Volume (vph)	29	2	51	8	2	15	33	290	11	69	310	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	55		0	0	0	0
Storage Lanes	0		0	1		0	1		1	0	0	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.867				0.850		0.993	
Flt Protected		0.982		0.950			0.950				0.991	
Satd. Flow (prot)	0	1677	0	1770	1615	0	1770	1863	1583	0	1833	0
Flt Permitted		0.982		0.950			0.950				0.991	
Satd. Flow (perm)	0	1677	0	1770	1615	0	1770	1863	1583	0	1833	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		479			412			279			527	
Travel Time (s)		10.9			11.2			5.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	2	55	9	2	16	36	315	12	75	337	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	9	18	0	36	315	12	0	436	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	58.2%							ICU Level of Service B				
Analysis Period (min)	15											

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	530	362	58	1186	33	386	76	37	14	39	184
Future Volume (vph)	88	530	362	58	1186	33	386	76	37	14	39	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	165		0	180		90	100	0
Storage Lanes	1			1	1		0	1		1	1	0
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t				0.850		0.996			0.951			0.876
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3525	0	1770	3366	0	1770	3100	0
Flt Permitted	0.122				0.380			0.456			0.674	
Satd. Flow (perm)	227	3539	1583	708	3525	0	849	3366	0	1255	3100	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)				393		2			40			200
Link Speed (mph)				35		35			35			35
Link Distance (ft)				409		465			524			328
Travel Time (s)				8.0		9.1			10.2			6.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	576	393	63	1289	36	420	83	40	15	42	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	576	393	63	1325	0	420	123	0	15	242	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)				12		12			12			12
Link Offset(ft)				0		0			0			0
Crosswalk Width(ft)				16		16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94		94			94			94
Detector 2 Size(ft)				6		6			6			6
Detector 2 Type				Cl+Ex		Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)				0.0		0.0			0.0			0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4			8		

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	16.0	16.0	3.0	16.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	9.5	31.0	31.0	9.5	31.0		9.5	33.5		9.5	40.5	
Total Split (s)	19.5	37.0	37.0	19.5	37.0		19.5	33.5		19.5	40.5	
Total Split (%)	16.7%	31.8%	31.8%	16.7%	31.8%		16.7%	28.8%		16.7%	34.8%	
Maximum Green (s)	16.0	32.0	32.0	16.0	32.0		16.0	28.0		16.0	35.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0		1.5	2.0		1.5	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		19.0	19.0		19.0			21.0			28.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	39.6	32.9	32.9	38.0	32.1		29.7	26.1		14.7	8.2	
Actuated g/C Ratio	0.51	0.42	0.42	0.49	0.41		0.38	0.33		0.19	0.10	
v/c Ratio	0.41	0.39	0.44	0.15	0.92		0.82	0.11		0.06	0.48	
Control Delay	14.2	17.2	3.6	9.8	34.4		36.8	14.8		18.4	12.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.2	17.2	3.6	9.8	34.4		36.8	14.8		18.4	12.2	
LOS	B	B	A	A	C		D	B		B	B	
Approach Delay		11.9			33.2			31.8			12.6	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 116.5

Actuated Cycle Length: 78.3

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 24.4

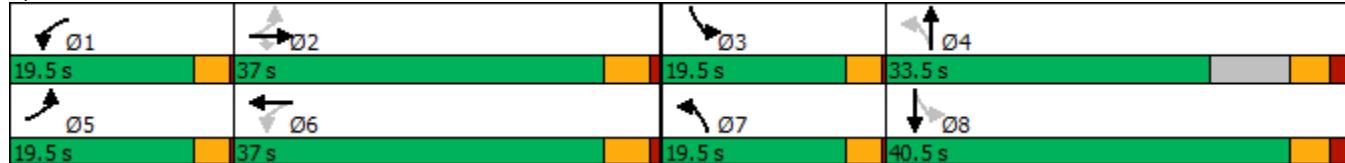
Intersection LOS: C

Intersection Capacity Utilization 82.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: San Pedro Drive & Alameda Blvd



Lanes, Volumes, Timings
2: San Pedro Drive & Signal Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	3	15	9	2	34	8	453	12	30	402	17
Future Volume (vph)	18	3	15	9	2	34	8	453	12	30	402	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945			0.898			0.997				0.850
Flt Protected		0.975			0.990			0.999			0.997	
Satd. Flow (prot)	0	1716	0	0	1656	0	0	1855	0	0	1857	1583
Flt Permitted		0.975			0.990			0.999			0.997	
Satd. Flow (perm)	0	1716	0	0	1656	0	0	1855	0	0	1857	1583
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		353			338			529			524	
Travel Time (s)		9.6			9.2			10.3			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	3	16	10	2	37	9	492	13	33	437	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	49	0	0	514	0	0	470	18
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 49.1%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
3: San Pedro Drive & Wilshire Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	19	8	2	29	8	422	14	36	375	15
Future Volume (vph)	21	4	19	8	2	29	8	422	14	36	375	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.900			0.996			0.995
Flt Protected						0.990			0.999			0.996
Satd. Flow (prot)	0	1713	0	0	1660	0	0	1853	0	0	1846	0
Flt Permitted						0.990			0.999			0.996
Satd. Flow (perm)	0	1713	0	0	1660	0	0	1853	0	0	1846	0
Link Speed (mph)						25			35			35
Link Distance (ft)						402			533			529
Travel Time (s)						11.0			10.4			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	21	9	2	32	9	459	15	39	408	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	43	0	0	483	0	0	463	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 52.6%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
4: San Pedro Drive & Corona Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	18	9	2	31	8	391	14	35	352	15
Future Volume (vph)	21	4	18	9	2	31	8	391	14	35	352	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.900			0.995			0.995
Flt Protected						0.989			0.999			0.996
Satd. Flow (prot)	0	1714	0	0	1658	0	0	1852	0	0	1846	0
Flt Permitted						0.989			0.999			0.996
Satd. Flow (perm)	0	1714	0	0	1658	0	0	1852	0	0	1846	0
Link Speed (mph)					25	25			35			35
Link Distance (ft)					282	351			531			533
Travel Time (s)					7.7	9.6			10.3			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	20	10	2	34	9	425	15	38	383	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	46	0	0	449	0	0	437	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 50.2%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
5: San Pedro Drive & Anaheim Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	4	17	10	3	36	9	358	13	33	328	18
Future Volume (vph)	19	4	17	10	3	36	9	358	13	33	328	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.901			0.995			0.993
Flt Protected						0.990			0.999			0.996
Satd. Flow (prot)	0	1714	0	0	1662	0	0	1852	0	0	1842	0
Flt Permitted						0.990			0.999			0.996
Satd. Flow (perm)	0	1714	0	0	1662	0	0	1852	0	0	1842	0
Link Speed (mph)					25				35			35
Link Distance (ft)					285				527			531
Travel Time (s)					7.8				10.3			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	4	18	11	3	39	10	389	14	36	357	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	53	0	0	413	0	0	413	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 46.4%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
6: San Pedro Drive & Carmel Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	19	9	2	34	8	325	14	36	302	17
Future Volume (vph)	21	4	19	9	2	34	8	325	14	36	302	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	55		0	0	0	0
Storage Lanes	0		0	1		0	1		1	0	0	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.858				0.850		0.994	
Flt Protected		0.977		0.950			0.950				0.995	
Satd. Flow (prot)	0	1713	0	1770	1598	0	1770	1863	1583	0	1842	0
Flt Permitted		0.977		0.950			0.950				0.995	
Satd. Flow (perm)	0	1713	0	1770	1598	0	1770	1863	1583	0	1842	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		479			412			279			527	
Travel Time (s)		10.9			11.2			5.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	21	10	2	37	9	353	15	39	328	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	10	39	0	9	353	15	0	385	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	55.2%							ICU Level of Service B				
Analysis Period (min)	15											

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1091	525	56	614	14	284	70	71	24	67	184
Future Volume (vph)	116	1091	525	56	614	14	284	70	71	24	67	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	165		0	180		90	100	0
Storage Lanes	1			1	1		0	1		1	1	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t			0.850		0.997			0.925			0.890	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	3274	0	1770	3150	0
Flt Permitted	0.280			0.122			0.406			0.655		
Satd. Flow (perm)	522	3539	1583	227	3529	0	756	3274	0	1220	3150	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		429			2			77			200	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		409			465			524			328	
Travel Time (s)		8.0			9.1			10.2			6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	1186	571	61	667	15	309	76	77	26	73	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	1186	571	61	682	0	309	153	0	26	273	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4			8		

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	16.0	16.0	3.0	16.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	9.5	31.0	31.0	9.5	31.0		9.5	33.5		9.5	40.5	
Total Split (s)	19.5	37.0	37.0	19.5	37.0		19.5	33.5		19.5	40.5	
Total Split (%)	16.7%	31.8%	31.8%	16.7%	31.8%		16.7%	28.8%		16.7%	34.8%	
Maximum Green (s)	16.0	32.0	32.0	16.0	32.0		16.0	28.0		16.0	35.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0		1.5	2.0		1.5	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		19.0	19.0		19.0			21.0			28.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	43.0	35.5	35.5	38.8	32.1		28.8	23.3		15.2	8.4	
Actuated g/C Ratio	0.54	0.44	0.44	0.48	0.40		0.36	0.29		0.19	0.10	
v/c Ratio	0.32	0.75	0.61	0.29	0.48		0.67	0.15		0.10	0.54	
Control Delay	11.4	23.5	7.8	12.7	19.7		28.2	13.0		19.1	15.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	11.4	23.5	7.8	12.7	19.7		28.2	13.0		19.1	15.1	
LOS	B	C	A	B	B		C	B		B	B	
Approach Delay		18.0			19.2			23.2			15.4	
Approach LOS		B			B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 116.5

Actuated Cycle Length: 80

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 18.7

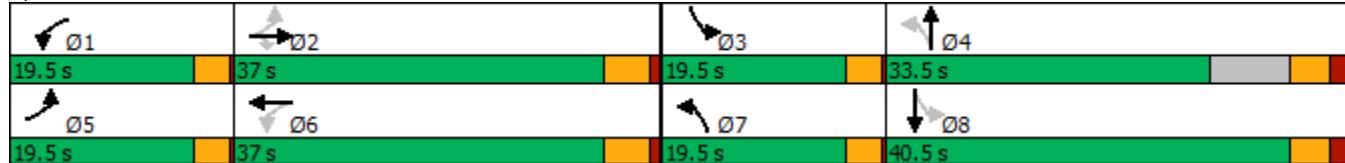
Intersection LOS: B

Intersection Capacity Utilization 72.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: San Pedro Drive & Alameda Blvd



Lanes, Volumes, Timings
2: San Pedro Drive & Signal Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	2	52	10	3	19	41	360	12	71	543	28
Future Volume (vph)	30	2	52	10	3	19	41	360	12	71	543	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.919						0.850
Flt Protected						0.985						0.994
Satd. Flow (prot)	0	1676	0	0	1686	0	0	1846	0	0	1852	1583
Flt Permitted						0.985						0.994
Satd. Flow (perm)	0	1676	0	0	1686	0	0	1846	0	0	1852	1583
Link Speed (mph)						25			35			35
Link Distance (ft)						338			529			524
Travel Time (s)						9.2			10.3			10.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	2	57	11	3	21	45	391	13	77	590	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	0	35	0	0	449	0	0	667	30
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 67.6%

ICU Level of Service C

Analysis Period (min) 15

Lanes, Volumes, Timings
3: San Pedro Drive & Wilshire Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	63	9	3	17	36	360	14	86	496	24
Future Volume (vph)	36	3	63	9	3	17	36	360	14	86	496	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.922			0.995			0.995
Flt Protected						0.984			0.996			0.993
Satd. Flow (prot)	0	1679	0	0	1690	0	0	1846	0	0	1840	0
Flt Permitted						0.984			0.996			0.993
Satd. Flow (perm)	0	1679	0	0	1690	0	0	1846	0	0	1840	0
Link Speed (mph)						25			35			35
Link Distance (ft)						402			533			529
Travel Time (s)						11.0			10.4			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	3	68	10	3	18	39	391	15	93	539	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	31	0	0	445	0	0	658	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.9%

ICU Level of Service C

Analysis Period (min) 15

Lanes, Volumes, Timings
4: San Pedro Drive & Corona Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	3	61	10	3	18	37	358	14	82	461	25
Future Volume (vph)	35	3	61	10	3	18	37	358	14	82	461	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.921			0.995			0.994
Flt Protected						0.984			0.996			0.993
Satd. Flow (prot)	0	1679	0	0	1688	0	0	1846	0	0	1839	0
Flt Permitted						0.984			0.996			0.993
Satd. Flow (perm)	0	1679	0	0	1688	0	0	1846	0	0	1839	0
Link Speed (mph)					25			35			35	
Link Distance (ft)					282		351		531		533	
Travel Time (s)					7.7		9.6		10.3		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	3	66	11	3	20	40	389	15	89	501	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	34	0	0	444	0	0	617	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 61.3%

ICU Level of Service B

Analysis Period (min) 15

Lanes, Volumes, Timings
5: San Pedro Drive & Anaheim Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	3	56	12	4	20	44	357	13	74	428	30
Future Volume (vph)	33	3	56	12	4	20	44	357	13	74	428	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.924			0.996			0.992
Flt Protected						0.984			0.995			0.993
Satd. Flow (prot)	0	1679	0	0	1694	0	0	1846	0	0	1835	0
Flt Permitted						0.984			0.995			0.993
Satd. Flow (perm)	0	1679	0	0	1694	0	0	1846	0	0	1835	0
Link Speed (mph)					25				35			35
Link Distance (ft)					285				527			531
Travel Time (s)					7.8				10.3			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	3	61	13	4	22	48	388	14	80	465	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	39	0	0	450	0	0	578	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 55.1%

ICU Level of Service B

Analysis Period (min) 15

Lanes, Volumes, Timings
6: San Pedro Drive & Carmel Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	63	10	3	19	41	358	14	86	383	28
Future Volume (vph)	36	3	63	10	3	19	41	358	14	86	383	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	55		0	0		0
Storage Lanes	0		0	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.869				0.850		0.992	
Flt Protected		0.983		0.950			0.950				0.991	
Satd. Flow (prot)	0	1679	0	1770	1619	0	1770	1863	1583	0	1831	0
Flt Permitted		0.983		0.950			0.950				0.991	
Satd. Flow (perm)	0	1679	0	1770	1619	0	1770	1863	1583	0	1831	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		479			412			279			527	
Travel Time (s)		10.9			11.2			5.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	3	68	11	3	21	45	389	15	93	416	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	11	24	0	45	389	15	0	539	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	68.1%							ICU Level of Service C				
Analysis Period (min)	15											

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	530	362	58	1186	33	386	76	37	14	39	184
Future Volume (vph)	88	530	362	58	1186	33	386	76	37	14	39	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	165		0	165		90	100	0
Storage Lanes	1			1	1		0	1		1	1	0
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t				0.850		0.996			0.951			0.876
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3525	0	1770	3366	0	1770	3100	0
Flt Permitted	0.122				0.380			0.456			0.674	
Satd. Flow (perm)	227	3539	1583	708	3525	0	849	3366	0	1255	3100	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)				393		2			40			200
Link Speed (mph)				35		35			35			35
Link Distance (ft)				409		465			524			328
Travel Time (s)				8.0		9.1			10.2			6.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	576	393	63	1289	36	420	83	40	15	42	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	576	393	63	1325	0	420	123	0	15	242	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)				12		12			12			12
Link Offset(ft)				0		0			0			0
Crosswalk Width(ft)				16		16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94		94			94			94
Detector 2 Size(ft)				6		6			6			6
Detector 2 Type				Cl+Ex		Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)				0.0		0.0			0.0			0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4			8		

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	16.0	16.0	3.0	16.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	9.5	31.0	31.0	9.5	31.0		9.5	33.5		9.5	40.5	
Total Split (s)	19.5	37.0	37.0	19.5	37.0		19.5	33.5		19.5	40.5	
Total Split (%)	16.7%	31.8%	31.8%	16.7%	31.8%		16.7%	28.8%		16.7%	34.8%	
Maximum Green (s)	16.0	32.0	32.0	16.0	32.0		16.0	28.0		16.0	35.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0		1.5	2.0		1.5	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		19.0	19.0		19.0			21.0			28.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	39.6	32.9	32.9	38.0	32.1		29.7	26.1		14.7	8.2	
Actuated g/C Ratio	0.51	0.42	0.42	0.49	0.41		0.38	0.33		0.19	0.10	
v/c Ratio	0.41	0.39	0.44	0.15	0.92		0.82	0.11		0.06	0.48	
Control Delay	14.2	17.2	3.6	9.8	34.4		36.8	14.8		18.4	12.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.2	17.2	3.6	9.8	34.4		36.8	14.8		18.4	12.2	
LOS	B	B	A	A	C		D	B		B	B	
Approach Delay		11.9			33.2			31.8			12.6	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 116.5

Actuated Cycle Length: 78.3

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 24.4

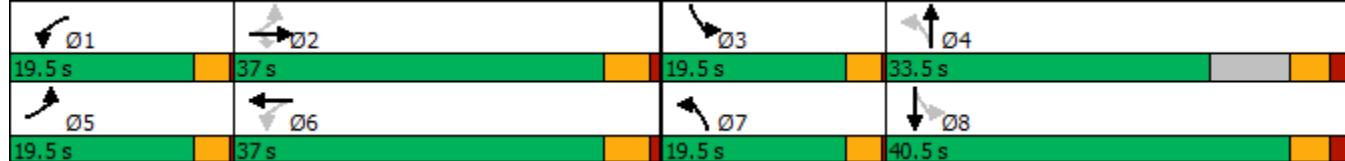
Intersection LOS: C

Intersection Capacity Utilization 82.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: San Pedro Drive & Alameda Blvd



Lanes, Volumes, Timings
2: San Pedro Drive & Signal Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	3	15	9	2	34	8	453	12	30	402	17
Future Volume (vph)	18	3	15	9	2	34	8	453	12	30	402	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945			0.898			0.996				0.850
Flt Protected		0.975			0.990		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1656	0	1770	1855	0	1770	1863	1583
Flt Permitted		0.975			0.990		0.950			0.950		
Satd. Flow (perm)	0	1716	0	0	1656	0	1770	1855	0	1770	1863	1583
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		353			338			529			524	
Travel Time (s)		9.6			9.2			10.3			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	3	16	10	2	37	9	492	13	33	437	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	49	0	9	505	0	33	437	18
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free		Free		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	36.1%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
3: San Pedro Drive & Wilshire Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	19	8	2	29	8	422	14	36	375	15
Future Volume (vph)	21	4	19	8	2	29	8	422	14	36	375	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.900			0.995			0.994	
Flt Protected		0.977			0.990		0.950			0.950		
Satd. Flow (prot)	0	1713	0	0	1660	0	1770	1853	0	1770	1852	0
Flt Permitted		0.977			0.990		0.950			0.950		
Satd. Flow (perm)	0	1713	0	0	1660	0	1770	1853	0	1770	1852	0
Link Speed (mph)		20			25			35			35	
Link Distance (ft)		351			402			533			529	
Travel Time (s)		12.0			11.0			10.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	21	9	2	32	9	459	15	39	408	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	43	0	9	474	0	39	424	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free		Free		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	41.6%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
4: San Pedro Drive & Corona Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	18	9	2	31	8	391	14	35	352	15
Future Volume (vph)	21	4	18	9	2	31	8	391	14	35	352	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	35		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.943			0.900			0.995			0.994	
Flt Protected		0.976			0.989		0.950			0.950		
Satd. Flow (prot)	0	1714	0	0	1658	0	1770	1853	0	1770	1852	0
Flt Permitted		0.976			0.989		0.950			0.950		
Satd. Flow (perm)	0	1714	0	0	1658	0	1770	1853	0	1770	1852	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		282			351			531			533	
Travel Time (s)		7.7			9.6			10.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	20	10	2	34	9	425	15	38	383	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	46	0	9	440	0	38	399	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free		Free		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	39.8%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
5: San Pedro Drive & Anaheim Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	4	17	10	3	36	9	358	13	33	328	18
Future Volume (vph)	19	4	17	10	3	36	9	358	13	33	328	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	60		0	30		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.943			0.901			0.995			0.992	
Flt Protected		0.976			0.990		0.950			0.950		
Satd. Flow (prot)	0	1714	0	0	1662	0	1770	1853	0	1770	1848	0
Flt Permitted		0.976			0.990		0.950			0.950		
Satd. Flow (perm)	0	1714	0	0	1662	0	1770	1853	0	1770	1848	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		285			303			527			531	
Travel Time (s)		7.8			8.3			10.3			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	4	18	11	3	39	10	389	14	36	357	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	53	0	10	403	0	36	377	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	37.7%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
6: San Pedro Drive & Carmel Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	19	9	2	34	8	325	14	36	302	17
Future Volume (vph)	21	4	19	9	2	34	8	325	14	36	302	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	55		0	75		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.858				0.850		0.992	
Flt Protected		0.977		0.950			0.950			0.950		
Satd. Flow (prot)	0	1713	0	1770	1598	0	1770	1863	1583	1770	1848	0
Flt Permitted		0.977		0.950			0.950			0.950		
Satd. Flow (perm)	0	1713	0	1770	1598	0	1770	1863	1583	1770	1848	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		479			412			279			527	
Travel Time (s)		10.9			11.2			5.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	21	10	2	37	9	353	15	39	328	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	10	39	0	9	353	15	39	346	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	39.6%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1091	525	56	614	14	284	70	71	24	67	184
Future Volume (vph)	116	1091	525	56	614	14	284	70	71	24	67	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	165		0	165		90	100	0	
Storage Lanes	1		1	1		0	1		1	1	0	
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t			0.850		0.997			0.925			0.890	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	3274	0	1770	3150	0
Flt Permitted	0.280			0.122			0.406			0.655		
Satd. Flow (perm)	522	3539	1583	227	3529	0	756	3274	0	1220	3150	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			429		2			77			200	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		409			465			524			328	
Travel Time (s)		8.0			9.1			10.2			6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	1186	571	61	667	15	309	76	77	26	73	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	1186	571	61	682	0	309	153	0	26	273	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4			8		

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	16.0	16.0	3.0	16.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	9.5	31.0	31.0	9.5	31.0		9.5	33.5		9.5	40.5	
Total Split (s)	19.5	37.0	37.0	19.5	37.0		19.5	33.5		19.5	40.5	
Total Split (%)	16.7%	31.8%	31.8%	16.7%	31.8%		16.7%	28.8%		16.7%	34.8%	
Maximum Green (s)	16.0	32.0	32.0	16.0	32.0		16.0	28.0		16.0	35.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0		1.5	2.0		1.5	2.0	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		19.0	19.0		19.0			21.0			28.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	43.0	35.5	35.5	38.8	32.1		28.8	23.3		15.2	8.4	
Actuated g/C Ratio	0.54	0.44	0.44	0.48	0.40		0.36	0.29		0.19	0.10	
v/c Ratio	0.32	0.75	0.61	0.29	0.48		0.67	0.15		0.10	0.54	
Control Delay	11.4	23.5	7.8	12.7	19.7		28.2	13.0		19.1	15.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	11.4	23.5	7.8	12.7	19.7		28.2	13.0		19.1	15.1	
LOS	B	C	A	B	B		C	B		B	B	
Approach Delay		18.0			19.2			23.2			15.4	
Approach LOS		B			B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 116.5

Actuated Cycle Length: 80

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 18.7

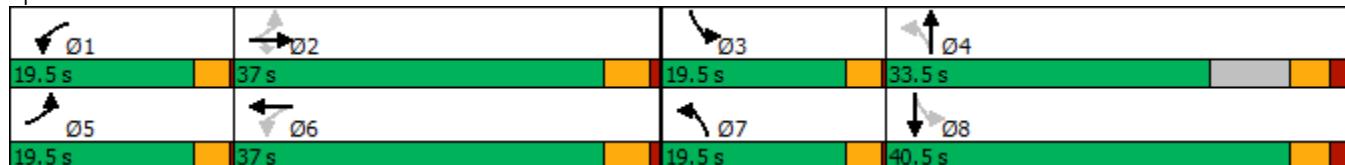
Intersection LOS: B

Intersection Capacity Utilization 72.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: San Pedro Drive & Alameda Blvd



Lanes, Volumes, Timings
2: San Pedro Drive & Signal Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	2	52	10	3	19	41	360	12	71	543	28
Future Volume (vph)	30	2	52	10	3	19	41	360	12	71	543	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.916			0.919			0.995				0.850
Flt Protected		0.982			0.985		0.950			0.950		
Satd. Flow (prot)	0	1676	0	0	1686	0	1770	1853	0	1770	1863	1583
Flt Permitted		0.982			0.985		0.950			0.950		
Satd. Flow (perm)	0	1676	0	0	1686	0	1770	1853	0	1770	1863	1583
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		353			338			529			524	
Travel Time (s)		9.6			9.2			10.3			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	2	57	11	3	21	45	391	13	77	590	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	0	35	0	45	404	0	77	590	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	48.8%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
3: San Pedro Drive & Wilshire Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	63	9	3	17	36	360	14	86	496	24
Future Volume (vph)	36	3	63	9	3	17	36	360	14	86	496	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.922			0.994			0.993	
Flt Protected		0.983			0.984		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1690	0	1770	1852	0	1770	1850	0
Flt Permitted		0.983			0.984		0.950			0.950		
Satd. Flow (perm)	0	1679	0	0	1690	0	1770	1852	0	1770	1850	0
Link Speed (mph)		20			25			35			35	
Link Distance (ft)		351			402			533			529	
Travel Time (s)		12.0			11.0			10.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	3	68	10	3	18	39	391	15	93	539	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	31	0	39	406	0	93	565	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	49.2%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
4: San Pedro Drive & Corona Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	3	61	10	3	18	37	358	14	82	461	25
Future Volume (vph)	35	3	61	10	3	18	37	358	14	82	461	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	35		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.921			0.994			0.992	
Flt Protected		0.983			0.984		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1688	0	1770	1852	0	1770	1848	0
Flt Permitted		0.983			0.984		0.950			0.950		
Satd. Flow (perm)	0	1679	0	0	1688	0	1770	1852	0	1770	1848	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		282			351			531			533	
Travel Time (s)		7.7			9.6			10.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	3	66	11	3	20	40	389	15	89	501	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	34	0	40	404	0	89	528	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	47.1%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
5: San Pedro Drive & Anaheim Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	3	56	12	4	20	44	357	13	74	428	30
Future Volume (vph)	33	3	56	12	4	20	44	357	13	74	428	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	60		0	30		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.918			0.924			0.995			0.990	
Flt Protected		0.982			0.984		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1694	0	1770	1853	0	1770	1844	0
Flt Permitted		0.982			0.984		0.950			0.950		
Satd. Flow (perm)	0	1679	0	0	1694	0	1770	1853	0	1770	1844	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		285			303			527			531	
Travel Time (s)		7.8			8.3			10.3			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	3	61	13	4	22	48	388	14	80	465	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	39	0	48	402	0	80	498	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	45.0%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
6: San Pedro Drive & Carmel Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	63	10	3	19	41	358	14	86	383	28
Future Volume (vph)	36	3	63	10	3	19	41	358	14	86	383	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	55		0	75		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.869				0.850		0.990	
Flt Protected		0.983		0.950			0.950			0.950		
Satd. Flow (prot)	0	1679	0	1770	1619	0	1770	1863	1583	1770	1844	0
Flt Permitted		0.983		0.950			0.950			0.950		
Satd. Flow (perm)	0	1679	0	1770	1619	0	1770	1863	1583	1770	1844	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		479			412			279			527	
Travel Time (s)		10.9			11.2			5.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	3	68	11	3	21	45	389	15	93	416	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	11	24	0	45	389	15	93	446	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	47.9%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑↑	↑	↑	↑↑	
Traffic Volume (vph)	88	530	362	58	1186	33	386	76	37	14	39	184
Future Volume (vph)	88	530	362	58	1186	33	386	76	37	14	39	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	165		0	165		90	100		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Fr _t			0.850		0.996				0.850		0.876	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3525	0	1770	3539	1583	1770	3100	0
Flt Permitted	0.122			0.380			0.456			0.700		
Satd. Flow (perm)	227	3539	1583	708	3525	0	849	3539	1583	1304	3100	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		393			2				84		200	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		409			465			524			328	
Travel Time (s)		8.0			9.1			10.2			6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	576	393	63	1289	36	420	83	40	15	42	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	576	393	63	1325	0	420	83	40	15	242	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane							Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		4		4	8			

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6		7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	3.0	16.0	16.0	3.0	16.0		3.0	8.0	8.0	3.0	8.0	
Minimum Split (s)	9.5	31.0	31.0	9.5	31.0		9.5	33.5	33.5	9.5	40.5	
Total Split (s)	19.5	37.0	37.0	19.5	37.0		19.5	33.5	33.5	19.5	40.5	
Total Split (%)	16.7%	31.8%	31.8%	16.7%	31.8%		16.7%	28.8%	28.8%	16.7%	34.8%	
Maximum Green (s)	16.0	32.0	32.0	16.0	32.0		16.0	28.0	28.0	16.0	35.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0		0.5	2.0	2.0	0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.5	5.5	3.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0		1.5	2.0	2.0	1.5	2.0	
Recall Mode	None	Max	Max	None	Max		None	None	None	None	None	
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		19.0	19.0		19.0			21.0	21.0		28.0	
Pedestrian Calls (#/hr)		0	0		0			0	0		0	
Act Effct Green (s)	39.6	32.9	32.9	38.0	32.1		29.7	26.1	26.1	14.7	8.2	
Actuated g/C Ratio	0.51	0.42	0.42	0.49	0.41		0.38	0.33	0.33	0.19	0.10	
v/c Ratio	0.41	0.39	0.44	0.15	0.92		0.82	0.07	0.07	0.06	0.48	
Control Delay	14.2	17.2	3.6	9.8	34.4		36.8	20.7	1.4	18.4	12.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	14.2	17.2	3.6	9.8	34.4		36.8	20.7	1.4	18.4	12.2	
LOS	B	B	A	A	C		D	C	A	B	B	
Approach Delay		11.9			33.2			31.7			12.6	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 116.5

Actuated Cycle Length: 78.3

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 24.4

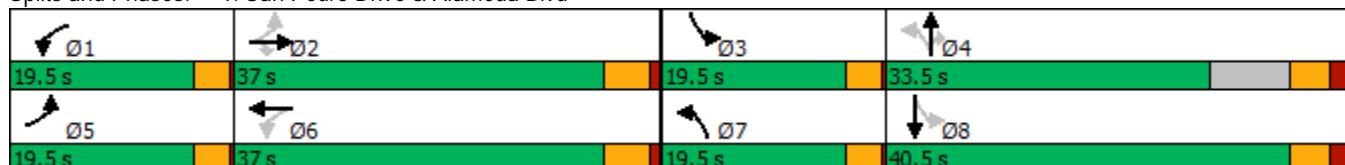
Intersection LOS: C

Intersection Capacity Utilization 82.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: San Pedro Drive & Alameda Blvd



Lanes, Volumes, Timings
2: San Pedro Drive & Signal Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	3	15	9	2	34	8	453	12	30	402	17
Future Volume (vph)	18	3	15	9	2	34	8	453	12	30	402	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.945			0.898			0.996			0.994	
Flt Protected		0.975			0.990		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1656	0	1770	3525	0	1770	3518	0
Flt Permitted		0.975			0.990		0.950			0.950		
Satd. Flow (perm)	0	1716	0	0	1656	0	1770	3525	0	1770	3518	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		353			338			529			524	
Travel Time (s)		9.6			9.2			10.3			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	3	16	10	2	37	9	492	13	33	437	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	49	0	9	505	0	33	455	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	30.7%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
3: San Pedro Drive & Wilshire Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	19	8	2	29	8	422	14	36	375	15
Future Volume (vph)	21	4	19	8	2	29	8	422	14	36	375	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941			0.900			0.995			0.994	
Flt Protected		0.977			0.990		0.950			0.950		
Satd. Flow (prot)	0	1713	0	0	1660	0	1770	3522	0	1770	3518	0
Flt Permitted		0.977			0.990		0.950			0.950		
Satd. Flow (perm)	0	1713	0	0	1660	0	1770	3522	0	1770	3518	0
Link Speed (mph)		20			25			35			35	
Link Distance (ft)		351			402			533			529	
Travel Time (s)		12.0			11.0			10.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	21	9	2	32	9	459	15	39	408	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	43	0	9	474	0	39	424	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	30.6%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
4: San Pedro Drive & Corona Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	18	9	2	31	8	391	14	35	352	15
Future Volume (vph)	21	4	18	9	2	31	8	391	14	35	352	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.943			0.900			0.995			0.994	
Flt Protected		0.976			0.989		0.950			0.950		
Satd. Flow (prot)	0	1714	0	0	1658	0	1770	3522	0	1770	3518	0
Flt Permitted		0.976			0.989		0.950			0.950		
Satd. Flow (perm)	0	1714	0	0	1658	0	1770	3522	0	1770	3518	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		282			351			531			533	
Travel Time (s)		7.7			9.6			10.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	20	10	2	34	9	425	15	38	383	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	46	0	9	440	0	38	399	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	29.6%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
5: San Pedro Drive & Anaheim Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	4	17	10	3	36	9	358	13	33	328	18
Future Volume (vph)	19	4	17	10	3	36	9	358	13	33	328	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.943			0.901			0.995			0.992	
Flt Protected		0.976			0.990		0.950			0.950		
Satd. Flow (prot)	0	1714	0	0	1662	0	1770	3522	0	1770	3511	0
Flt Permitted		0.976			0.990		0.950			0.950		
Satd. Flow (perm)	0	1714	0	0	1662	0	1770	3522	0	1770	3511	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		285			303			527			531	
Travel Time (s)		7.8			8.3			10.3			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	4	18	11	3	39	10	389	14	36	357	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	53	0	10	403	0	36	377	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	28.4%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
6: San Pedro Drive & Carmel Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	19	9	2	34	8	325	14	36	302	17
Future Volume (vph)	21	4	19	9	2	34	8	325	14	36	302	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	55		0	75		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.941			0.858				0.850		0.992	
Flt Protected		0.977		0.950			0.950			0.950		
Satd. Flow (prot)	0	1713	0	1770	1598	0	1770	1863	1583	1770	3511	0
Flt Permitted		0.977		0.950			0.950			0.950		
Satd. Flow (perm)	0	1713	0	1770	1598	0	1770	1863	1583	1770	3511	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		479			412			279			527	
Travel Time (s)		10.9			11.2			5.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	21	10	2	37	9	353	15	39	328	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	10	39	0	9	353	15	39	346	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	39.6%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑↑	↑	↑	↑↑	
Traffic Volume (vph)	116	1091	525	56	614	14	284	70	71	24	67	184
Future Volume (vph)	116	1091	525	56	614	14	284	70	71	24	67	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	165		0	165		90	100		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Fr _t			0.850		0.997				0.850		0.890	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	3539	1583	1770	3150	0
Flt Permitted	0.280			0.122			0.405			0.705		
Satd. Flow (perm)	522	3539	1583	227	3529	0	754	3539	1583	1313	3150	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			429		2				84		200	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		409			465			524			328	
Travel Time (s)		8.0			9.1			10.2			6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	1186	571	61	667	15	309	76	77	26	73	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	1186	571	61	682	0	309	76	77	26	273	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane							Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		

Lanes, Volumes, Timings
1: San Pedro Drive & Alameda Blvd

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6		7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	3.0	16.0	16.0	3.0	16.0		3.0	8.0	8.0	3.0	8.0	
Minimum Split (s)	9.5	31.0	31.0	9.5	31.0		9.5	33.5	33.5	9.5	40.5	
Total Split (s)	19.5	37.0	37.0	19.5	37.0		19.5	33.5	33.5	19.5	40.5	
Total Split (%)	16.7%	31.8%	31.8%	16.7%	31.8%		16.7%	28.8%	28.8%	16.7%	34.8%	
Maximum Green (s)	16.0	32.0	32.0	16.0	32.0		16.0	28.0	28.0	16.0	35.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0		0.5	2.0	2.0	0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.5	5.5	3.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0		1.5	2.0	2.0	1.5	2.0	
Recall Mode	None	Max	Max	None	Max		None	None	None	None	None	
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		19.0	19.0		19.0			21.0	21.0		28.0	
Pedestrian Calls (#/hr)		0	0		0			0	0		0	
Act Effct Green (s)	43.0	35.5	35.5	38.8	32.1		28.9	23.4	23.4	15.2	8.4	
Actuated g/C Ratio	0.54	0.44	0.44	0.48	0.40		0.36	0.29	0.29	0.19	0.10	
v/c Ratio	0.32	0.76	0.61	0.29	0.48		0.67	0.07	0.15	0.09	0.54	
Control Delay	11.4	23.6	7.8	12.7	19.8		28.1	23.1	6.6	19.0	15.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	11.4	23.6	7.8	12.7	19.8		28.1	23.1	6.6	19.0	15.1	
LOS	B	C	A	B	B		C	C	A	B	B	
Approach Delay		18.0			19.2			23.7			15.4	
Approach LOS		B			B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 116.5

Actuated Cycle Length: 80.1

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 18.8

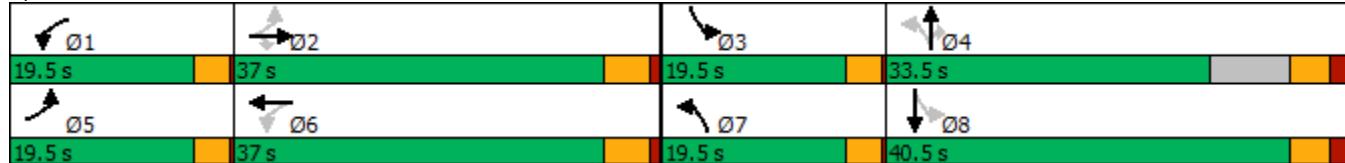
Intersection LOS: B

Intersection Capacity Utilization 72.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: San Pedro Drive & Alameda Blvd



Lanes, Volumes, Timings
2: San Pedro Drive & Signal Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	2	52	10	3	19	41	360	12	71	543	28
Future Volume (vph)	30	2	52	10	3	19	41	360	12	71	543	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.916			0.919			0.995			0.993	
Flt Protected		0.982			0.985		0.950			0.950		
Satd. Flow (prot)	0	1676	0	0	1686	0	1770	3522	0	1770	3514	0
Flt Permitted		0.982			0.985		0.950			0.950		
Satd. Flow (perm)	0	1676	0	0	1686	0	1770	3522	0	1770	3514	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		353			338			529			524	
Travel Time (s)		9.6			9.2			10.3			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	2	57	11	3	21	45	391	13	77	590	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	0	35	0	45	404	0	77	620	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	36.1%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
3: San Pedro Drive & Wilshire Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	63	9	3	17	36	360	14	86	496	24
Future Volume (vph)	36	3	63	9	3	17	36	360	14	86	496	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t		0.917			0.922			0.994			0.993	
Flt Protected		0.983			0.984		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1690	0	1770	3518	0	1770	3514	0
Flt Permitted		0.983			0.984		0.950			0.950		
Satd. Flow (perm)	0	1679	0	0	1690	0	1770	3518	0	1770	3514	0
Link Speed (mph)		20			25			35			35	
Link Distance (ft)		351			402			533			529	
Travel Time (s)		12.0			11.0			10.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	3	68	10	3	18	39	391	15	93	539	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	31	0	39	406	0	93	565	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	36.2%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
4: San Pedro Drive & Corona Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	3	61	10	3	18	37	358	14	82	461	25
Future Volume (vph)	35	3	61	10	3	18	37	358	14	82	461	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t		0.917			0.921			0.994			0.992	
Flt Protected		0.983			0.984		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1688	0	1770	3518	0	1770	3511	0
Flt Permitted		0.983			0.984		0.950			0.950		
Satd. Flow (perm)	0	1679	0	0	1688	0	1770	3518	0	1770	3511	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		282			351			531			533	
Travel Time (s)		7.7			9.6			10.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	3	66	11	3	20	40	389	15	89	501	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	34	0	40	404	0	89	528	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	34.8%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
5: San Pedro Drive & Anaheim Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	3	56	12	4	20	44	357	13	74	428	30
Future Volume (vph)	33	3	56	12	4	20	44	357	13	74	428	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.918			0.924			0.995			0.990	
Flt Protected		0.982			0.984		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1694	0	1770	3522	0	1770	3504	0
Flt Permitted		0.982			0.984		0.950			0.950		
Satd. Flow (perm)	0	1679	0	0	1694	0	1770	3522	0	1770	3504	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		285			303			527			531	
Travel Time (s)		7.8			8.3			10.3			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	3	61	13	4	22	48	388	14	80	465	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	39	0	48	402	0	80	498	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	33.4%							ICU Level of Service A				
Analysis Period (min)	15											

Lanes, Volumes, Timings
6: San Pedro Drive & Carmel Ave

02/24/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	63	10	3	19	41	358	14	86	383	28
Future Volume (vph)	36	3	63	10	3	19	41	358	14	86	383	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	55		0	75		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.917			0.869				0.850		0.990	
Flt Protected		0.983		0.950			0.950			0.950		
Satd. Flow (prot)	0	1679	0	1770	1619	0	1770	1863	1583	1770	3504	0
Flt Permitted		0.983		0.950			0.950			0.950		
Satd. Flow (perm)	0	1679	0	1770	1619	0	1770	1863	1583	1770	3504	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		479			412			279			527	
Travel Time (s)		10.9			11.2			5.4			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	3	68	11	3	21	45	389	15	93	416	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	11	24	0	45	389	15	93	446	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	46.3%							ICU Level of Service A				
Analysis Period (min)	15											